

# Mapping urban changes

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**Mapping**  
**urban**  
**changes**

**Mapiranje**  
**urbanih**  
**promjena**



# **Mapping** **urban changes**

# **Mapiranje** **urbanih promjena**

edited by / uredila  
Ana Plosnić Škarić

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Milan Pelc

Editor / Urednica  
Ana Plosnić Škarić

Reviewers / Recenzenti  
Ivo Babić  
Bojana Bojanić Obad Šćitaroci

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# Mapiranje urbanih promjena

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Ana Plosnić Škarić



Hrvatska zaklada za znanost  
/ Croatian Science Foundation



Institut za povijest umjetnosti, Zagreb, Hrvatska  
/ Institute of Art History, Zagreb, Croatia



Dubrovnik: Civitas et Acta Consiliorum  
Visualizing Development of the Late Medieval Urban Fabric

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# Introduction

Ana Plosnić Škarić

This book is the result of the work on the project “Dubrovnik: Civitas et Acta Consiliorum. Visualising Development of the Late Medieval Urban Fabric”, which was carried out at the Institute of Art History, Zagreb, Croatia (2014-2017), and was supported by the Croatian Science Foundation. An academic conference that was organised towards the end of the project aimed to discuss the methodology of the research on urban history and form as well as the methodology of the presentation of results. Therefore, these collected papers comprise precisely the scientific works which are broad in scope, and which critically reflect on the methodology of the work and its presentation.

The collected papers involve a total of twenty-five works written by thirty-eight authors. The texts are submitted in different languages: there are four texts in Croatian, three in Italian, one in German, and seventeen in the English language. The texts are supplemented by illustrations, which include historical maps and images, analytical maps, photographs, schematic 2D and 3D presentations, tables and diagrams. All authors, without exception, are researchers at reputable academic or related institutions and renowned independent researchers. Fifteen of them are researchers at academic or related institutions in Croatia, in addition to two independent researchers, while others are scholars at academic and research institutions, five of whom are from Belgium, three from Italy, three from the United Kingdom, two from Germany, two from Canada, two from the United States of America, one from Ireland, one from Israel, one from Slovenia, and one from Spain. The collected papers bring together both: the experienced researchers and those at the beginning of their careers, full of fresh ideas, especially regarding the use of new computer programs and a step towards digital humanities. The works involved in the collected papers are arranged in eight parts, in accord with the most characteristic methodology that was presented in each particular work. The first part offers an interpretation of the reality of the city's form in historical maps and images, thus revealing, with a critical approach, the methodologies of the presentation of buildings and spaces that still exist as well as those that are irretrievably lost – whether it is a consequence of the natural development of the city, the realization of theoretical approaches to conservation, or catastrophes. The second part analyses the relationship between the text and the physical space, where the text quality itself seems to be one of the indispensable sources for the recognition of the overall urban reality of a given period. The third part discusses the possibilities and the range of familiarity with the former physical appearance of individual buildings, which are based primarily on data from archival sources. Archival sources are also the starting point

in the works of the fourth part. It involves and critically reflects upon the projection of data into maps or city plans, which shows the socio-historical and economic realities of a certain period in the specific space of the city. The fifth part provides valuable experience in GIS programs for data processing and the presentation of results using analytical maps, and in each of the three texts, the research is mainly based on either material, image, or archival sources. The sixth part, however, offers, in every text, an experience of urban development research through all the aforementioned available sources of information. In the seventh part, the methodology of the reconstruction of historic urban centres is presented in 3D and 4D computer programs and applications. The eighth part provides a fascinating insight into entirely new digital methods of collecting and systematising sources for urban history research.

However, irrespective of the fact that the works are divided into eight parts, in accordance with the most characteristic methodology that connects them, the issues discussed here – in the sense of collecting, researching and processing visual and textual or archival material, the historical contextualisation, the theoretical background and the manner in which the results are presented – are approached consistently in all the works in the collected papers. What makes the book particularly valuable is its approach to the above-mentioned issues from the viewpoint of various disciplines: archaeology, history, art history, and architecture, thus creating, in every sense of the word, a multidisciplinary adventure.



## ✕ Cities studied in this book

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2 3

4

5 6

1. Samos,
2. Leeds,
3. London,
4. Bruges,
5. Brussels,
6. Antwerp,
7. Milano,
8. Florence,
9. Venice,
10. Dresden,
11. Rijeka,
12. Rab,
13. Zagreb,
14. Trogir,
15. Split,
16. Dubrovnik,
17. St. Petersburg,
18. Constantinople,
19. Jaffa.

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Dubrovnik:  
la realtà nelle immagini  
storiche  
*Ilario Principe*

Perspectives  
or how to deal  
with complexity.  
The case of Melchior  
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City in its historical  
maps and images



# Dubrovnik: la realtà nelle immagini storiche

Ilario Principe

Vorrei iniziare da una considerazione apparentemente marginale: mi sono sempre chiesto perchè gli scrittori ragusei del passato non hanno magnificato le proprie fortificazioni e bisognerà aspettare la seconda metà del Novecento perchè uno studioso di grandissimo valore nell'analisi storica urbana della città e delle sue emergenze, Lukša Beritić, si accinga a descrivere mura, porte, torri, rivellini, fortezze collocando storicamente ogni elemento del circuito fortificato nella sua dimensione spaziale e temporale. Si vedano ad esempio le sapide, ma mute riguardo alle fortificazioni, notazioni sul sito e sulle caratteristiche della città e dei suoi abitanti fornite dal Luccari; oppure molto più tardi le annotazioni di circostanza e nulla più di Giuseppe Gelcich; o ancora i pochi cenni dedicati a questa o a quell'opera fortificatoria nella storia di Ragusa raccontata anno per anno da Matteo Zamagna cinquant'anni dopo. E anche chi raguseo non è stenta a inserire quell'ammasso vertiginoso di fortificazioni, che sembrano cresciute come funghi dalla scabra costa dalmata meridionale, dallo stesso identico colore delle rocce circostanti poichè delle stesse pietre sono fatte, in una coerente ed esaustiva cornice descrittiva e interpretativa: senza andare tanto lontano si può ricordare la corposa monografia storica di Robin Harris, che dedica alle fortificazioni solo quattro pagine su cinquecento.<sup>1</sup>

A chi si inerpicava sulle mura per compierne il periplo prima dell'assedio serbo del 1991, quando il giro completo non era possibile e si doveva discendere dalle mura alla torre dell'orologio per risalirne un po' più avanti, un'autentica sorpresa era allora ricevere il succinto ma esauriente libretto del Beritić compreso nel costo del biglietto di visita alle mura, con una cartina, molte foto a colori, ma soprattutto il distillato di un'intera vita di studioso attento e partecipe alla storia e alla cultura della propria comunità. Poco egli dice degli ingegneri e architetti che vi hanno lavorato per almeno due secoli, è vero, ma ciò è comprensibile ponendo mente alla grande massa di documenti da esaminare, tutti conservati nel venerando archivio di Palazzo Sponza, e al fatto che, appunto, nel passato nessuno si è dato pensiero di narrare come le fortificazioni di Ragusa siano sorte e si siano modificate e sviluppate. Sempre tenendo presente che una città-stato di piccole dimensioni proiettata sul mare non aveva alcun interesse a far conoscere ai potenziali nemici lo stato delle sue difese, salvo mostrarle nella loro imponenza quando questi si fossero avvicinati. E infatti fino a quello sciagurato assedio mai le mura di Dubrovnik avevano ricevuto assalti: non tanto un monito per la difesa della Libertas ragusea, quanto un insieme di segni e strutture che già denunciavano all'orizzonte la qualità sociale, culturale, economica che le aveva prodotte e con la quale, più che con le mura, lo straniero doveva fare i conti.

Un segno è un intaglio; una struttura qualcosa di costruito: tali i significati etimologici. Da un punto di vista linguistico segno ha una diecina di sensi diversi: fra questi mi sembra il più preciso per le nostre considerazioni proprio quello meno esaustivo, e cioè “traccia visibile non necessariamente riconducibile a un significato”. Struttura non arriva a tanto, e il suo spessore linguistico si può confinare a “complesso di elementi costitutivi di qualcosa”. Sono allora i segni, ovvero le tracce, gli elementi costitutivi della struttura? Ad esempio, nell’iconografia del Merian che vuol descrivere gli effetti del terremoto del 1667 le tracce si sprecano (FIG. 1), ma un vero significato esse conservano nelle dense nubi di polvere che si alzano dalle macerie, nel fumo degli incendi in città, nelle montagne squarciate dal sisma, non certo nel circuito difensivo o negli elementi del paesaggio. Arduo riconoscere in questi segni un orizzonte cognitivo diverso dalla semplice indicazione di stato: l’immagine non è strutturata in quanto tale e svolge il suo itinerario di lettura su due diversi piani, la visibilità e la sensazione; quest’ultima non promana da quella ma da un complesso di significanze proprie dell’osservatore. In altre parole, costui si aspetta che un sisma distruttivo sia seguito da un incendio e si manifesti con quei caratteri, ma che questa aspettativa si applichi sulle mura di Dubrovnik o su quelle di qualsiasi altra città è del tutto indifferente.<sup>2</sup>

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Non c’è neppure bisogno di un evento traumatico per eventualmente suggerire questa sensazione, basta il richiamo all’inconosciuto espresso in modi conoscibili ma non riconoscibili: così si possono leggere immagini intitolate alla città di Ragusa che tranquillamente circolano nella comunità degli studiosi: i quali sono sempre faticosamente alla ricerca di un punto d’appoggio ove ancorare la leva della conoscenza, quando invece sono segni d’un altro orizzonte non conoscitivo ma appunto di sensazione. Un esempio di veduta a volo d’uccello del 1580 dalla *Raccolta de’ disegni di tutte le città, et fortezze di mare che sono nel Viaggio da Venezia a Costantinopoli*, ripresa dal Rosaccio (FIG. 2), e una veduta prospettica ancora del Merian del 1638 (FIG. 3), poi malamente copiata dal Coronelli in varie sue opere, dimostrano ampiamente questo assunto. La causalità delle tracce si fa struttura percepibile senza peraltro produrre un significato ontologicamente definito; la casualità dei segni è strutturata entro un universo riferibile senza tanti complimenti a un numero indefinibile di soggetti, nei quali l’unica realtà restano linee e campiture che conferiscono forma surrettiziamente storica a qualcosa tutto sommato di irrilevante. Certo che è un bel gioco quello di ricostruire, o meglio di indovinare la rilevanza storica di queste tracce e segni; ma è un bel gioco che dura poco, salvo aggiungere pennellate erudite di dubbia utilità a composizioni che dovrebbero nutrirsi di ben altre sostanze.

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C'è però la possibilità di esprimere significati felicemente inseriti su un doppio binario di valutazioni sensoriali: lo storico e il metaforico. Per storico intendo la capacità di suggerire com'era e dov'era un certa traccia lasciata dalla società in un momento preciso della sua evoluzione culturale, artistica, economica, tecnologica, e così via, quindi storica: uno specimen del suo processo diacronico misurabile con l'ineluttabilità delle pietre e dei mattoni. Per metaforico intendo qui il senso figurato come espressione di un patrimonio comune di idee e di referenti spazio-temporali, coordinato con una specifica funzione di potere spirituale o temporale. Tali considerazioni sono evidenti in alcune immagini di Dubrovnik riferite a momenti devozionali ma tangenzialmente in grado di aprire scenari di ricostruzione filologica specifica all'orizzonte storico. Una di queste, non immagine ma scultura a tutto tondo, è la statua del patrono della città, San Biagio, un'opera in argento ricoperta d'oro alta poco più di 64 cm conservata nella chiesa omonima e di sicuro realizzata nella seconda metà del Quattrocento da un ancora anonimo orafo raguseo, perfetto conoscitore della sua città. La minuscola placchetta di cm 14.4x13.6 di Dubrovnik che il santo sorregge sul braccio sinistro in una composizione consueta in questo tipo di offerta devozionale, rappresenta un palinsesto di informazioni urbane relative proprio a quel periodo storico, riferendoci alla ricostruzione grafica delineata in passato (FIG. 4). Vale la pena sottolineare che l'opera è stata assai poco considerata in funzione conoscitiva dagli studiosi, i quali hanno sempre lamentato l'inesistenza di rappresentazioni attendibili della struttura urbana di Dubrovnik avanti il disastroso terremoto del 1667 che l'avrebbe completamente distrutta, forse disturbati dalle innumerevoli statue devozionali in pietra dello stesso San Biagio poste a guardia di mura, porte, torri, fortificazioni, quasi tutte con sintetiche, e largamente inutili a fini pratici, icone della città posta sotto la sua protezione insieme al territorio di pertinenza, dove pure analoghe statue di San Biagio se ne trovano a decine.

Per la ristrettezza della superficie a disposizione mancano qui gli elementi esterni alla cinta fortificata, quali la fortezza di Lovrijenac e la fortificazione staccata di Revelin fuori porta Ploče, inoltre l'immagine complessiva è stata ridotta nel numero delle strade, che dalle 14 che esistevano su entrambi i lati dello Stradun alla fine del XV secolo diventano sette nel lato meridionale e otto in quello settentrionale, ma gli edifici principali sono tutti al loro posto, come si può notare dalla [Tavola 1](#) dove sono indicate le emergenze significative. Fra le mancanze più notevoli si può citare il palazzo Luža presso San Biagio, luogo di raduno dei nobili, rovinato dal terremoto e poi distrutto nel 1708 per avere più spazio per la nuova chiesa di San Biagio, e il battistero a destra della Cattedrale distrutto dagli austriaci nel 1830. Circa

la data esatta cui riferire l'immagine urbana, il Rešetar ha ipotizzato essere compresa fra il 1481 e il 1485: non anteriore al 1481 perché si vedrebbe il campanile con l'orologio realizzato quell'anno, né posteriore al 1485 perché la fortezza di San Giovanni si mostra nello schematico impianto di sapore medievale anteriore al rifacimento del 1485 conservatosi fino ad oggi.

In realtà la questione è più complessa e per tentare di risolverla ci si deve riferire a un'immagine di tipo completamente diverso lasciata da un pellegrino, Konrad Grünenberg, in viaggio nel 1486 verso i luoghi santi. Le immagini dei viaggiatori meriterebbero un lungo commento sulla loro attendibilità: quel che il viaggiatore disegna/designa è ciò che vede, o che ha visto, o che ricorda, o che gli è stato riferito da altri, o che ha copiato da fonti altrui, o che cosa? come si forma l'immagine di una città nella mente di chi la vede o l'attraversa? e quanto di questa immagine gli storici devono prendere per informazione e non invece per deformazione? La figura del nostro pellegrino non è equivoca per la città, citata in rosso nella didascalia che vi si riferisce, ma è evidente che il rapporto col suo mare e la forma urbana appaiono assai lontani dalla realtà (FIG. 5).<sup>3</sup> Quanto egli ha interpolato rispetto ai suoi ricordi, se l'immagine l'ha tracciata posteriormente, e quanto ha invece testimoniato con la visione diretta che lo storico non può permettersi di relegare nell'immaginazione?

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Sono domande ardue, alle quali non si può rispondere in attesa di inquadrare la fonte nel contesto che gli è proprio. In questa immagine, come nella placchetta sostenuta dalla statua, è ben visibile la torre civica, o torre delle campane, che non è stata edificata nel 1481 ma nel 1463 secondo le ricostruzioni del Beritić. L'inconfondibile torre di San Giovanni, che chiude a sinistra il porto, venne iniziata nel 1346 in forma quadrangolare, poi nel 1500 la si inglobò in una torre semicircolare con un antistante bastione pentagonale, e infine nel 1552-57 si collegarono fra loro le mura di tutti questi bastioni nella forma conservatasi fino ad oggi. Il profilo a scarpa dell'ordine inferiore delle torri che non fanno parte del muro di cortina sul mare, nel disegno del Grünenberg è troppo insistito per essere casuale mentre nell'immagine del San Biagio nessuna torre è a scarpa. Poiché la datazione del viaggio del pellegrino è attendibile, vuol dire che i lavori alla torre di San Giovanni, poi fortezza dal 1557, ebbero presumibilmente due fasi: la prima con la costruzione della scarpa terminata avanti il 1486, che egli vide; la seconda con la costruzione del bastione pentagonale che né il pellegrino né l'orafo registrano poiché le iconografie sono anteriori a tale data. Altri controlli incrociati sono possibili. Ad esempio il Palazzo dei Rettori aveva un primo impianto duecentesco trasformato in forme gotiche nel 1436 e infine nei modi che possiamo definire dell'incipiente rinascimento dalmata nel 1464, ma la sua delineaazione nelle due iconografie

appare diversa: primitivo nella statua d'argento, più elaborato e con una ricca trina in marmo a coronamento nel Grünenberg. A mio parere tutto ciò consentirebbe di retrodatare la placchetta al 1463, anno in cui molti lavori alle fortificazioni erano o si stavano completando, come voto beneaugurante per la sicurezza che San Biagio avrebbe accordato alla città, giusto prima del completamento del Palazzo dei Rettori.

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In questi casi le tracce urbane si fanno struttura, cioè costituiscono qualcosa di identificabile senza possibilità d'errore da parte dei loro destinatari principali: se tuttavia un certo segno è diverso dal reale osservabile all'epoca, ciò non impedisce che di quel segno e della struttura che sottende se ne dia un'interpretazione diversa proprio in funzione della qualità sensitiva dell'immagine. Il veicolo è diventato messaggio, e il segno riconduce a un significato icona di sé stesso.

Altre figurazioni devozionali di Dubrovnik ancora attendono di essere studiate nonostante siano riprodotte in libri, cartoline, ceramiche, gadget turistici e altro: si tratta di dipinti su tela o tavola, alcuni di assoluto pregio per la storia dell'arte croata e rinascimentale in genere. Si prenda ad esempio la figurazione urbana contenuta nello scomparto sinistro del trittico dipinto da Nikola Božidarević nei primissimi anni del Cinquecento conservato nel Museo dei Domenicani, che mostra San Paolo insieme a San Biagio il quale sorregge con entrambe le mani la città dettagliatamente delineata (FIG. 6). L'ariosità della rappresentazione con quegli smaglianti fondi oro e tutte quelle barche in primo piano, le celebri caracche ragusee che per secoli assicurarono la fortuna della città, insieme al porto e alle massicce fortificazioni che lo proteggono oltre lo sbarramento delle Kaša, vogliono farsi carico di una autocelebrazione capace di stupire mercanti e viaggiatori: e lo storico sarà soddisfatto nel constatare che il disegno della torre di San Giovanni non ancora trasformato in forte concorre a ipotizzare una datazione vicina ma di alcuni anni posteriore alla veduta del Grünenberg, come nei fatti è.

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Totalmente diverso il caso in cui il segno vuole significare esattamente ciò che rappresenta, in quel che definiamo iconografia storica per eccellenza. Possiamo averne di tipi diversi ma per semplicità facciamo ricorso a due categorie: derivato e originale, i cui significati non hanno bisogno di spiegazione. Prendiamo il tipo derivato che per Dubrovnik assume le vesti di una trascrizione che sono riuscito a ricostruire solo sommariamente poiché mancano indagini e studi di dettaglio nonostante sia riprodotta nei contesti più svariati (FIG. 7). La trascrizione, databile all'inizio del Settecento secondo Peković, si trova nell'Archivio di Dubrovnik ed è stata riprodotta da storici e illustratori della città sì da farne un'icona delle sue origini. Nessuna indagine a quanto ne so è stata invece fatta per raccorderla col documento originale, del quale si sono perse le tracce. Si tratta di uno schizzo a penna di cm 15x20

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FIGURA 1  
Dubrovnik, terremoto 1667  
(Milan Rešetar, "Slike Staroga Dubrovnika,"  
Narodna starina III/8/2 (1924): fig. 10).

FIGURA 2  
Giuseppe Rosaccio: Dubrovnik 1598  
(Milan Rešetar, "Slike Staroga Dubrovnika,"  
Narodna starina III/8/2 (1924): fig. 4).

FIGURA 3  
Matthaeus Merian, Dubrovnik 1638  
(Milan Rešetar, "Slike Staroga Dubrovnika,"  
Narodna starina III/8/2 (1924): fig. 6).

FIGURA 4  
Dubrovnik  
(Milan Rešetar, "Slike Staroga Dubrovnika,"  
Narodna starina III/8/2 (1924): fig. 3).

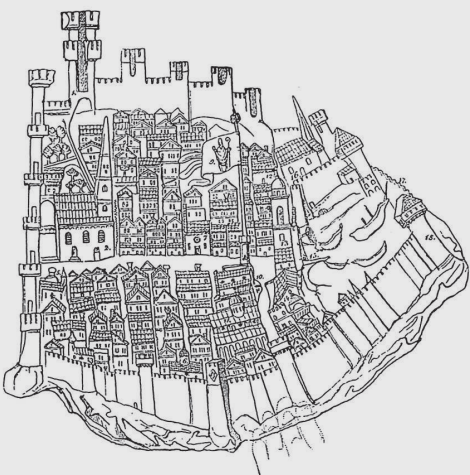
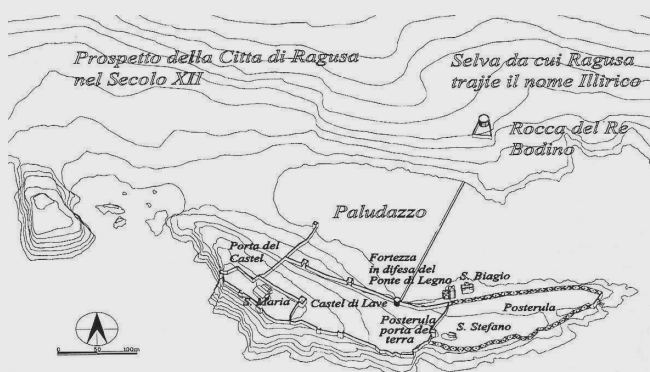
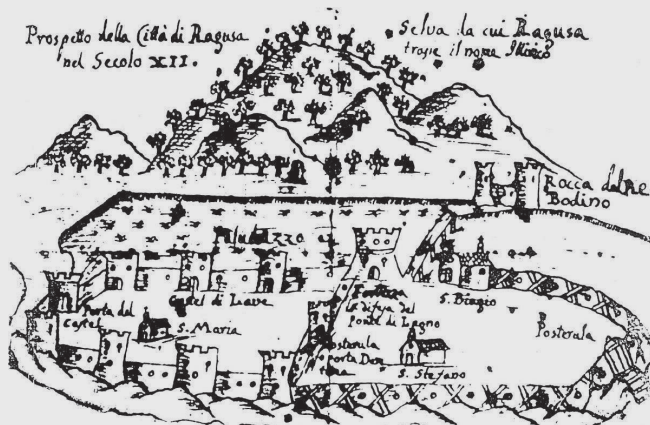
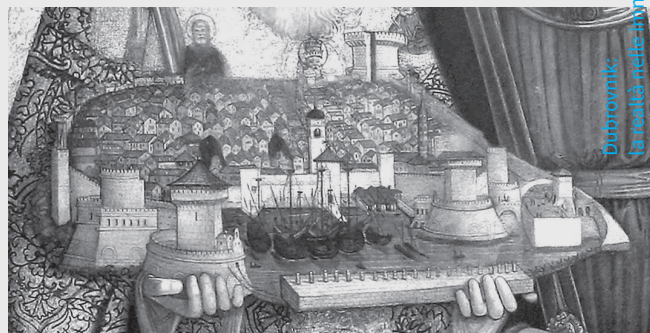
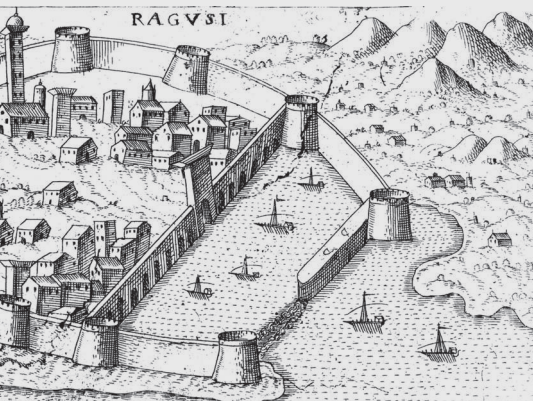
FIGURA 5  
Konrad Grünenberg, Dubrovnik  
(Konrad Grünenberg, *Beschreibung der Reise  
von Konstanz nach Jerusalem*, 1487. Badische  
Landesbibliothek Karlsruhe, cod. St. Peter  
pap. 32).

FIGURA 6  
Nikola Božidarević, Trittico per la cappella  
della famiglia Bonda nella chiesa dei  
Domenicani di Ragusa (dettaglio)  
(fotografia: Institut za povijest umjetnosti).

FIGURA 7  
Prospetto della Città di Ragusa nel Secolo XII.  
(Državni Arhiv u Dubrovniku,  
Fond Bassegli-Gozze).

FIGURA 8  
Željko Peković, *Dubrovnik. La fondation et  
le développement de la ville médiévale*,  
Split: Ministère de la Culture de la République  
de Croatie, 1998, fig. 24.





D'Arrovink  
 La civiltà medievale in Sicilia

nell'Archivio privato della famiglia Bassegli-Gozze acquistato dall'Archivio di Dubrovnik nel 1941, tracciato dopo il 1817 su informazioni posteriori al 1588. Il disegno originale sarebbe stato contenuto in una *Descrizione della Città di Ragusa e da dove ebbe la sua origine*, menzionata al f. 135 di un "Indice del libro 2.ndo delle Cronistorie di Ragusa di P. Damiano Ohmuchevich probabilmente andate perdute" come si esprimono i registi dell'Archivio. La descrizione in italiano che accompagna il disegno continua in un altro foglio nel cui retro è un elenco dal titolo "Di cento, trentadue famiglie di Nobili, le quali erano nella città di Ragusa, solamente ventinove perseverano questo presente anno 1588, e sono le seguenti [segue elenco]". In sostanza qualcuno della famiglia Gozze ha copiato dopo il 1817 (la data è ricostruibile a partire dal fascicolo che contiene il disegno) parte o tutte le cronache di questo Damiano Ohmuchevich che scriveva al cadere del Seicento, cui si deve il *Prospetto della Città di Ragusa nel Secolo XII*, da lui ricostruito sulla base della Descrizione citata: si tratterebbe quindi di un disegno di terza mano rispetto a un originale di difficile datazione. In questo Prospetto l'insediatura viene definita senza mezzi termini Paludazzo; le montagne che la sovrastano sono popolate di querce, cioè della "Selva da cui Ragusa trasse il nome Illirico"; un Ponte di legno è gettato fra le due sponde a separare il Paludazzo dal mare aperto guardato da una Fortezza e dalla Rocca del Re Bodino. L'insediamento si sviluppa interamente sul promontorio meridionale e appare separato in due compartimenti: quello verso il mare è protetto da una cinta fortificata continua fatta di fascine e sbarramenti in legno, l'altro appare munito di mura e torri in solida fabbrica anche sul lato che lo separa dal primo. Questo ha nome Posterula, l'altro Castel di Lave, che sono i nomi segnati in bella evidenza all'interno dei due circuiti difensivi. Castel di Lave è caratterizzato dalla chiesa di Santa Maria e dalla Porta del Castel che si apre a occidente, laddove ancora oggi c'è la porta di collegamento più importante col territorio raguseo. Posterula dalla presenza di due chiese, San Biagio e Santo Stefano entrambe all'interno della fortificazione: stranamente alcuni commentatori sostengono che San Biagio si trovi in realtà fuori del circuito, e così fa anche Peković nella trascrizione grafica computerizzata, peraltro imprecisa (FIG. 8).<sup>4</sup>

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Due domande si impongono a proposito di questa prospettiva. La prima: si tratta davvero di un documento storico? Difficile che si tratti di un falso: tutto quanto viene mostrato appare coerente coi risultati delle indagini e delle fonti storiche. Ad esempio, la Rocca del Re Bodino trae nome da un personaggio storico menzionato nelle cronache ragusine che avrebbe assediato a lungo la città proprio nel XII secolo: questa rocca viene citata posteriormente come Fortezza orientale e incorporata infine nella costruzione dei bastioni verso la fine del XIII secolo. La seconda: il nucleo del primo insediamento è stato

Posterula o Castel di Lave? La veduta sembra escludere una posizione di distacco del castelletto altomedievale nell'organizzazione urbana, che non viene menzionato. Vari indizi concorrono a far propendere per la prima ipotesi: nonostante l'apparente precarietà della fortificazione, la presenza della chiesa dedicata a San Biagio, punto di riferimento costante e personaggio venerato attraverso i secoli fino ai giorni nostri, fa pensare che proprio qui i profughi di Epidauro si fossero dapprima diretti. Col tempo e con l'aumento di popolazione dovuto a profughi provenienti da altre località l'insediamento si dovette espandere nelle aree adiacenti che vennero dotate di fortificazioni più robuste in grado di difendere anche il primo sito. Al massimo si può aver avuto un doppio insediamento alle due estremità del promontorio, saldatosi poi nel tempo e incernierato sul presunto castelletto. Le ricostruzioni locali pressochè unanimemente tendono a riconoscere il sito del primitivo insediamento nel punto più elevato del promontorio, che verrà poi guardato, insieme alla porta del Castel, dalla fortezza di Lovrijenac dall'altra parte del braccio di quel mare che si vuole essere stato il primo porto di Ragusa. Non è il caso di affrontare in questa sede la complessa questione perché andrebbe strettamente collegata sia con risultanze archeologiche tuttora difficili da decifrare, sia coi dettati degli Statuti comunali che a più riprese menzionano parti antiche di Dubrovnik.

Però l'immagine non è un falso ottocentesco: contiene troppi riferimenti storici di spessore inequivocabile. Ma cosa rappresenta oltre al dipanarsi dei segni, significanti e significativi? In realtà non pare una struttura urbana: troppo diluite sono le presenze e neppure si riesce a stabilire il nucleo del primo insediamento, se Posterula o Castel di Lave. Tale incertezza deriva dal non saper collocare bene il sito del primo porto di Ragusa. Se questo fosse stato a ovest, come ritengono pressochè unanimemente le ricostruzioni locali, cioè nella breve insenatura poi guardata dall'imponente fortezza di Lovrijenac staccata dalle mura cittadine, allora il sito originario sarebbe Castel di Lave; se invece il porto fosse stato a est, cioè nel sito che occupa ancora oggi e dal quale si vede benissimo Cavtat, l'antica Epidauro da dove gli abitanti fuggirono nel VII secolo scacciati da invasioni di popoli slavi e barbari, allora non c'è dubbio che Posterula, significativo toponimo medievale, sia stato il fulcro dal quale si svilupperà Ragusa. La trascrizione non pende né per l'una né per l'altra ipotesi: ad est c'è il Paludazzo, un braccio di mare che si inoltra fra due ripe di cui una fortificata; ad ovest invece non si scorge niente che possa fornire il sospetto di un porto, tranne quella Porta del Castel (s'intende di Lave) sul circuito murario che da qualche parte importante doveva pur dare accesso. Queste due ripe saranno destinate a unirsi dopo la bonifica del Paludazzo dove oggi si snoda lo Stradun con la parte più bassa della città che così assumerà il volto destinato a caratterizzarla

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## TAVOLA 1

Schema grafico della placchetta argentea di San Biagio di cm 14.4x13.6 coi numeri identificativi delle emergenze urbane (Milan Rešetar, "Slike Staroga Dubrovnika," Narodna starina III/8/2 (1924): 5-6, elaborazione Ilario Principe).

**1**

Torre Minčeta,

**2**

Chiesa di San  
Francesco col  
convento, il giardino  
dietro e il campanile  
aguzzo,

**3**

Convento di San  
Tommaso,

**4**

Convento di Santa  
Chiara,

**5**

Fontana di Onofrio,

**6**

Convento di Santa  
Maria poi diventato  
ospedale militare,

**7**

Chiesa di San Pietro,  
Lorenzo e Andrea,

**8**

Statua di Orlando  
con l'altissimo  
pennone,

**9**

Effigie di San Biagio  
sulla bandiera  
ragusea,

**10**

Chiesa di San Biagio,

**11**

Cattedrale,

**12**

Chiesa di San  
Jacopo nel luogo  
che ora si chiama  
Peline,

**13**

Campanile civico  
con l'orologio,

**14**

Palazzo dei Rettori,

**15**

Porto,

**16**

San Domenico,

**17**

Catena che chiudeva  
il porto,

**18**

Fortezza di San  
Giovanni.

definitivamente. Se il segno del porto manca non è perchè manca il porto o il foglio è piccolo; semplicemente non vi è necessità di mostrarlo. Che in tutta evidenza all'epoca ci fosse un porto è fuori dubbio; dove fosse non era necessario indicare forse perchè non era parte della struttura urbana a pieno titolo, se non si vogliono addurre improbabili ragioni di segretezza. In questo caso tanti segni non formano ai nostri occhi una struttura pur se una struttura è sottoposta a tutti i segni ivi tracciati dall'anonima mano.

Per l'iconografia storica originale si può fare riferimento a tre carte manoscritte conservate nella Miscellanea di Architettura Militare dell'Archivio di Stato di Torino, costituita da cinque volumi con 576 tavole delle più svariate località, alcune non identificate, eseguite tra la metà del Cinquecento e la metà del Seicento che nonostante diverse promesse non sono state oggetto di edizione critica. Le tre carte sono state da me segnalate per la prima volta in una conferenza tenuta all'inizio di ottobre 1990 a Palazzo Sponza<sup>5</sup> e sono state variamente riprodotte in scritti di storici locali senza mai arrivare a un'analisi dettagliata. Qui si riprendono molte delle indicazioni già fornite alla luce di nuove ricerche, inadeguate tuttavia dal momento che l'edizione critica è di là da venire, né si è potuto realizzare uno studio comparativo con le altre 14 carte dalmate di questa Miscellanea: che sembra essere stata iniziata da Emanuele Filiberto e proseguita dal figlio Carlo Emanuele I, forse su precisa commissione e comunque raccogliendo anche materiali eterogenei già disponibili, e aveva scopi di conoscenza di vari territori e delle loro fortificazioni in un'epoca in cui profondi rivolgimenti si annunciavano nell'assetto politico istituzionale europeo. Proprio nel 1611 Carlo Emanuele I infatti pensa di fare di Ragusa una base della guerra contro i Turchi, iniziativa non si sa con quanto favore vista dai ragusei se poi niente viene realizzato a tal fine. Le tre immagini sono: una veduta territoriale in tecnica mista prospettico zenitale, un disegno in prospettiva del porto, una sorprendente planimetria zenitale del centro storico dove solo le Kaše antistante il porto è restituita in prospettiva. La prima è da considerare anteriore alle altre due, che dovrebbero essere coeve e perciò rispondenti a un medesimo obiettivo: per convincersene basta osservare la forma del Revelin, nella prima carta totalmente diversa dalla prospettiva fornita dalla carta del porto e dalla restituzione zenitale, in queste due ultime parzialmente assimilabile a quanto si può oggi vedere.

La carta territoriale è un disegno a penna e acquerellature colorate su carta di cm 57,5x42 con "Scala di passi cento veneti" pari a cm 4.5: copre l'area compresa fra il Lazzaretto e una porzione del porto di Santa Croce, Gruž, così chiamato dal nome della chiesa del Convento dei Domenicani fondato nel 1427; la parte occidentale compreso il nome del porto è restituita in prospettiva ortogonale (FIG. 9). A sinistra della città è correttamente

segnalata la fortezza di Lovrijenac, pure essa con una pianta schematica di forma diversa da quella che apparirà nella carta planimetrica. Quel che sembra una catena a chiudere il porto sottostante Bokar sono invece scogli affioranti. A destra della città è segnalato il Revelin congiunto con un ponte levatoio alla porta di Ploče: iniziata nel 1463, questa massiccia fortificazione guardava la città a mezzogiorno e ne sorvegliava il porto dall'alto, mentre il ponte viene datato al 1449 e riceve definitiva sistemazione proprio in seguito alla costruzione della fortezza. E' un punto cardine delicatissimo dell'organizzazione urbana e difensiva della città: lo prova l'angolo della fortezza a guardia della porta e del ponte terminato solo nel 1601 poichè si progettava di traslocare entrambi in posizione più difendibile, e di questo progetto si continuerà a parlare fin quasi alla vigilia del terremoto del 1669. In realtà i ponti sono due: uno di collegamento fra la porta e il Revelin, e l'altro in pietra a due archi fra questo e la strada costiera al di là del fossato. La delineazione del forte è diversa dalle altre carte ma ciò non vuol dire che sia anteriore alla data della sua sistemazione: il modo in cui è delineata l'area del porto, che appare frutto di fantasia, fa intendere che chi l'ha disegnato non era in possesso o non ricordava più gli elementi sui quali impostare le sue notazioni grafiche.

Dentro le mura Ragusa è completamente muta, ad eccezione del suo nome e di una singolare campitura in rosso e bruno sovrapposta alla parte della città che guarda il mare aperto fra il forte Bokar e la zona su cui sorgerà l'insediamento dei Gesuiti nel primo quarto del Settecento, dove esisteva l'altra antica struttura benedettina di Santa Maria del Castello e dove si presume che la stessa Dubrovnik possa aver registrato il suo primitivo insediamento. Questa singolarità si può spiegare in vari modi. In primo luogo può darsi che il disegnatore abbia voluto riferirsi appunto al primo sorgere della città che le cronache vogliono insediata in un sito denominato "Lave de Campo", forse con riferimento alle rocce ritenute laviche di cui sarebbe formata la scogliera sulla quale è stata impostata la prima muraglia di difesa; infatti con un medesimo segno vengono individuate le rocce incumbenti sul mare al di là del muro. In secondo luogo può trattarsi di una vasta area sgombra di edificazioni che di conseguenza viene segnata come dirupata e spoglia al pari della scogliera al di fuori del corrispondente muro. Non è inconsueto che a un certo punto dello sviluppo di fondazioni urbane medioevali queste abbandonino i primitivi siti per spostarsi in aree pianeggianti o per inglobarle negli incasati in crescita: ciò è avvenuto anche per Dubrovnik che ha bonificato il braccio di mare sul quale oggi si distende lo Stradun, raccordando due distinti insediamenti che da due rupi si fronteggiavano; e inoltre si devono ricordare le fondazioni monastiche che tradizionalmente si insediavano in località appartate della struttura



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## TAVOLA 2

Particolare della planimetria territoriale dell'Archivio di Stato di Torino: i numeri si riferiscono alle strutture fortificate sotto indicate seguendo la carta allegata alla guida Le mura di Dubrovnik di Lukša Beritić, edizione italiana pubblicata a Spalato nel 1990 (elaborazione di Ilario Principe).

**1**  
Porta Pile,

**2**  
Bastione e torre di  
Porta Pile,

**3**  
Bastione e torre di  
San Francesco,

**4**  
Torre Angelo  
superiore,

**5**  
Torre Minčeta,

**6**  
Probabile  
ubicazione della  
torre quadrangolare  
di Santa Barbara,

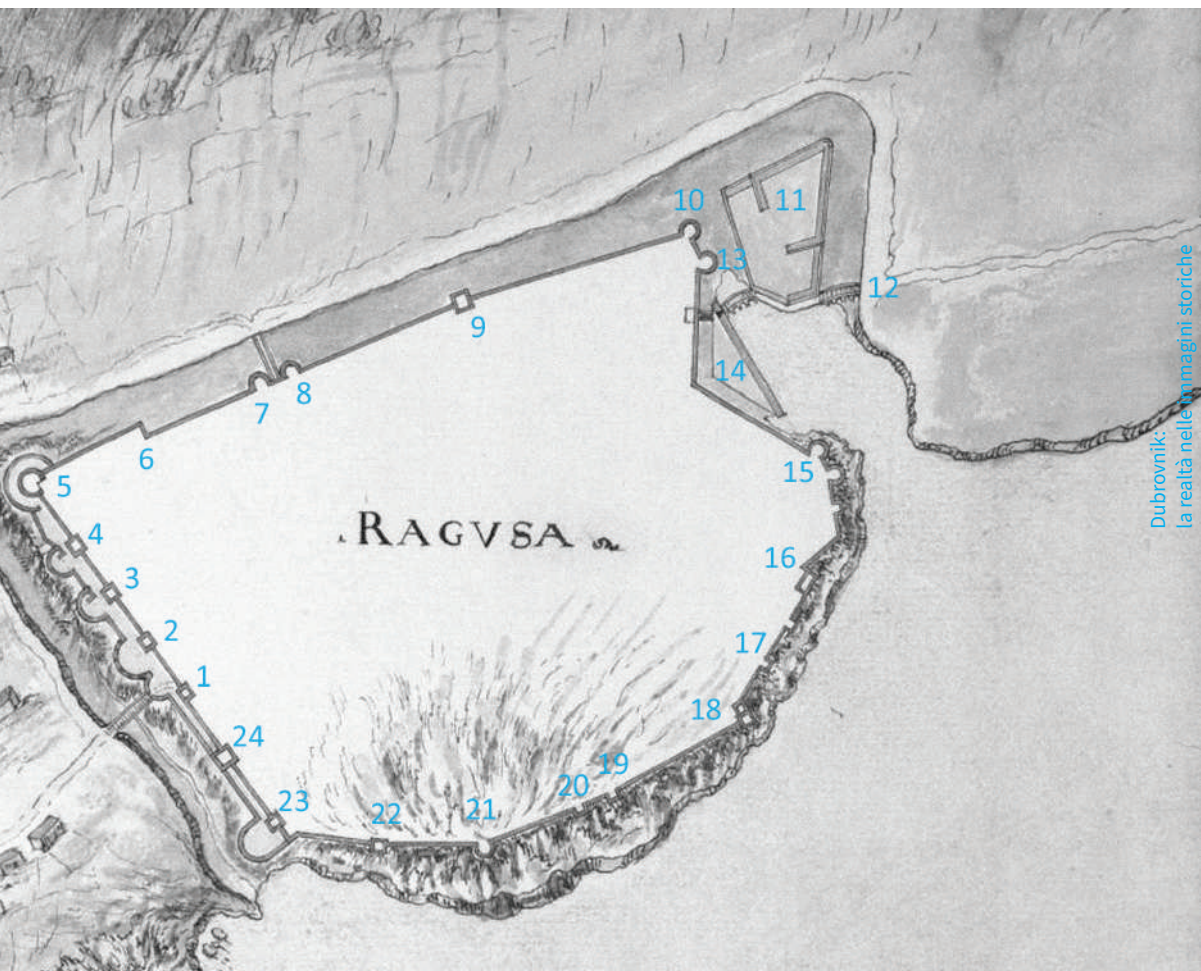
**7**  
Torre di Santa Lucia,

**8**  
Torre di Santa  
Caterina (queste due  
ultime torri hanno  
forma e ubicazione  
diversa),

**9**  
Torre di San  
Giacomo, in realtà  
semicircolare,

**10**  
Due torri rotonde  
delle quali non si ha  
corrispondenza  
reale,  
**11**  
Revelin,  
**12**  
Porta Ploče,





Dubrovnik:  
la realtà nelle immagini storiche

**13**

Ponte levatoio di Porta Ploče,

**14**

Porto, senza corrispondenza con la realtà,

**15**

Fortezza di San Giovanni, senza corrispondenza con la realtà,

**16**

Probabile sito del bastione di San Salvatore,

**17**

Due piccole torri di cui esistono riferimenti documentari che forse si riferiscono alla cortina muraria prima della costruzione in questo punto del bastione di Santo Stefano,

**18**

Bastione di Santa Margherita,

**19**

Torre Stella,

**20**

Fortificazione detta Campana dei morti,

**21**

Torre di Santa Maria,

**22**

Torre Kalarinja,

**23**

Torre Bokar,

**24**

Torre Puncijela.

urbana venendo poi da questa inglobate. Una terza ipotesi potrebbe spiegare questo segno con l'indicare a un attaccante dal mare il punto del circuito murario di maggiore solidità, stretto com'era sui due versanti da ripide scarpate rocciose, e quindi di scoraggiare un attacco da quel lato; oppure al contrario di segnalarne la minore solidità in quanto la sua posizione ritenuta imprevedibile non richiedeva un'attenta sorveglianza. Tale ipotesi può essere avanzata considerando che la pianta mal si raccorda con le altre due di Dubrovnik mentre fa parte di un insieme di immagini coeve disegnate dalla stessa mano, com'è evidente in una delle due di Curzola, con un medesimo intento che potrebbe essere lo spionaggio militare. Sta di fatto che sembra di trovarsi in un'area che stia andando a fuoco, oppure che sia cannoneggiata quando sappiamo che in questo comparto urbano tali avvenimenti le cronache non riferiscono. Peralto a un attento esame si vede che le linee rosse e brune iniziano da uno specifico tratto delle mura e si irradiano verso l'interno: questo tratto è incernierato sulla Campana dei morti o bastione di San Pietro, e si sviluppa sulla cortina che lo fiancheggia sia verso la torre Stella che verso la torre Santa Maria. E' il tratto più elevato del circuito murario, costruito per primo e di continuo rafforzato perché forse non difficile da espugnare, ed è da qui che scola l'acqua nelle condutture urbane: quale migliore indicazione per un attacco da quel lato? Ma c'è di più. Presso la torre di Santa Maria venne costruita nel 1513 una grande cisterna per i rifornimenti d'acqua piovana, e l'anno dopo il convento ottenne l'autorizzazione ad aprire una finestra nel muro a condizione di demolire le rocce sottostanti. Quella finestra, a dispetto dell'asperità della costa rocciosa che non si sa fino a qual punto venne effettivamente resa inaccessibile, doveva essere un richiamo troppo evidente per non doverlo segnalare. Né il convento né la finestra vengono però disegnati nella planimetria urbana e ciò è assai singolare poiché questa struttura avrebbe dovuto essere messa in evidenza se davvero di spionaggio militare si trattava.

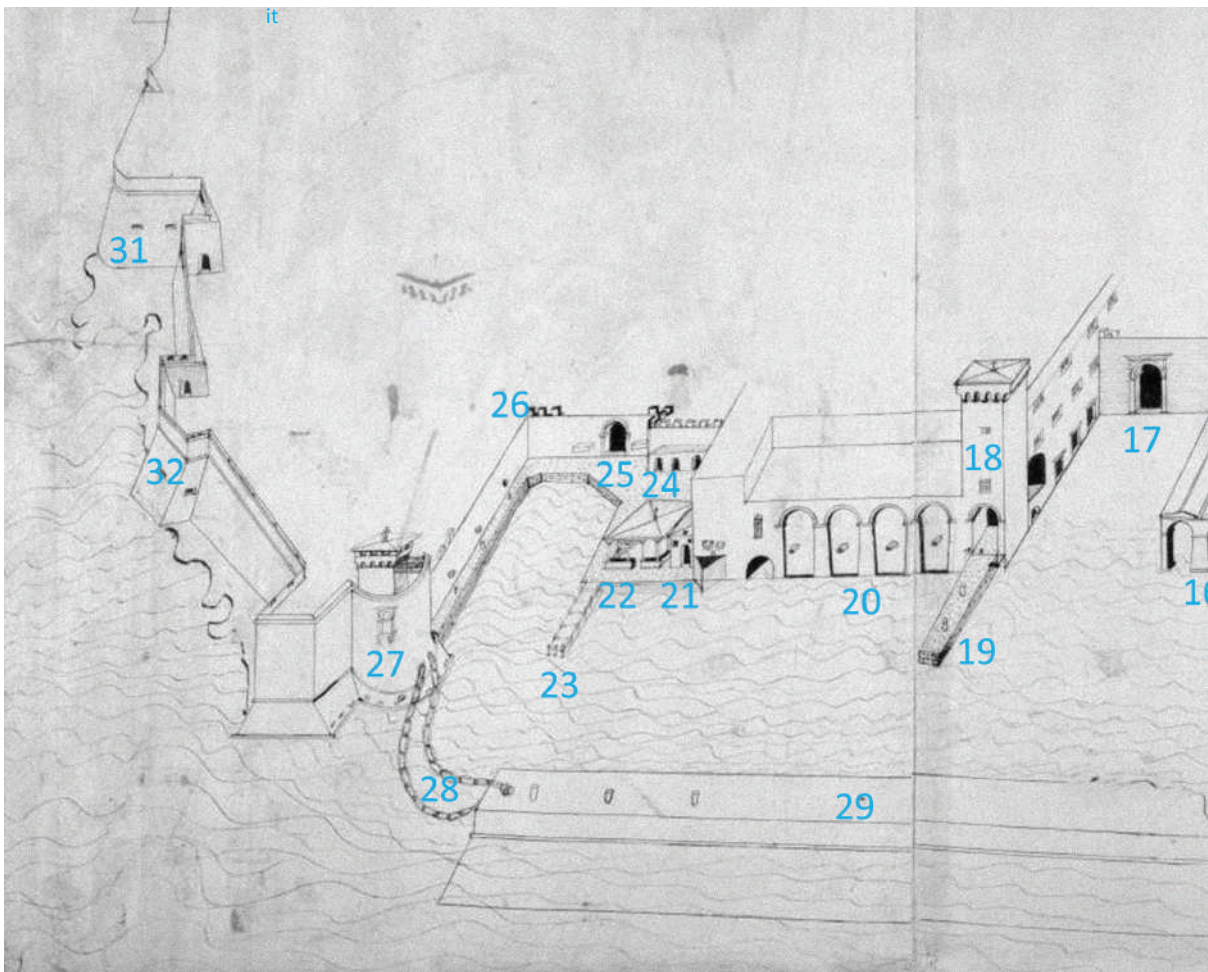
Sulla stessa carta al margine inferiore destro si scorge un pezzetto dell'isola di Lokrum in cui è accuratamente disegnato l'angolo di una struttura architettonica in forma di fabbricato continuo a recintare una vasta superficie quadrangolare, oggi segnalato localmente a fini turistici come Lazzaretto. L'isola è sottoposta a protezione integrale naturalistica ed è una meta di eccezionale interesse a una ventina di minuti di barca dal porto turistico di Dubrovnik; il supposto Lazzaretto è un lunghissimo muro in pietra allo stato di rudere invaso dalla vegetazione che non permette la praticabilità dello spazio che contiene, e neppure di leggerne le caratteristiche oltre le scabre mura. Nel 1613 i Veneziani sbarcarono sull'isola per fortificarla a proprio vantaggio, o usarne fortificazioni esistenti, ma ne furono respinti dai Ragusei: potrebbe trattarsi del ricordo di quell'evento poiché non avrebbe avuto

senso indicare una fortificazione così marginale senza riferirsi a qualcosa che all'epoca tutti conoscevano, com'era appunto un tentativo, respinto, della Serenissima; oppure della specificazione grafica di una struttura preesistente che poteva essere utilizzata a tale scopo.

Le case sparse nella campagna si addensano maggiormente fra la città e il porto di Santa Croce. Vi si possono riconoscere due tipologie: una con muro a circondare un orto quadrato, l'altra isolata nella campagna ma quasi sempre vicina ad alberature. Non credo siano state segnate a caso ma riprendono una situazione insediativa effettivamente esistente all'epoca: valgano per tutte le due chiese chiaramente delineate e la fortificazione che si scorge appollaiata su una montagna nel margine inferiore sinistro, ruotata ad angolo retto rispetto a Ragusa ma orientata rispetto alla insenatura di Santa Croce. Una strada si stacca da Dubrovnik all'altezza di Porta Pile dove si scorge il vasto spazio esterno alle mura su cui si estenderà l'area urbanizzata, dirigendosi verso Santa Croce non per il percorso più breve ma avvicinandosi prima alla costa con un'ampia falcatura verso la zona su cui sorge oggi l'ospedale, poi dirigendosi verso il braccio di mare interno. Nessuna urbanizzazione invece all'altro capo della città, dove superato il Revelin si stacca la strada costiera per Ragusa Vecchia, ossia Cavtat. Manca qui il Lazzaretto costruito nel 1590, e questa può essere un'indicazione sulla data di redazione della carta.

Per quanto riguarda le fortificazioni, evidenziate nella [Tavola 2](#), dalla Minčeta a Bokar, vale a dire sul lato occidentale, la delimitazione appare corretta e in sintonia con quanto mostrato nella pianta urbana. Sul lato mare da Bokar a San Giovanni le cose sono un po' diverse. La torre Kalarinja è correttamente segnata all'interno di Bokar col suo caratteristico baluardo tondeggiante, poi il disegno si fa rettilineo trascurando la risega rinascimentale di collegamento al muro. Si riconosce la torre quadrata di Santa Maria e quella tonda di San Pietro, o Campana dei morti, poi ancora due torri quadrate vicine fra loro, e così delineate anche nella pianta urbana, di cui una è la torre Stella e dell'altra non è stato tramandato il nome; più avanti il bastione di Santa Margherita non ha ancora la forma tondeggiante ma si presenta con due torri quadrate affiancate sulla verticale di traguardo visivo. Di qui fino a San Giovanni, delle cinque torrette quadrate alternate a puntoni e riseghe a seguire la morfologia della scogliera, ne sono chiaramente visibili tre, più una di maggiori dimensioni d'inconsueta forma rettangolare. Sul lato terra a settentrione la lunga cortina rettilinea a partire dalla Minčeta è interrotta prima da una risega, poi da due avancorpi semicircolari, e infine da un'altra isolata torre quadrata prima di arrivare al sistema delle fortificazioni del porto: un disegno che appare di fantasia. Che peraltro si aggrava in maniera sconcertante sul lato del porto, guardato da due coppie di orecchioni uno

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- |                       |                    |                  |                      |                       |
|-----------------------|--------------------|------------------|----------------------|-----------------------|
| <b>1</b>              | <b>5</b>           | <b>9</b>         | <b>13</b>            | <b>17</b>             |
| Revelin,              | Torre di San Luca, | Torre anonima    | Porta Macello,       | Porta della           |
| <b>2</b>              | <b>6</b>           | attestata dai    | <b>14</b>            | Pescheria poi         |
| Orecchione del        | Torre Asimon,      | documenti,       | Torre di San         | modificata a sesto    |
| Revelin verso porta   | <b>7</b>           | <b>10</b>        | Domenico con         | acuto,                |
| Ploče,                | Fune per il        | Macello,         | merlatura aggettante | <b>18</b>             |
| <b>3</b>              | sollevamento del   | <b>11</b>        | poi scomparsa,       | Torre della Pescheria |
| Primo ponte           | sollevoio,         | Antemurale di    | <b>15</b>            | poi demolita,         |
| levatoio sul fossato, | <b>8</b>           | collegamento con | Magazzino di         | <b>19</b>             |
| <b>4</b>              | Torre di San       | la Torre di San  | attrezziera,         | Molo principale in    |
| Porta sulla strada    | Giacomo,           | Domenico,        | <b>16</b>            | muratura,             |
| per Cavtat,           |                    | <b>12</b>        | Due bacini del       | <b>20</b>             |
|                       |                    | Muro principale  | Piccolo Arsenale,    | Quattro bacini del    |
|                       |                    | di difesa,       |                      | Grande Arsenale,      |

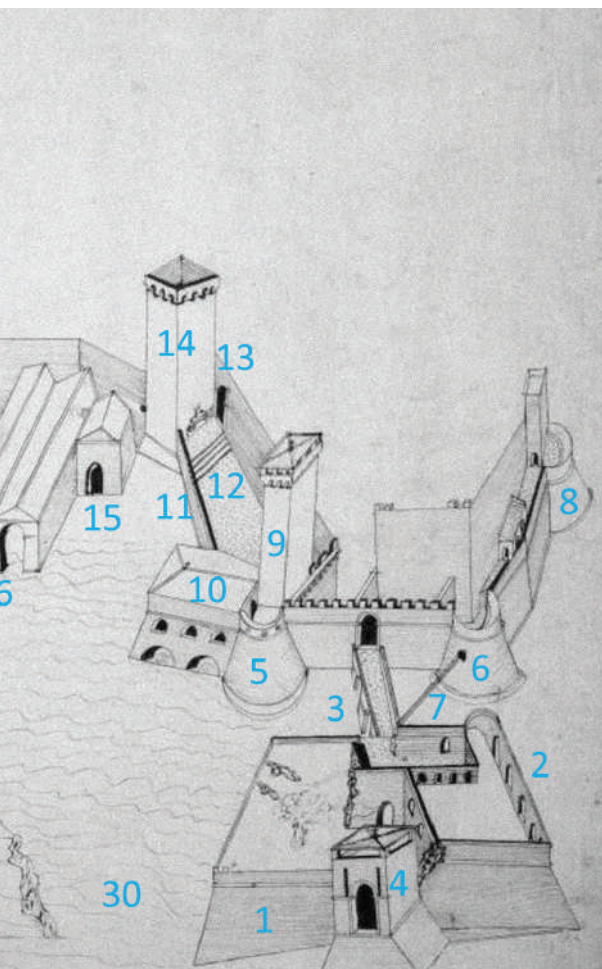


TAVOLA 3

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Particolare dello schizzo prospettico del porto con le sue fortificazioni e strutture dal disegno conservato all'Archivio di Stato di Torino (elaborazione di Ilario Principe).

- 21** Porta del Fondico col moletto triangolare di protezione,  
**22** Loggia quadrangolare colonnata fuori le mura,  
**23** Molo secondario in legno,  
**24** Bastione Palazzo,  
**25** Porta della Ponta o del Porto,  
**26** Muro di cortina angolare di collegamento,  
**27** Fortezza di San Giovanni col primitivo impianto quadrangolare e il bastione di protezione a fianco,

- 28** Catene per la chiusura del porto lato sud,  
**29** Kaše diga artificiale a protezione del porto,

- 30** Breccia nelle Kaše da cui mancano le catene; i due cannoni sullo spalto del Revelin puntano verso il centro del porto e dietro di essi appaiono muri sbracciati e rovine,  
**31** Bastione di Santa Margherita con la sua porta,

- 32** Probabile bastione di San Salvatore con la sua porta in una formulazione precedente il riammodernamento avvenuto dopo il 1647; manca sul medesimo muro di cortina il successivo bastione di Santo Stefano realizzato dopo il terremoto del 1669.

dei quali vorrebbe identificarsi con la fortezza di San Giovanni: l'intera insenatura del porto e le strutture che la fiancheggiano sono inattendibili, e mancano le Kaše che aveva attirato l'attenzione del pellegrino diretto ai luoghi santi e che nelle altre due carte torinesi rimane perfettamente delineata, a meno di non volervi riconoscere quel lungo steccone a chiudere un porto dall'improbabile forma a triangolo ottuso. Vi esiste il Revelin, ma in forme diverse da quelle registrate dalla prospettiva del porto e dalla planimetria urbana, mentre l'unica segnalazione attendibile sono i due ponti levatoi di accesso a Porta Ploče. In sostanza sembra che il disegnatore abbia avuto modo di osservare con sufficiente agio due lati della città e il territorio circostante dal lato occidentale presso Gruž, ma non abbia avuto accesso né alla struttura più importante di Dubrovnik, cioè il porto, né alle fortificazioni che la guardavano a settentrione dal lato del monte Srđ.

La seconda immagine della Miscellanea torinese è una veduta prospettica del porto con le fortificazioni lato mare in un disegno a penna di cm 55.5×42 rimasto forse incompiuto stante l'approssimazione con cui vengono delineati alcuni elementi delle strutture portuali e delle relative fortificazioni (FIG. 10). Il documento è muto ma gli elementi rappresentati si riconoscono con relativa facilità aiutandosi con la preziosa analisi delle fortificazioni dovuta al Beritić, già citata: da questo testo essenziale sono state tratte alcune delle notizie che seguono e che in parte riprendono il testo della conferenza del 1990; la sintesi visiva è espressa nella [Tavola 3](#). A destra in primo piano appare il Revelin, la cui forma è molto migliorata rispetto alla carta precedente: viene segnalato l'orecchione tondeggiante sullo spigolo che guarda Porta Ploče ed è presente il primo ponte sul fossato con la porta d'uscita di forma quadrangola sulla strada di Cavtat, ma non c'è traccia del forte parapetto proposto intorno al 1617 dall'architetto Michele Hranjac e costruito dieci anni più tardi; e neppure del cavaliere che in quella occasione avrebbe dovuto essere realizzato sullo spigolo esterno in linea con l'orecchione. Il ponte levatoio del Revelin si dirige verso Porta Ploče con un basso muro merlato fra due torrioni rotondi: quello di sinistra può riconoscersi nella torre di San Luca, quello di destra nella torre denominata Asimon, dagli alti muri ma in basso avvolta da un bastione tondeggiante d'epoca posteriore così caratteristico nelle fortificazioni di Dubrovnik; la fune di collegamento con la porta d'ingresso del Revelin vuole alludere al sollevamento del ponte levatoio, mentre la torre semicircolare estrema sulla destra è quella di San Giacomo.

Sopra il bastione di San Luca la snella alta torre non è di fantasia poiché si legge nelle storie di Ragusa che questa era l'unica torre oltre la Minčeta a presentare, anteriormente al 1884 quando ne venne demolita la copertura, una merlatura aggettante a mensole come nel disegno è mostrato. In realtà

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com'è facile notare tutte le strutture fortificate maggiori del porto avevano coronamenti analoghi. Nessuna traccia invece della Chiesa dell'Annunciazione, costruita nel 1536, che su questo bastione doveva trovarsi. Il basso e massiccio edificio immediatamente sulla sinistra rappresenta il macello, da cui si stacca un antemurale per la torre di San Domenico e posteriormente il muro di difesa vero e proprio su cui si apre l'omonima porta Macello costruita nel 1612: se tale lettura è corretta la sua presenza fornisce un indizio per la datazione della carta. Questo tratto di cortina termina con la torre di San Domenico a pianta quadrangolare, ubicata di fronte al portale della chiesa da cui prende nome: anche questa torre mostra merlatura a mensole, ma mentre per quella di San Luca le mensole sono visibili in quadri e fotografie anteriori al 1884, in questo caso non se ne aveva altra notizia poichè la copertura era stata demolita durante l'occupazione austriaca e nessun'altra traccia era rimasta. I tre edifici bassi sotto la torre fuori delle mura vogliono alludere, i due più lunghi al cosiddetto Piccolo Arsenale, il minore a un magazzino di attrezzeria. L'apertura nel tratto di cortina successivo è identificabile con la porta della Pescheria della fine del Trecento ma non presenta somiglianza con l'attuale, costruita com'è con arco gotico a tutto sesto e non con architrave piana di tipo rinascimentale come qui disegnata, priva anche della statua di San Biagio che le è sovrapposta. Ancora a sinistra si può notare l'alta torre della Pescheria di cui resta ricordo in qualche quadro poichè venne demolita dagli austriaci a metà dell'Ottocento: anche questa con merlature a mensola, era una delle quattro torri costruite nella seconda metà del Duecento a protezione del porto e proprio sotto di essa si allungava uno dei due moli, quello di maggiore importanza realizzato, a quanto si può evidenziare sia da questa carta che dal confronto con quella successiva, in muratura mentre l'altro appare su palizzata. Oltre la torre si notano le quattro grandi arcate che immettevano negli altrettanti bacini del Grande Arsenale. Non è segnalata la successiva torre Penitenziaria che ospitava le carceri della Repubblica, ma è indicata chiaramente la porta del Fondico e il brevissimo moletto triangolare che la proteggeva prima della sistemazione della riva fra i due moli, che nel disegno appare già realizzata e coesistere col moletto. Accanto a questo la bassa Loggia quadrangolare su colonne, fuori della cortina muraria, e dietro di essa il bastione Palazzo a protezione dell'importante porta della Ponta o del porto.

Un lunga cortina ad angolo retto collega il bastione Palazzo con la fortezza di San Giovanni, ultima e più importante delle quattro grandi fortificazioni sul porto. Il primitivo impianto quadrangolare può vedersi spuntare, col suo coronamento merlato a mensola, dalla torre circolare costruita attorno alla metà del Cinquecento quando venne collegata anche al bastione pentagonale puntato a mezzogiorno sul mare aperto. Per chissà quale scrupolo, su cui si



## TAVOLA 4

Sovrapposizione grafica della planimetria di Dubrovnik dell'Archivio di Stato di Torino, in nero, sulla carta catastale del 1972 rilevata al suolo, in blu (elaborazione di Ilario Principe). La sovrapposizione è stata condotta in corrispondenza del filo strada degli isolati sul lato settentrionale dello Stradun: come si può notare essa è perfetta. Le frecce in alto evidenziano la mancata corrispondenza

con le strutture fortificate: e così quelle ad ovest su Porta Pile e sul forte di Bokar, e ad est sul bastione di San Giovanni e sul molo principale in muratura. La freccia sulla Cattedrale registra il cambio di orientamento dopo il terremoto del 1669 con una nuova abside rettilinea spostata dalla parte opposta. La piegatura del foglio in un grosso volume rilegato impedisce una precisa leggibilità.

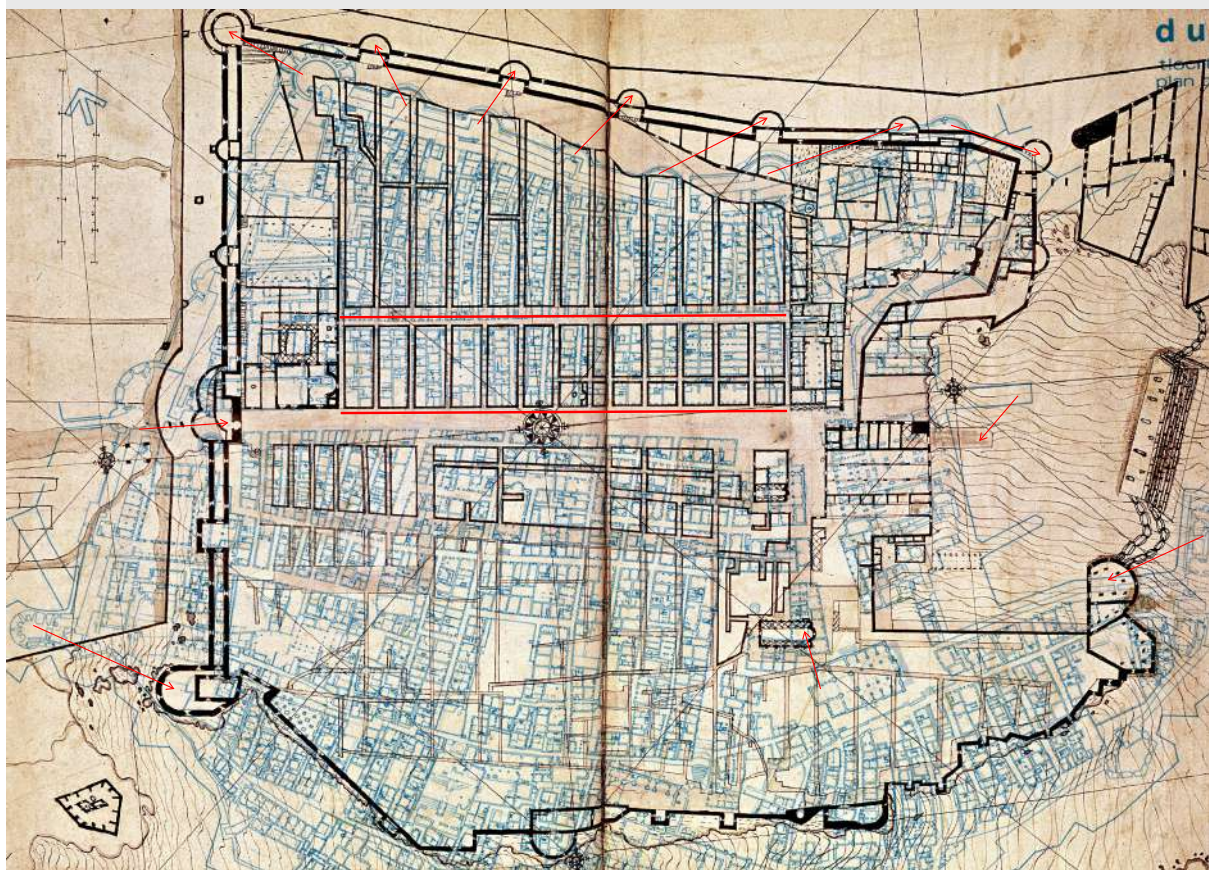


TAVOLA 5

Sovrapposizione grafica della planimetria di Dubrovnik dell'Archivio di Stato di Torino, in nero, sulla carta catastale del 1972 rilevata al suolo, in blu (elaborazione di Ilario Principe). La sovrapposizione è stata condotta in corrispondenza di: A - Forte Bokar; B - Torre di San Giovanni. Le frecce in basso stabiliscono la corrispondenza fra la torre Campana dei morti a sinistra e il bastione Santa Margherita a destra. Corrispondenza analoga è

evidenziata sulle strutture fortificate settentrionali, sulle absidi della Cattedrale, sul molo principale in muratura e su Porta Pile, che si possono confrontare con le analoghe di Tavola 4. Lo Stradun si discosta di pochi gradi dall'andamento e dalla posizione attuale; l'intero comparto meridionale subisce invece una evidente riduzione di spessore che impedisce precisi confronti topografici.



può argomentare a lungo, l'anonimo disegnatore pone qui in bella evidenza la grande edicola di San Biagio, unica sua testimonianza del corredo decorativo della città. Da questa fortezza si stacca la catena che chiude l'imboccatura sud del porto agganciandosi a un lato delle Kaše, la diga artificiale a protezione delle strutture portuali mentre l'altra a nord avrebbe dovuto stendersi dal lato opposto fino alla torre di San Luca ma nel disegno non è segnalata: al suo posto la diga presenta una breccia a voler indicare una struttura non finita oppure uno dei possibili varchi per penetrare forzosamente nel porto, per tale motivo protetto dai cannoni in postazione sugli spalti del Revelin. Peraltro puntati verso il porto e non verso l'esterno, mentre qualcosa di simile a ruderi caduti dal vicino muro si scorgono sullo spalto alle loro spalle: sono indicazioni certe, tutte da decifrare. Da San Giovanni fino al bastione Santa Margherita, riconoscibile dal suo spigolo arrotondato, dovrebbero trovare posto altri due bastioni, Santo Salvatore e Santo Stefano: si tratta dei più recenti, il primo pentagonale eretto fra il 1647 e il 1657, il secondo di forma irregolare fra il 1658 e il 1660 giusto pochi anni prima del terremoto. Di bastioni però se ne vede uno solo, neppure pentagonale o comunque regolare come il primo di quelli citati. Dal confronto con la successiva figura il muro di cortina in questo tratto appare frammentario e spezzato, con brevi sporgenze, rientranze, torrette quadrate aggettanti verso la scogliera a sfruttarne ogni minima articolazione morfologica: è pensabile che non della sistemazione operata dopo la metà del Seicento il disegnatore abbia voluto rendere conto per il semplice motivo che la carta è anteriore, ma di una situazione planovolumetrica che per la prospettiva adottata e per la scarsità di informazioni, e con la complessità dell'andamento a spezzata, sia stata risolta semplificando gli elementi della rappresentazione e tendendo verso la razionalizzazione sperimentata nel concreto negli anni successivi. La terza immagine, la più importante, è un disegno a penna di cm 59×42 con leggera coloritura sovrapposta al reticolo viario, su cui è trascritta la pianta dentro le mura e il territorio immediatamente a ovest oltre Porta Pile (FIG. 11). Un rilievo completamente muto ma così accurato per l'attendibilità delle informazioni e per la datazione che al momento si può avanzare, fra gli ultimi anni del Cinquecento e i primi del Seicento, che è arduo ipotizzare condotto a memoria oppure su fonti derivate da altrui osservazioni: chi l'ha disegnato deve averlo disegnato sul posto, e forse col consenso delle istituzioni locali. Nulla tuttavia si rinviene a tale proposito nelle fonti coeve o nelle delibere del Maggiore e del Piccolo Consiglio, né di una simile impegnativa operazione è rimasta traccia in altre fonti della memoria storica ragusea. Che la carta fosse un rilievo scientificamente condotto lo dimostrano le quattro rose dei venti periferiche a otto direzioni regolate sulla centrale a 16 direzioni che riproducono un corretto reticolo geometrico.

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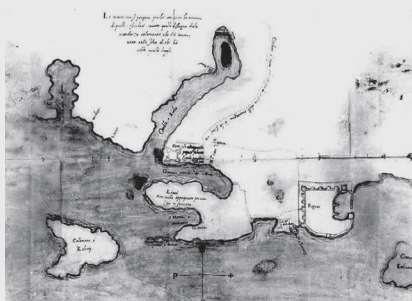
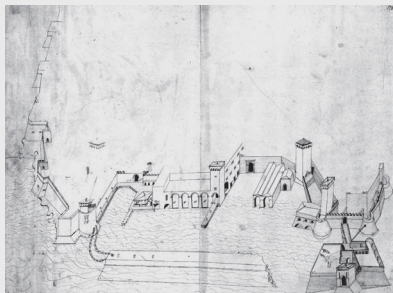
Tuttavia la completa sovrapposizione della carta sul catastale del 1972 non è possibile se non per parti. Ad esempio, la fila di isolati lato nord dello Stradun si sovrappone esattamente alla situazione attuale mentre le fortificazioni settentrionali subiscono un evidente allargamento e quelle meridionali una pronunciata contrazione, [Tavola 4](#). Deformazioni ancora più marcate se si sovrappongono le due fortificazioni estreme di Bokar e San Giovanni: a questo punto una buona fetta del comparto meridionale col circuito di fortificazioni che vi insiste rimane esterno alla delineaazione antica, come si vede nella [Tavola 5](#). In sostanza si ha una riduzione esagerata sui meridiani ed una invece accettabile restituzione sui paralleli: potrebbe aver contribuito a ciò una visione complessiva di controllo ripresa successivamente dall'alto, dallo stesso punto scenografico oggi preferito dai turisti, che appiattisce la veduta trasversale ma non quella longitudinale; né va dimenticato che il rapporto, calcolato in via empirica, fra spessore e larghezza della città in entrambe la mappa e il catastale, e di conseguenza la foto aerea, è di circa 0.7 per la prima e 0.67 per il secondo, cioè a dire che le distorsioni sono interne a un impianto tutto sommato coerente. Inoltre la carta non è finita: lo provano la scala grafica sulla destra rimasta incompleta delle misure di riferimento e la delineaazione approssimativa dei comparti urbani meridionali prospicienti il mare, rispetto a quelli di Prijeko o disposti attorno allo Stradun e al porto. Però il rilievo non è stato condotto a vista ma con misurazioni: infatti per alcune delle strutture architettoniche più significative, cioè tutte quelle attorno al porto nonché il convento di San Francesco, non si disegnano soltanto i muri perimetrali ma anche i setti murari con le relative aperture in un vero rilievo, forse il primo in assoluto a scala urbana e architettonica insieme. Chi l'ha disegnato non può essere anche autore della prospettiva del porto: lo provano diversi dettagli, fra i quali i più appariscenti sono le Kaše con la sua doppia catena e la mancanza del Piccolo Arsenale col magazzino annesso. Sono stati fatti probabilmente nello stesso periodo da persone che forse lavoravano a contatto: lo provano alcune aperture scrupolosamente segnalate in entrambe; ma in tale caso il fatto che le Kaše nella prospettiva del porto appaiono come parzialmente demolite sul lato del Revelin può indurre a pensare a un rilievo della città in conseguenza di un evento traumatico di cui lo sbarramento artificiale si rendeva fedele interprete. Può essere un sintomo di ciò il fatto che dal lato del Revelin nella pianta urbana la catena di chiusura del porto è semplice mentre verso San Giovanni è doppia, e così viene registrata nella prospettiva.

Ai committenti del rilievo interessavano non soltanto gli edifici principali quanto il circuito delle fortificazioni: su questo versante la rappresentazione non tradisce le aspettative di chi vuole leggere la storia di pietra attraverso la storia di carta. Delle due fortificazioni esterne, Lovrijenac ha una pianta

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FIGURA 9  
Dubrovnik. Pianta con dettagli in prospettiva delle mura con fortificazioni (Ilario Principe, "Tri neobjavljene karte Dubrovnika iz XVI.- XVII. st.," Dubrovnik 1 (1991): 191-202).

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FIGURA 12  
Dubrovnik, Catasto Austriaco 1837.

FIGURA 13  
Dubrovnik, Rilievo catastale al suolo Institut za povijest umjetnosti, 1972.

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FIGURA 10  
Dubrovnik. Assonometria del porto e con le fortificazioni (Ilario Principe, "Tri neobjavljene karte Dubrovnika iz XVI.- XVII. st.," Dubrovnik 1 (1991): 191-202).

FIGURA 14  
Progetto di un forte e delineazione della costa a sud di Dubrovnik in una planimetria del 1599 con-servata all'Archivio di Stato di Venezia: la forma della città in basso a destra è diventata uno sche-matico segno grafico.

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FIGURA 11  
Dubrovnik. Pianta della città (Ilario Principe, "Tri neobjavljene karte Dubrovnika iz XVI.- XVII. st.," Dubrovnik 1 (1991): 191-202).

diversa da quella della prima carta ma senz'altro più aderente alla sua effettiva forma; il Revelin all'altra estremità è così accuratamente disegnato che senza difficoltà può essere messo a confronto con la consistenza attuale. Prima e dopo quest'ultimo sono indicate le pile di sostegno dei due ponti di collegamento con l'esterno, ma non i ponti medesimi per evidenziare che essi potevano essere ritirati a piacimento, in tutto o solo la sezione centrale per quello in pietra. Tralasciando le fortificazioni del porto già viste, a partire dall'Asimon in alto a destra il circuito murario presenta in bell'ordine verso sinistra la torre di San Giacomo, visibile anche all'estremità della carta precedente ma senza la merlatura demolita dagli austriaci, la torre Drezvenik, la centrale torre di Santa Caterina, o di San Vito perchè situata presso l'antica cappella di tal nome, la torre di Santa Lucia e quella di Santa Barbara prima della torre angolare della Minčeta. Queste cinque torri hanno caratteri molto simili fra loro, con gli antichi impianti quadrangolari racchiusi dai bastioni rotondi conservatisi intatti in tutta la loro potenza. Impressionante la Minčeta ben alta sulla città, la cui semplice pianta circolare a due anelli concentrici, con quello interno a sostituire un impianto quadrangolare originario, non tradisce la complessità della progettazione dovuta secondo la tradizione al Michelozzo. All'interno di questo tratto di cortina per una buona metà la città ha conservato la fascia di rispetto intra moenia, anche per la pendenza del terreno che non consentiva agevoli edificazioni, e si interrompe con la chiesa romanica di San Giacomo e l'articolata presenza dei Domenicani. Dalla Minčeta fino a Bokar la cortina è rettilinea e registra nell'ordine la torre Angolo superiore, poi la torre di San Francesco, il complesso di Porta Pile con l'omonima torre e infine la torre Puncijela per terminare alla torre casamattata o forte di Bokar. Quest'ultimo è assai suggestivo perchè si allunga su una isoletta collegata alla terraferma da un arco sotto cui passa ancora oggi il mare: venne completato nel 1570 con tre ricchi cornicioni che gli conferiscono un aspetto più elegante delle altre fortificazioni. A ridosso di Bokar verso la città si eleva la piccola torre Kalarinja, la cui importanza era determinata dal guardare il vecchio porto occidentale, qui rappresentato dal braccio di mare che si insinua fino a Porta Pile ma che perde ogni interesse con lo sviluppo del porto maggiore. Fra Bokar e Santa Margherita, come avviene fra quest'ultima e San Giovanni, la cortina ripete l'andamento delle vecchie mura e si svolge lungo il mare spezzata e mossa a seguire l'andamento frastagliato della costa rocciosa. Vi si possono riconoscere tre fortificazioni principali: la torre di Santa Maria che aggetta sulle rocce presso l'omonimo convento; la tondeggiante fortificazione detta Campana dei morti o bastione di San Pietro, completata nel 1574 e per la sua posizione a guardia dello stretto di Lokrum considerata uno degli otto principali punti forti della città, e infine la quadrangolare torre Stella, stondata su uno spigolo e non più ricostruita dopo

il terremoto, vicino alla quale si trova un'altra torre che insieme all'aggetto triangolare presso il bastione di Santa Margherita doveva avere una sua non secondaria importanza nello svolgersi della cortina difensiva lato mare. Il tratto di muro fra torre Stella e Campana dei morti è probabilmente il più antico risalendo nel suo impianto forse all'origine stessa di Dubrovnik, con adeguamenti fino al XIII secolo e un generale rafforzamento e innalzamento del parapetto nel 1424. In questo punto, il più alto della città, sorgeva l'acquedotto: l'acqua scorreva in canali di pietra e veniva distribuita nelle fontane cittadine e in due serbatoi collocati presso la chiesa di Santo Stefano in corrispondenza della Cattedrale, e a San Nicola dietro Palazzo Sponza. Infine, fra Santa Margherita e San Giovanni vi sono cinque torrette quadrate che verranno parzialmente ristrutturare a metà Seicento con la costruzione dei due bastioni di Santo Salvatore e di Santo Stefano.

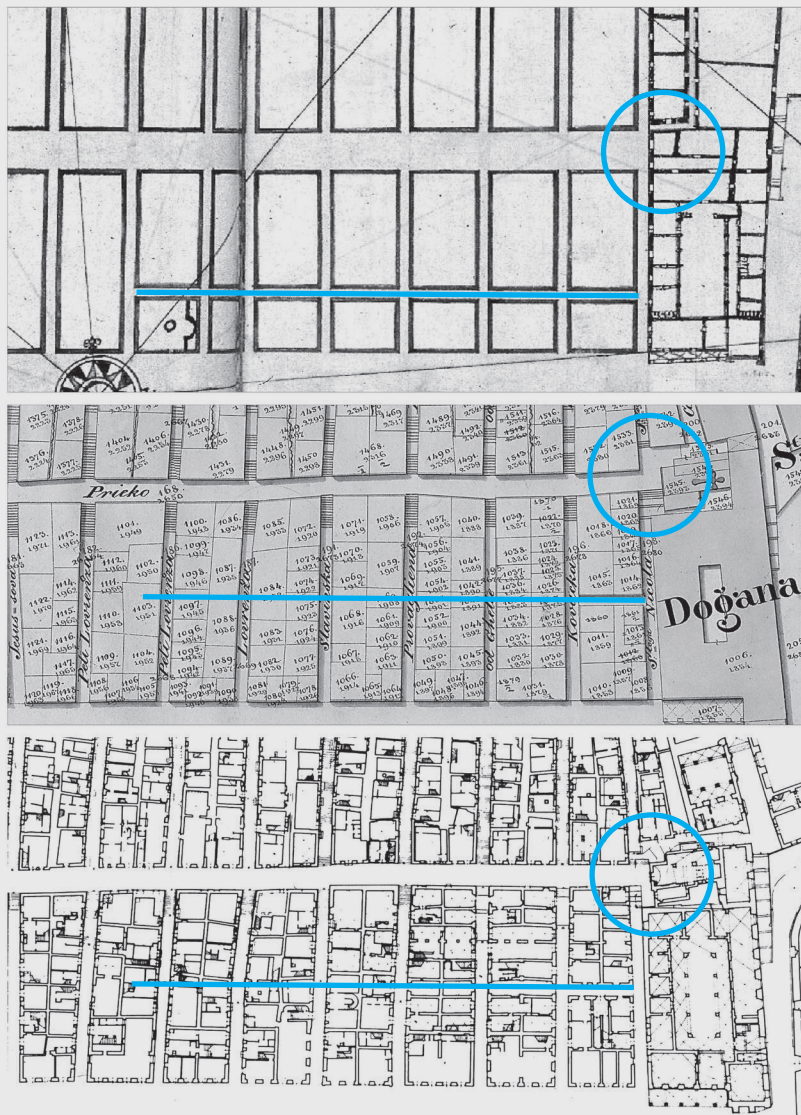
Per quanto riguarda la struttura urbana si è già visto che l'intera parte meridionale, che secondo le ricostruzioni storiche ha ospitato il nucleo insediativo originario, non è disegnata nello stesso modo di Prijeko, o dello Stradun con gli isolati che lo fiancheggiano: è incompleta nella mancata segnalazione del convento di Santa Maria il cui sito è vuoto di costruzioni, e nello spazio a ridosso del bastione di San Giovanni; appare come una rilevazione provvisoria non ripassata a penna in attesa di una verifica che non c'è mai stata, o di ulteriori elementi che meglio ne specificassero la consistenza edificata. Ciò appare sorprendente per Rupe, il grande magazzino dei grani la cui prima costruzione è del XIV-XV secolo mentre la versione che si può oggi ammirare venne costruita fra il 1542 e il 1590, che non si può pensare fosse poco visibile dal momento che caratterizza significativamente sia dal punto di vista funzionale che architettonico il comparto urbano sul quale insiste, ma che il rilievo traccia come semplice isolato senza particolare evidenza. Di fronte al lato occidentale del complesso dei Domenicani è segnalata la chiesa del Rosario edificata nel 1594, e dalla parte opposta si può identificare la chiesa preromanica di San Nicola rifatta nel 1607 in forme rinascimentali: poichè in questo rifacimento la facciata della chiesa è stata arretrata di un paio di metri rispetto all'allineamento della strada, e di tale arretramento non c'è traccia nella pianta che in quest'area appare perfettamente delineata, si può pensare a una datazione del rilievo compresa fra il 1594 e il 1607. Per restare in questa parte della città, altre considerazioni si possono fare. Al loro posto sono le tredici stecche di isole che si possono contare a nord sullo Stradun fra San Francesco e Palazzo Sponza, solo che le prime sette vengono interrotte da una strada parallela allo Stradun. Questa strada, anzi vicoletto, esiste oggi solo nella prima stecca compresa fra la Ulica Zlatarska e la successiva Ulica Kovačka, dove si interrompe. Ma se si guarda bene sul terreno il fronte di case della Ulica Kovačka si può notare

che sul lato opposto al vicoletto è presente, a sinistra di chi guarda, una evidente ammorsatura sfalsata fra due edifici, uno dei quali, sul lato verso lo Stradun, preesisteva al terremoto del 1667 ed è qui debitamente registrato, e l'altro viene ricostruito ostruendo totalmente il vicoletto. Saltando per brevità tutte le stecche intermedie, analogo riscontro può farsi per l'ultima di esse, delimitata dalla Ulica Petilovrijenci e dalla Zamanjina: l'edificio sul lato orientale della Petilovrijenci che ostruisce il vecchio vicolo è più basso e posteriore dei due edifici che lo fiancheggiano, e nella Zamanjina invece l'edificio sul lato occidentale presenta un'ammorsatura a chiudere il precedente vicolo: qui abbiamo la dimostrazione topografica antica della sua esistenza che prova l'attendibilità delle informazioni della carta,<sup>6</sup> come si vede nel confronto grafico alla [Tavola 6](#).

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Ma sulla datazione si possono fare altre congetture. Nel 1612, dopo la morte di Francesco Gonzaga, nelle acque di Ragusa si scontrano due flotte: una inviata dai veneziani alleati del Duca di Savoia, l'altra allestita da Filippo III di Spagna e Ferdinando d'Austria guidata dal Duca d'Ossuna.<sup>7</sup> Lo scontro è breve perché una tempesta disperde le navi: gli spagnoli si ritirano a Brindisi, i veneziani nel porto di Santa Croce a Ragusa, che iniziano a fortificare. I ragusei parteggiano naturalmente per gli avversari dei veneziani che da molto tempo considerano oppressori. Durante la sosta i veneziani con aggressioni e danni tentano di vendicarsi di quelli che consideravano favori usati dalla Repubblica di Ragusa nei confronti dei loro nemici: ad esempio rifornire le navi spagnole di vettovaglie e marinai. In tale contesto si può collocare la redazione delle carte finite a Torino. Che peraltro potrebbero essere state iniziate qualche tempo prima. Nel 1602 si registra un moto di ribellione dei lagostani che col pretesto di conservare i loro antichi privilegi deliberano di consegnarsi ai veneziani. Di fronte alla reazione dei ragusei che si impadroniscono del castello arrestando i colpevoli della sedizione, i veneziani sostengono di essere intervenuti non per impadronirsi di Lagosta ma per impedire maggiori disordini; dopo aver constatato che la ribellione era stata domata si ritirano a Curzola, per l'appunto una delle località di cui si ha una pianta territoriale omogenea a quella di Ragusa. Questa di Curzola e le altre planimetrie territoriali, fra cui Ragusa, possono essere state disegnate nel 1602; la prospettiva del porto e la planimetria della città dieci anni dopo quando i veneziani avranno tutto il tempo di redigere un rilievo accurato senza che i ragusei, impegnati a sollecitare i buoni uffici del Papa e del turco contro la loro presenza, riusciranno ad impedire le operazioni tecniche necessarie. Di tali operazioni i ragusei nulla dicono nei loro annali per comprensibili motivi, né i veneziani conservano le carte poiché queste si inseriscono nelle iniziative tentate l'anno prima da Carlo Emanuele I per fare di Ragusa una base fortificata contro i turchi. Per tale motivo le mura lato





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## TAVOLA 6

Confronto grafico fra la carta dell'Archivio di Stato di Torino in alto, il catasto austriaco del 1837 al centro, e il rilievo catastale al suolo del 1972 (elaborazione di Ilario Principe). Col cerchio viene evidenziato l'arretramento della chiesa di San Nicola nei rifacimenti del 1607, che la prima carta non registra perché

probabilmente anteriore; con la linea la prosecuzione del vicioletto attualmente esistente seguendo le indicazioni della carta torinese. Poiché la linea ha uguale misura, si può concludere che la planimetria antica è stata rilevata sul campo con molta precisione.

mare sono delineate con maggiore esattezza delle mura lato terra: potevano essere rilevate a vista nel 1602 semplicemente navigando loro attorno ma non penetrando nel porto il cui accesso era impedito; nel 1612, durante le aggressioni e i danni di cui parlano i cronisti, niente di più facile che i veneziani si siano potuti aggirare per la città registrando quanto vedevano, fermandosi però al margine meridionale dell'abitato, Santa Maria e San Giovanni, per mancanza di tempo o perché impediti dalla reazione dei ragusei.

Queste considerazioni ci dicono che la carta urbana è pienamente attendibile e offre uno spaccato quanto più vicino al reale si potesse osservare all'epoca, ma sottolineano che la città non è stata distrutta dal terremoto del 1667: molti edifici sono crollati o hanno sofferto gravi distruzioni, altri sono stati completamente rinnovati approfittando di una loro parziale rovina, però l'impianto urbanistico ha retto al sisma e la città di oggi è la stessa che l'anonimo disegnatore ha così ben tracciato. Non è una città barocca o rinascimentale nonostante la potenza evocativa di alcuni dei suoi elementi portanti: è una città medievale, quella codificata negli Statuti del 1272 con le aggiunte posteriori all'incendio del 1296, che ha saputo reinterpretarsi in forme stilistiche nuove.

Tramontata la Repubblica, a dispetto di tante manomissioni di cui si renderanno artefici, saranno gli austriaci nel 1837 a fornire dell'antica Ragusa un'immagine che l'apparente neutralità del segno grafico mensorio (FIG. 12) p. 42 non arriva a privare del singolarissimo, inimitabile fascino conferitole dalle stratificazioni medievali, rinascimentali, barocche. Neutralità apparente, perchè si arriva a un rovesciamento del segno che riceve la sua consacrazione dall'anonimato: spariscono le fortificazioni e al loro posto tutto in giro alla città solo una scritta impietosa ne ricorda l'esistenza, "Spazio occupato dalle Fortificazioni", ma nasconde la forma. In tale immutato aspetto la città si apre ancora oggi al visitatore e allo studioso (FIG. 13). p. 42

A conclusione di questo intervento, e per consegnare alla visione di ogni studioso delle iconografie storiche quanto possa essere distante la presunta verità oggettiva dalla certa verità ricordata, riproduco (FIG. 14) la planimetria p. 42 allegata a un dispaccio del 12 ottobre 1599 dell'ambasciatore veneto a Napoli col progetto di un costruendo forte, sovrapposto nella figura al terreno vergine. "Le misure non si pongono perchè non se na ha memoria di quelle essendosi cavato questo disegno da la ricordanza solamente, che s'è conservata nella idea di chi ha visto questi luoghi".<sup>8</sup> tale specifica in alto, e la forma di Dubrovnik in basso a destra riferita al 1599, mi pare il miglior epitaffio per chi cerca la realtà nelle immagini del passato. Ma si tratta, appunto, di un'altra storia.

## Note

- 1 Lukša Beritić, *Le mura di Dubrovnik* (Dubrovnik: Društvo prijatelja dubrovačke starine, 1990), pubblicato più volte in più lingue: uso qui un'edizione in italiano del 1990. Giacomo di Pietro Luccari, "Gentlhuomo Rauseo" nel suo *Copioso ristretto de gli Annali di Rausa* (Venezia: Antonio Leonardi, 1605), 152-153. Giuseppe Gelcich, *Dello sviluppo civile di Ragusa considerato ne' suoi monumenti storici ed artistici* (Ragusa: Carlo Pretner Tip. Edit., 1884). Matteo Zamagna, *La storia di Ragusa* (Trieste: Società Editrice Mutilati e Combattenti, 1935). Robin Harris, *Dubrovnik. A History* (London: SAQI, 2003), 290-293.
- 2 Milan Rešetar, "Slike Staroga Dubrovnika," *Narodna starina* III/8/2 (1924): 176-189, è il primo tentativo di tracciare una storia urbana della città attraverso immagini storiche. Alcune figure che qui riproduco sono state collazionate sugli originali da lui suggeriti: Matthaeus Merian, *Statt Ragusa... Cataro map* (Frankfurt am Main, 1665); *Viaggio da Venetia a Costantinopoli per mare, e per terra, et insieme quello di Terra Santa, da Giuseppe Rosaccio con brevità descritto, nel quale, oltre à settantadue disegni di geografia e corografia si discorre quanto in esso viaggio si ritrova, cioè città, castelli, porti, golfi, isole, monti, fiumi, e mari. Opera utile à mercanti, marinari, et à studiosi di geografia* (Venezia: Giacomo Franco 1598), 76 cc. nn., 72 figg. in rame; Matthaeus Merian, *Topographia Italiae* (Frankfurt, 1688), 322 × 202 mm. Nell'Appendice dedicata alla Grecia si trovano due tavole doppie, in una delle quali vi è Ragusa con Negroponte; l'altra comprende Koroni e Lefkada.
- 3 Konrad Grünenberg, *Beschreibung der Reise von Konstanz nach Jerusalem*, 1487, Badische Landesbibliothek Karlsruhe, cod. St. Peter pap. 32, ff. 13v-14r, in rete.
- 4 Željko Peković, *Dubrovnik. La fondation et le développement de la ville médiévale* (Split: Ministère de la Culture de la République de Croatie, 1998), testo bilingue croato e francese, fig. 24.
- 5 Ilario Principe, "Tri neobjavljene karte Dubrovnika iz XVI.- XVII. st.," *Dubrovnik* 1 (1991): 191-202 (traduzione Ivana Burdelez). Le immagini, oggi consultabili in rete, in: Archivio di Stato di Torino, Architettura militare, Disegni di piazze e fortificazioni, Volume V, *Dubrovnick. Pianta con dettagli in prospettiva delle mura con fortificazioni*, f. 98v-99; *Dubrovnik. Assonometria del porto e con le fortificazioni*, f. 242v-243; *Dubrovnik. Pianta della città*, f. 244v-245. Al f. 94v-95 l'immagine di Curzola ri-chiamata più avanti, della stessa mano e contigua alla mappa territoriale di Dubrovnik.
- 6 La ricostruzione grafica del vicolo è stata fatta da Lukša Beritić, *Urbanistički razvitak Dubrovnika* (Zagreb: Zavod za arhitekturu i urbanizam Instituta za likovne umjetnosti JAZU, 1958), 68, che tuttavia non l'appoggia al vicoletto esistente ma più in basso.
- 7 Matteo Zamagna, *La storia di Ragusa*, 231.
- 8 Archivio di Stato di Venezia, *Senato, Dispacci, ambasciatori Napoli*, filza 15 dis. 1a. "Dubrovnik. Pianta del forte e zona del porto e della costa a sud della città", disegno su carta con coloritura ad acquerello di cm 48.2x36.6, la fotoriproduzione è stata eseguita dall'Archivio di Stato di Venezia che ha autorizzato la pubblicazione con atto n. 46/2017, prot. 2247/28.13.07. Sui dispacci del periodo: Antonella Barzazi (a cura di), *Corrispondenze diplomatiche veneziane da Napoli. Dispacci*. Vol. III (27 maggio 1597-2 novembre 1604) (Roma: Istituto Poligrafico e Zecca dello Stato, 1991).

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- – *Urbanistički razvitak Dubrovnika*. Zagreb: Zavod za arhitekturu i urbanizam Instituta za likovne umjetnosti JAZU, 1958.
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Perspectives  
or how to deal  
with complexity.  
The case of Melchior  
Lorck's view of  
Constantinople

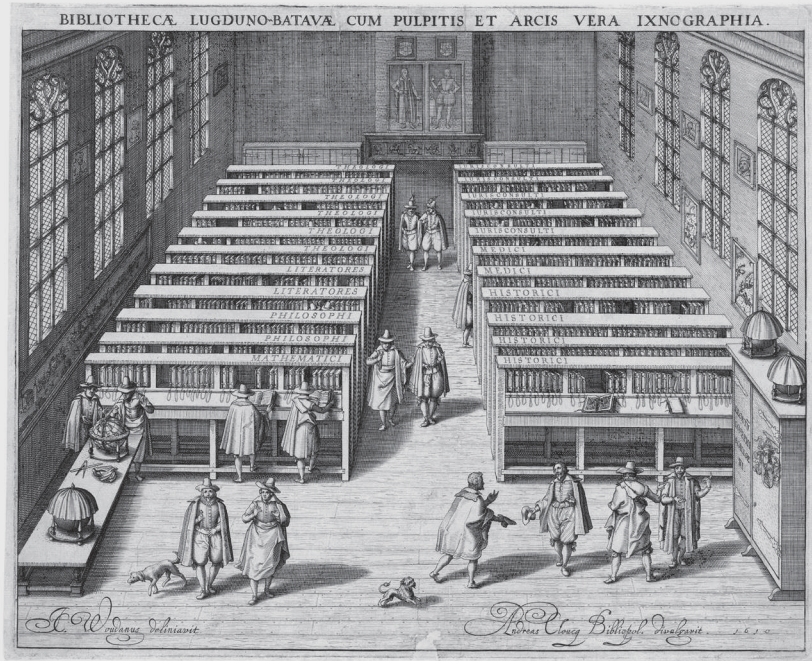
Elke Katharina Wittich

Among woodcuts, engravings and drawings, the Danish born artist Melchior Lorck left behind a most unusual view of Constantinople.<sup>1</sup> As the artist had visited this town and stayed there for some years in the 1550s, this picture is based on first-hand experience.<sup>2</sup> It was drawn in the 1560s with black and brown ink; some parts are painted with green watercolours and there are descriptions and indications in several languages all over the depiction of the city, explaining what can be seen or how to deal with some of the things portrayed. These indications suggest that the drawing is a precursor to a later woodcut or engraving.<sup>3</sup> Lorck's view of Constantinople has a height of c. 50 centimetres and – quite astonishingly – a width of more than 1100 centimetres. It became property of the university library of Leyden, a town situated in the northern, protestant part of the Netherlands, in 1598. Evidenced by an engraving by Jan Cornelisz Woudanus which is dated 1610, the drawing, a broadly conceived view, was preserved there, hanging on the left hand side of the reading room beneath the semi-circular windows (FIG. 1).<sup>4</sup> Because the drawing is so wide and very elaborate, Lorck's depiction of Constantinople suggests many details about this town which had been captured by the Ottomans more than a hundred of years before. As the capital of the Ottoman Empire, a distinctive shift in the urban image had been evident since that time, most notably the more than a hundred of minarets Lorck portrayed in his view.<sup>5</sup> As military or biblical images of the Ottoman Empire, these mostly significant devices were described in the reports as icons of a foreign, not to mention diabolic, religion.<sup>6</sup> Depicting these minarets, Lorck not only marked the capture of the “New Rome”, as Constantinople was called in reports of the time, by a mostly hazardous archenemy,<sup>7</sup> but gave the minarets a prominent role in the perspectives of his view. The preoccupation with such symbolic motifs in portrayals of towns is extremely significant, as other contemporaneous images of Constantinople, such as the map in the *Civitates Orbis Terrarum*, show only a few of such minarets.<sup>8</sup>

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Perspectives or how to deal with  
complexity. The case of Melchior Lorck's  
view of Constantinople

In the history of technology, numerous innovations have launched developments that have hitherto enabled previously unknown insights or unfamiliar views; these novelties were considered as harbinger of gratifying profit on the one hand or of the unfortunate disappearance of knowledge which marks a lack of cognitive capacity on the other. In order to understand such dynamics, one may reflect upon the case of Erwin Panofsky's paper *Perspective as Symbolic Form* which is still one of the most important publications on the use of perspectives in western arts. This paper was written in the 1920s at a time when artists abandoned the use of perspectives and a spatial idea of images in paintings and graphics.<sup>9</sup> A parallel trend can be observed in the medium of film, as theorists lamented the deterioration in pictorial design



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FIGURE 1

Jan Cornelisz Woudanus, *Bibliotheca Lugduno-Batavae Cum Pulpitis et arcis vera Ixnographia*, engraving, 1610. Library of the University of Leyden, The Netherlands, P 315-III N 22.

when silent films became “talkies”. The scope of pictorial design, such as close-up views, picture-in-picture or low angle shots, was considered to be elements of such expressive pictorial language; people suspected that these elements would be replaced with more realistic picture settings, thus losing the abstract visual impact of the film set.<sup>10</sup> A contextualisation of artistic and technological possibilities of picture settings therefore seems to be of the utmost importance. It should be based on an exact description of visual inventories of towns as seen in historical images. In addition, an analysis of changes in urban image construction can help to assess the observations. The case of Lorck’s view of Constantinople can be described as an artwork of extremely proportions; the ratio of height to width requires a special composition of perspectives. Such strategies should not simply be treated as mere technical tools but as conveyors of meaning, particularly as all images of the “Turks” were the subject of keen interest in northern Europe in Lorck’s time.<sup>11</sup> That ratio of height to width in Lorck’s woodcut justifies a classification of Lorck’s view as *curiositas*, an item of special interest.<sup>12</sup> Jan Cornelisz Woudanus’ engraving “Bibliotheca Lugduno-Batavae” of 1610 is often cited as a reference to the preservation of Lorck’s view in the university library at Leyden. It is mentioned in reports of how the work was, at one time, badly maintained, a lamentable fact which contributed to the damage of the web of paper, too.<sup>13</sup> The view of the reading room in the library itself, however, has hardly been mentioned, although there are several notable phenomena to be observed: the medial axis does not run down the middle of the aisle between the bookshelves, but passes through the two men in the foreground and back through the visitor at left. Seen from high above the scene and from outside the depicted room, the view is arranged as an overview, depicting an elongated great room with several bookshelves. The bookshelves as well as the cornices at the walls and the rugs of the window are aligned above the portrait of a woman on the back wall, again outside the image. Inscriptions on the top of the bookshelves mark shelves with books on mathematics – including geometry – and on philosophy as well. Upon a long table, two men are working with one of the two globes. In addition, a divider as an indispensable instrument of geometry can be found in front of the globe. More globes are stored on top of the armoire at right.

The reading room of the library at Leyden is littered with tools of accumulating knowledge – books, globes on the table and upon the armoire, maps and portraits at right, Melchior Lorck’s view of Constantinople on the left; this is undoubtedly a place of knowledge and scientific research in strictly ordered structures.<sup>14</sup> Altogether books on several fields of knowledge – mathematics, philosophy, literature, theology in the left-hand rows and history, medicine



and jurisprudence on the right – can be used. Nonetheless, the books on mathematics, which only cover one shelf, might not be the insignificant ones among all the others. Together with the globes, maps and Lorck's view of Constantinople, they demonstrate the prominent field of cartography as vital for a town like Leyden in the protestant northern Netherlands which depended on commercial relations with overseas territories.<sup>15</sup> Moreover, the inscriptions along the top of the shelves labelling the fields of knowledge may contain another level of meaning: this classification however is only visible for the discerning imaginary ideal viewer. In the reading room, the visitors portrayed would not have been able to see the inscriptions, for the simple reason that they are smaller than the book shelves and thus could not make out what is written along the top. As a consequence of this observation, the assumption that the engraving "Bibliotheca Lugduno-Batavae" is a historical documentation can be rejected, as the view is seen from an angle that is not at all realistic. Instead, one should take the printed title "Bibliotheca Lugduno-Batavae Cum Pulptis et arcis vera Ixnographia" into account, for it claims that the engraving shows "the genuine drawing" of the reading room, that is to say, the true image of knowledge constructed by means of perspective.<sup>16</sup>

**Deceptive appearances, or: how to construct knowledge by means of perspective**

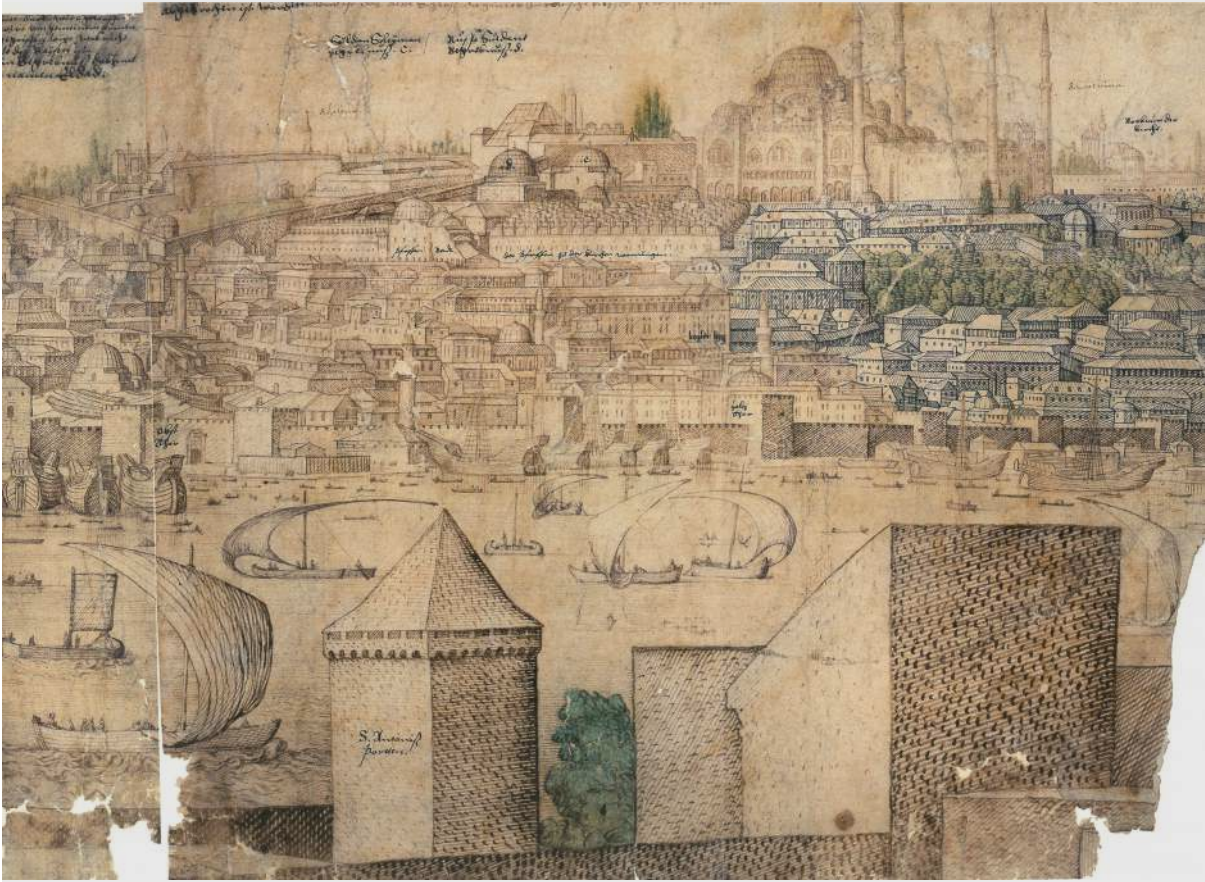
Melchior Lorck was a very well trained artist, who accordingly continued his studies after finishing his training as a goldsmith in Lübeck in northern Germany. Lorck worked as a court artist and did a lot of travelling to important centres of the arts and of printing; he visited Nüremberg as well as several towns in Italy, including – of course – Rome. After his visit to Constantinople where he stayed for several years as part of a Habsburg delegation, Lorck lived some years in Hamburg and in Antwerp, both of which were centres of printing at that time.<sup>17</sup> One of the few bequeathed written texts by Lorck document his idea that he possesses a *angeborene Naygung (...)* von Jugend auf, *Zu dem Perspectiuischen malen vnnd anndern freyen Khunsten*, an "inherent capacity, already noticeable in his youth, to handle perspectives and the fine arts".<sup>18</sup> Even though a woodcut or engraving of Lorck's drawing of Constantinople was never realised – like the more than 120 woodcuts of the so called *Turkish Publication*, which were only published post-mortem<sup>19</sup> – Lorck's view of Constantinople confirms his written self-assessment. The drawing includes several distinctive features, among them the most astonishing perspective construction boasting a width of more than 11 metres. Some other contemporary drawings, woodcuts or engravings with the same motif or with equally extensive measurements which are quoted and discussed in the literature on Lorck's view<sup>20</sup> likewise confirm its most unusual and not inimitable approach.

When he adapted inscriptions of Andrea Vavassores' map *Byzantium sive Costantineopolis* (sic.) of the early 16th century,<sup>21</sup> Lorck probably did consider the position of the different buildings in his view.<sup>22</sup> Nonetheless, the view of Constantinople differs from Vavassore's map of the town and from all other aerial views seen from bird's eye perspective, or cavalier projection, because of its basic structure: one looks at Constantinople as if standing on the opposite side of Galata, looking down from the town wall onto the city. Melchior Lorck has portrayed himself in his view as a draughtsman, in an inscription on a pillar of the town wall: *Das ortt zu / Gallatta / oder / Pera da ich / Melchior Lorichs / die Statt am / meisten oder / den meisten / theil der Statt / ge Conterfeit / habe / Anno 1559* – "The side at Galata or Pera where I, Melchior Lorck, mainly drew the city or, rather, the larger part of it. AD 1559" (FIG. 3).<sup>23</sup> This viewpoint soon led to questions by geographers and archaeologists about the realistic qualities of the view and about the validity of the view with regard to the actual topography of Constantinople.<sup>24</sup> The eight viewpoints which had been quoted already at the beginning of the 20th century were examined with the newest technical equipment. Thus, the concrete places have been slightly adjusted.<sup>25</sup> Delighted at this knowledge, nobody asked about the consequences for the view: this method of constructing a view seen from different standpoints assumes the continuous intersection of angles. Thus the salient features of Lorck's view are not only the astonishing width of the view, but also the masterly handling of the overlapping perspectives. Lorck's view had been discussed in the context of cartography, a field of science which has been the focus of increasing attention since the 1990s;<sup>26</sup> nonetheless these obvious questions about the deceptive appearances of Lorck's view have still not been answered. The most astonishing virtue of this view is the fact that a viewer, against all the odds, always has the sensation of being able to survey the entire city from above across all 11 metres.

Cristoforo Buondelmonti's map of the city in the *Insulae archipelagi cum pictura* of the early 16th century<sup>27</sup> and Jacopo de' Barbari's map of Venice of 1500 with its remarkable measurements of 139x282 centimetres have both been compared to Lorck's view of Constantinople (FIG. 2-4).<sup>28</sup> The measurements of Barberi's map allowed it to be preserved folded or to be presented as an interior decoration hanging on a wall; the very high viewpoint enables an overview of the whole city with all the fascinating details. In contrast, Lorck's view does not quite provide such possibilities. As a wheeled drawing, this view can only be presented hanging on a wall in representative rooms of greater measurements, such as reading rooms in libraries or assembly rooms in government buildings or castles. Even then, a viewer would not have been able to survey the whole scene because of

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FIGURE 2

Melchior Lorcz, *Detail of the View of Constantinople with the Süleymaniye Mosque in the distance*, drawing, 1560-1565. Library of the University of Leyden, The Netherlands, Inv. Nr. BPL 1758, leaf 10.



Perspectives on how to deal with complexity: The case of Melchior Lorck's view of Constantinople

FIGURE 3

Melchior Lorck, *Detail of the View of Constantinople with the artist in the foreground*, drawing, 1560-1565. Library of the University of Leyden, The Netherlands, Inv. Nr. BPL 1758, leaf 11.



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Figure 4  
 Melchior Lorck, *Detail of the View of Constantinople with the cemetery in the foreground*, drawing, 1560-1565. Library of the University of Leyden, The Netherlands, Inv. Nr. BPL 1758, leaf 12.

the rules of optics; according to these, a viewer would have had to retreat a long way back in order to survey a view of more than 11 metres, so far away that they then would be too far away from the view to make out details. Among the numerous views of towns and cities that still exist, there are various distinct horizontal formats: such views were used in the 16th century in political, economic and forensic contexts.<sup>29</sup> The perspectives of Lorck's view, as distinct from those other views of towns, are constructed to enable constant proximity of the viewer: one is looking from close up onto this town which is characterised by the skyline of prominent buildings such as minarets, depicted in a realistic manner. Thus it is possible to look down from the town wall on to the ships in the harbour at the Golden Horn and see at close hand the old centre of the town rising behind them. All these scenes are so close to reality that their construction has to be mentioned, particularly to elucidate the perspective illusion. The most recent measurements of prominent buildings, such as the Hagia Sophia or the column of Constantine in Lorck's view which have proven that they are depicted proportionately larger in relation to the surrounding buildings are convincing, but not in the least surprising.<sup>30</sup> Enlarging prominent buildings on maps or views has always been a commonly applied ploy to emphasize them and especially to arrange an imposing skyline. Lorck's inscription on the view near the Süleymaniye mosque *sol sampt alles ihrer zugehörenden Gebewe etwas grösser sein* – "...mosque of Süleyman. It ought to be somewhat larger ..." – express this purpose.<sup>31</sup> But there is undoubtedly more to come. Melchior Lorck was a master of composition. He even allowed himself the artistic freedom to break away from traditional approaches, especially he did not feature heavily enlarged ancient buildings in isolation by omitting the buildings around. This technique was quite usual at that time, examples can be found on Buondelmonti's map of Constantinople in the *Insulae archipelagi cum pictura*, Vavassore's *Byzantium sive Costantineopolis*, or the map in the *Civitates Orbis Terrarum* by Georg Braun and Hans Hogenberg, a collection of maps of towns published in 1572; the map of Constantinople therein is based on Vavassore's work.<sup>32</sup> These maps distinctly demonstrate that such enlarged ancient buildings featured in isolation and their position in the town can be emphasized. This technique was used even when such buildings no longer existed; their depiction was then based on written sources.<sup>33</sup> Anyway, a documentary approach to visual reporting cannot be expected in the late 16th century and the close to reality depiction of all those minarets in Lorck's view is therefore remarkable. The aspects which are the special hallmarks of Lorck's view – the close-up of the town and the depiction of realistic structures – may have been responsible for an underestimation of the potential of this artist.

Perspectives or how to deal with complexity. The case of Melchior Lorck's view of Constantinople

## Angles and Histories – Views of Constantinople

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Melchior Lorck's view of Constantinople supports the act of viewing by means of some additional devices. With this in mind, the viewer can imagine a foreground depicting warehouses on the riverside, by parts of the town wall and by cemeteries at the near side of Galata and Pera and can imagine themselves as if standing in a safe spot (FIG. 2-4). Even when Melchior Lorck himself catches the eye of the viewer, as a picture within the picture, portrayed as a draughtsman working on the view and supported by a man wearing a turban and carrying a pot of ink, this illusion of standing on solid ground is not spoiled. This scene is integrated in a tricky perspective construction (FIG. 3); the steep alignments of the pillars on the right and on the left of the figures (FIG. 2-3) straiten the angle and steer the view onto the drawing hand of Lorck. Likewise, alignments of the roofs of the houses behind the cemetery right of the draughtsman scene open up the view (FIG. 4) of the ancient building complex in the background. There, a viaduct and the spiralled column with the inscription *colona istoriata*, can be identified as well as the Byzantine fortress Yedikule and the Fatih Mosque of the 15th century;<sup>34</sup> this synopsis, supported by perspectives, hardly mirrors the situation in a documentary sense, the viewer rather absorbs an entire historical development conveyed by a group of buildings. Above Lorck's cap, one of the angles boldly aligns with the left-hand side and crosses the edge of the far-reaching and partly untilled old Serail (FIG. 2). There, several alignments arise to the cupola of the minarets of the Süleymaniye Mosque. Anticlockwise, lots of mast of the ships and boats which can be seen below the Hagia Sophia boast their not insignificant part in the perspective construction (FIG. 2);<sup>35</sup> in common with the truncated warehouses on the waterfront, it is no coincidence that this scene at the Golden Horn occupies exactly the mean height of the paper. Likewise, five of the alignments of the mast holding the canvas are deliberately aligned left and right above the cupola of the Hagia Sophia. For the whole width of more than 11 metres, there are striking changes between vanishing points: on the horizontal lines in the foreground with the town wall, in the middle-ground with the town wall on the opposing riverside and in the background with the horizontal line in the narrower sense. These grounds are obviously constructed by different points of sight as in the middle-ground lots of people in boots can be identified. In the background with the old town, on the contrary, not a single one is to be found; no surprise, as such a person would reveal the game of deception: the town in the background is shown nearer as the rules of optics do allow, whereas the means of perspectives enable this illusionistic construction. The skyline is continually broken by prominent, partly enlarged buildings, usually mosques, but in several places ancient or Byzantine buildings can be found. In addition, the vertical, shadowy towers of the town wall and

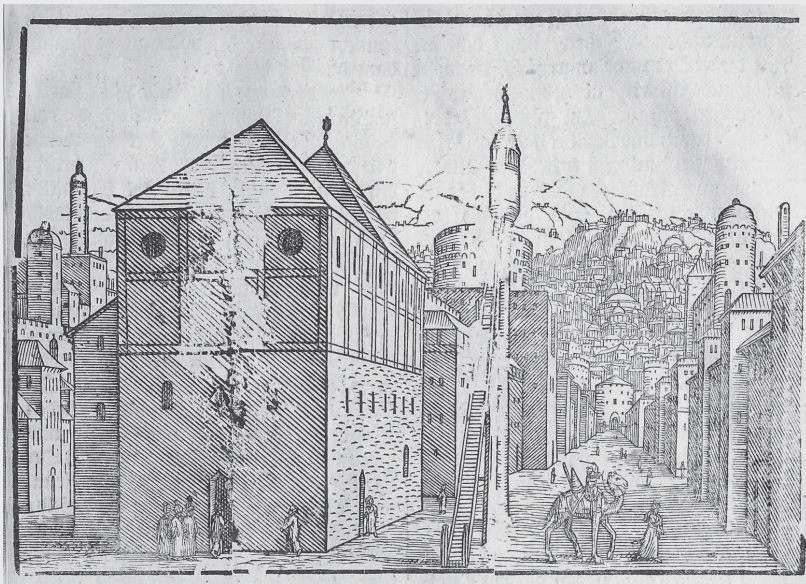
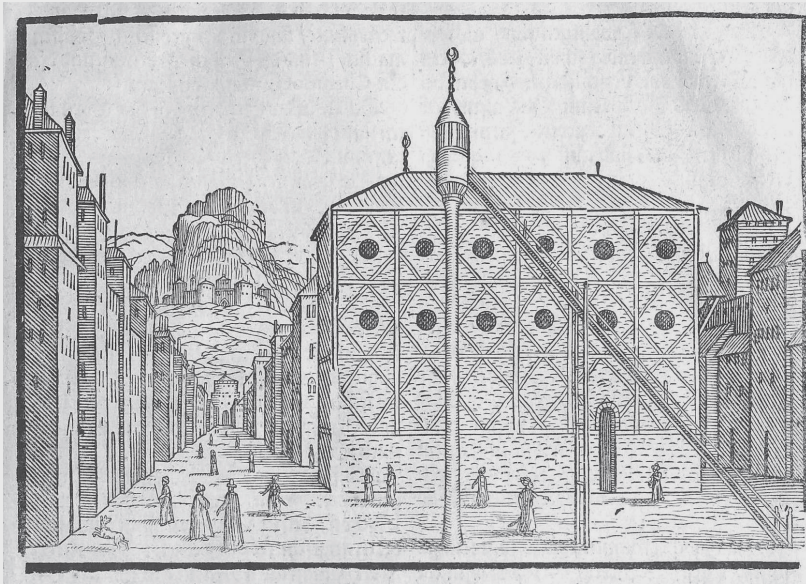


FIGURE 5  
Melchior Lorck, *View of an Ottoman town with a minaret in the foreground*, woodcut, 1570, as published in the *Thesaurus Exoticorum* by Eberhard W. Happel, 1688, Herzog August Bibliothek Wolfenbüttel, Germany, M: Gv 2° 26.

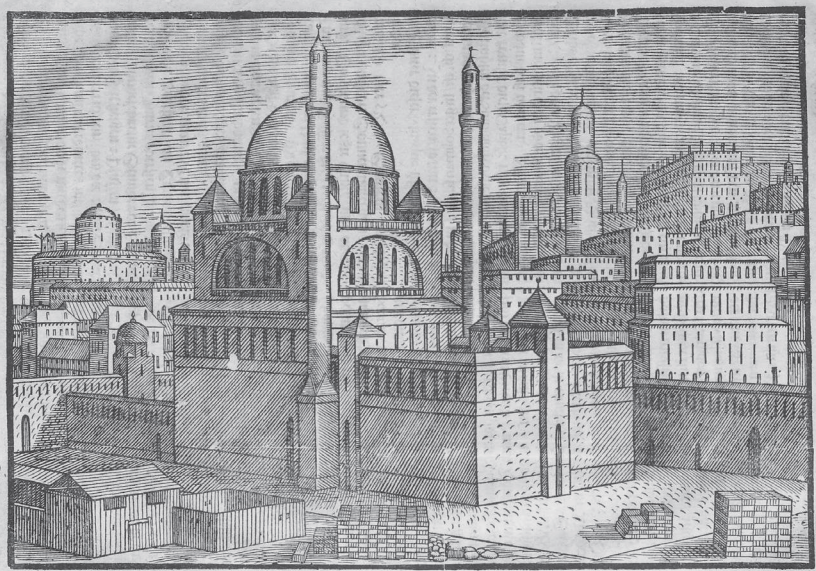
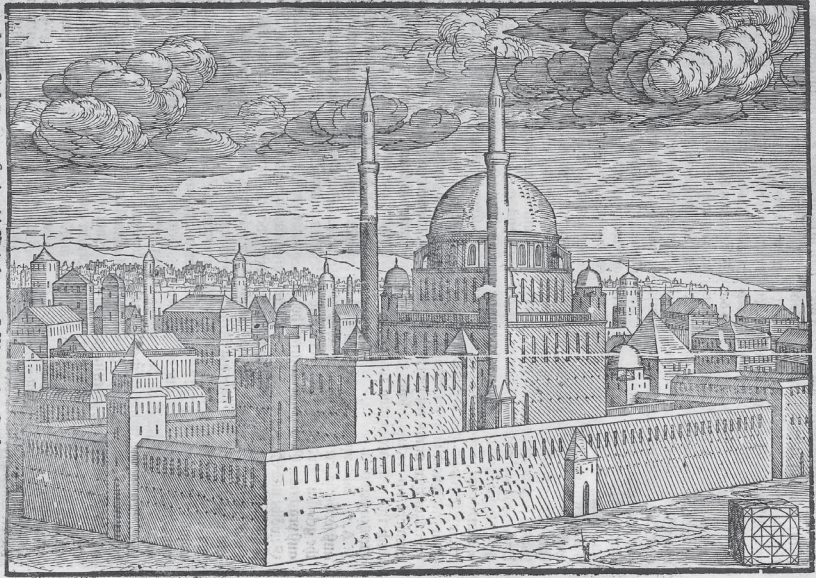
FIGURE 6  
Melchior Lorck, *View of an Ottoman town*, woodcut, 1570, as published in the *Thesaurus Exoticorum* by Eberhard W. Happel, 1688, Herzog August Bibliothek Wolfenbüttel, Germany, M: Gv 2° 26.

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FIGURE 7  
Melchior Lorck, *View of an Ottoman mosque with a cube in the foreground*, woodcut, 1570, as published in the *Thesaurus Exoticorum* by Eberhard W. Happel, 1688, Herzog August Bibliothek Wolfenbüttel, Germany, M: Gv 2° 26.

FIGURE 8  
Melchior Lorck, *View of an Ottoman mosque with cairns in the foreground*, woodcut, 1570, as published in the *Thesaurus Exoticorum* by Eberhard W. Happel, 1688, Herzog August Bibliothek Wolfenbüttel, Germany, M: Gv 2° 26.

the 100 minarets or more of mosques or Byzantine churches converted into mosques are presented as important elements of this comprehensive perspective construction. Dominating the urban image, they help to give the view a structure and to construct such perspectives: there is hardly a minaret that is not crossed by an alignment. This supporting function gives rise to doubts if these minarets are really drawn in a realistic manner, depicting all parts of the town. Once the viewer has these doubts in their mind, they might notice several inaccuracies or just additional building stories to fill the space between the more prominent structures. Nevertheless, Melchior Lorck's view of Constantinople appears to stand out in an historical competition with other contemporary views because of its unusual proportions of height and width, as well as by its consistently illusion of realistic settings and elaborate details of prominent buildings, such as the old Serail, the Süleymaniye Mosque and Hagia Sophia. This complexity of statements might have been one of Lorck's aims of drawing this huge view, or perhaps he just wanted to demonstrate his technical prowess and to present it as *curiosita*, an object to be discussed and marvelled at.

Remember the bookshelves in the reading room of the library in Leyden? This work manifests perfectly the role of Lorck's view as a means of knowledge accumulation on the one hand and the concept of *curiositas* on the other (FIG. 1). At right, the books on *Historici* fill four rows of book shelves. The scientific field of history was a science based on ancient philology at that time always searching for analogies of statements in ancient literature and theological foundations in Christianity.<sup>36</sup> Constantinople was discussed as the "New Rome" in the 16th century; the capture by the Ottomans which does not fit into this topos was then discussed as the Last Judgement.<sup>37</sup> While Lorck was drawing his view of Constantinople, the French scholar Pierre Gilles published his *De Topographia Constantinopolleos et de Illius Antiquitatibus* in 1561. This work discussed all hitherto known written works on Constantinople and compared the results with his own eye-witness experiences as a member of a French delegation to the Ottoman Porte. As a traveller with the newest information about Constantinople under Ottoman rule, Gilles described changes in the town and noted if ancient buildings and memorials are in their place and whether – and in which condition – they had endured the contemporary circumstances.<sup>38</sup> Gilles publication contains four books which are organized by the sequence of the seven hills and the valleys between. This is obviously a coveted analogy to Rome. It was used despite the fact that, as Gilles mentions several times, these hills in Constantinople cannot not be easily recognized. It is not proven whether Lorck knew Gilles' *Topographia Constantinopolleos*, nonetheless he might have known the topos of the "New Rome", since he evidently wanted to make reference to these seven hills in Constantinople,

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too, by depicting the skyline. To put it another way, why should have Lorck construct perspectives over a width of 11 metres showing all parts of the town, including the surroundings to the left and to the right if he did not particularly want to illustrate that story of the seven hills, manifesting the analogy to Rome? In any case, drawings of ancient buildings in Constantinople substantiate not only Lorck's interest in ancient remains but his knowledge of the discourse among historians and the means of artistic appropriation employed by artists.<sup>39</sup> Lorck knew how to deal with such surroundings in a perspective as well, he just let the angles gently level off the view.

### Lorck's woodcuts of Ottoman architecture

One of the characteristics of Melchior Lorck's work is the constant negotiation of formal conventions. Neither his place in a national history of arts nor his work fit in established categories. Woodcuts and drawings on the "Turks" constitute the most prominent works of a Danish born artist. His mastery is shown in drawings and woodcuts in books with models for other artists, but hardly anything was printed in his lifetime.<sup>40</sup> Nonetheless, his work is full of the most astonishing serendipities: preparatory work for a publication on costumes, for example, which show the clothing of a town or region according to sumptuary laws, not – as usual – with one or two figures in portrait format from front or rear view, but in landscape format. There are as many as fourteen people in all kinds of attitudes, presenting the clothing in all its variations for married or unmarried people, for elder or younger people and so on.<sup>41</sup> Lorck seems to have been especially keen in using unusual variations in different genres for different purposes. Working as a court artist, he knew exactly what might be of interest in the courtly collections;<sup>42</sup> as an artist with travel experiences he was also well informed as to where he could find printers capable of fulfilling special demands or where publishers for special kinds of publications might be found.<sup>43</sup> As an artist, Melchior Lorck might have been a person – with a combination of mastery and irreverence – who was confident enough to insinuate an European Christian superiority in handling techniques of perspectives. This is evidenced by his drawing of a Ottoman capital in which the knowledge of geometry was present but was not applied to the arts.<sup>44</sup>

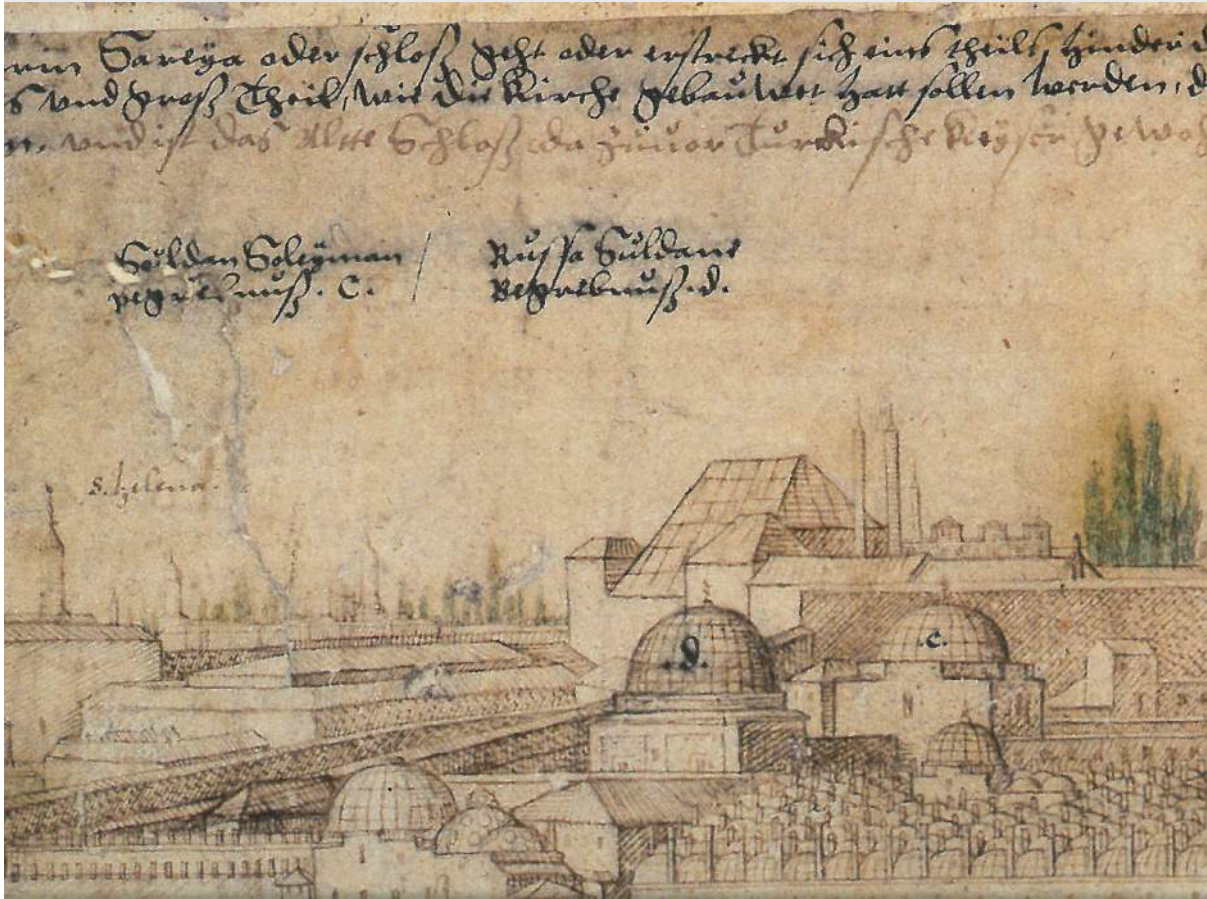
Lorck's view of Constantinople is discussed far beyond the contemporary discourse of conflict between the European Christian and the Ottoman Muslim empires, as an example of interesting usage of techniques in comparison with the contemporary cartography discourse.<sup>45</sup> However, even if Lorck's small woodcuts of clothing of Ottoman people evoked such interest among his contemporaries when it was first published in 1626 and again in 1646<sup>46</sup> why should the view of Constantinople with its astonishing measurements not have been discussed in this context of partly anxious, partly aggressive,

comparison with that archenemy? The fact that the view was hung in the reading room of the library in Leyden confirms its role in the accumulation of knowledge. Reflecting upon the contemporaneous practise of admiring remarkable objects with symbolic relevance in cabinets of wonder, Lorck's view of Constantinople might provide an additional impact. Anyway, it could be a benefit to possess such a view of Constantinople and to present it in a collection of *Turcica* filled up with weapons, other military equipment and clothes at that time.<sup>47</sup> Seen in the context with such collector's pieces, it could almost be understood as a reconquest of the city by artistic means. Furthermore, there are those fascinating woodcuts of towns in the Ottoman Empire by Lorck for which there is no artistic precedent in this special form of elaboration, except the Italian images of ideal scenes in streets of nameless ideal cities;<sup>48</sup> Lorck's contributions to this genre were published in Lorck's model books of 1626 and 1646 and can be seen in the context of the view of Constantinople (FIG. 5-8).<sup>49</sup> Six woodcuts show mosques, six others depict street scenes, with minarets or other distinctly Ottoman buildings – there are additional ones on cemeteries – probably in Constantinople, as Lorck stayed there for several years, although did not travel to other towns. After their initial publication in the so-called *Turkish Publication* in 1626 and 1646 all the woodcuts – there were more than 120 – were reused in Eberhard Werner Happel's *Thesaurus Exoticorum*, which contains a report on the "Musulmänner".<sup>50</sup> Happel's report on the "Turks" represents a special form of compiled knowledge which was justified by the escalated situation during the Ottoman Wars at the end of the 17th century.<sup>51</sup> More than 100 years after Lorck's death his woodcuts again were of interest, as they still transmitted knowledge about this hateful archenemy. Happel's form of compilation is elucidated by his use of image material, including Lorck's images and many other images of all genres by other artists. Images are chosen and used as illustrating material for their relevance to topic of the report. Thus they do not need to be created at the time or in the same context; a relationship to the author of the report or to his intentions is not necessary. All that mattered was visual accordance with the text supported by an icon symbol. In this sense, several of Lorck's woodcuts on scenes in towns were used by Happel to illustrate a report on different towns in the Ottoman Empire. Lorck's woodcuts therefore were entitled Aleppo, for example, or Damascus, no matter whether Lorck ever intended to depict a particular town or whether he wanted to represent an idealized portrayal of Ottoman towns (FIG. 5-6).<sup>52</sup> One of these scenes (FIG. 5) shows a line of buildings along the roadside aligning in the background on the left. To the right, a square in front of a huge building with an imposing façade can be recognised. Before this huge building and to the right of the centreline stands a freestanding minaret. It can be reached by

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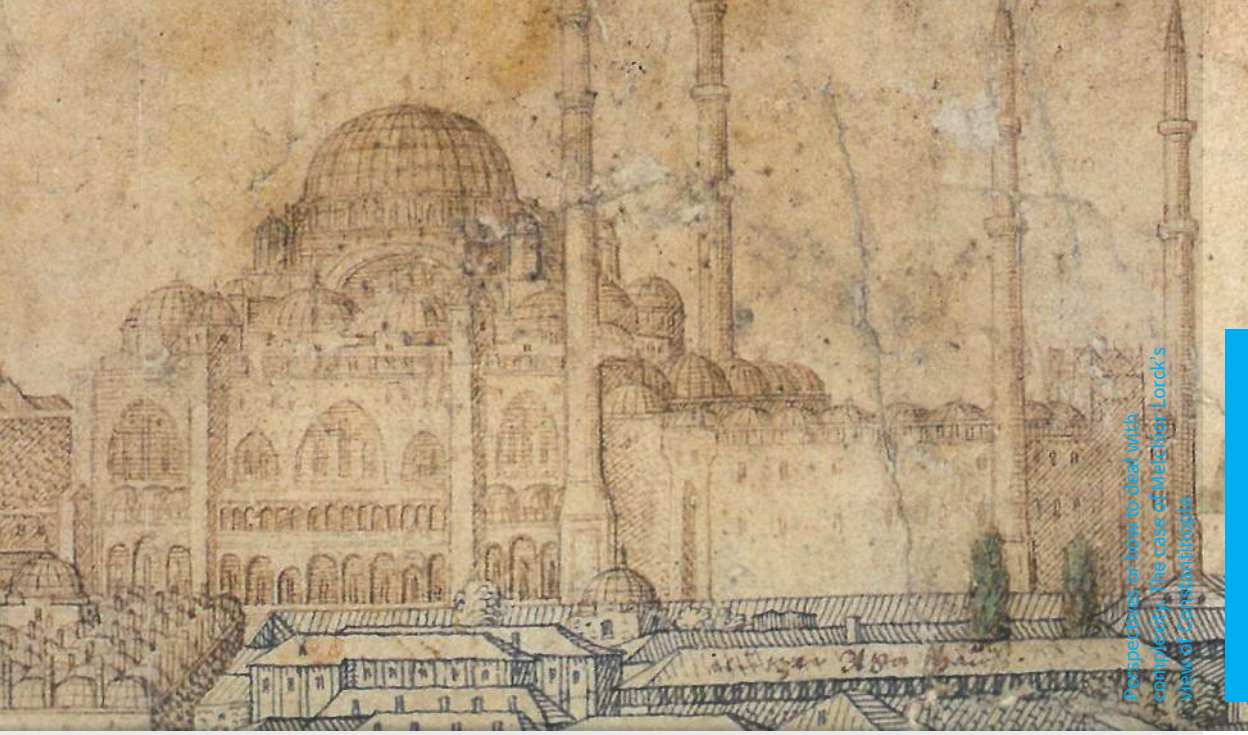
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FIGURE 9

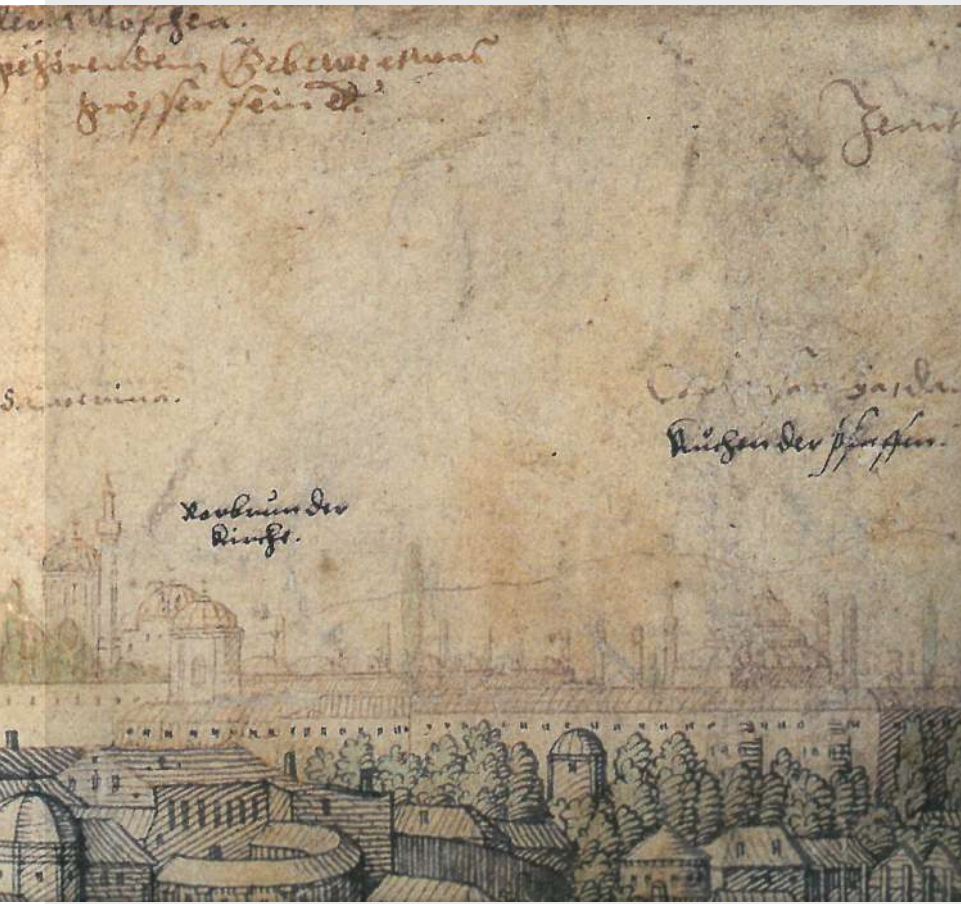
Melchior Lorck, *Detail of the View of Constantinople with the Süleymaniye Mosque*, upper part, drawing, 1560-1565. Library of the University of Leyden, The Netherlands, Inv. Nr. BPL 1758, leaf 10.

Der Ringen  
anbau  
von Gärten

Sultan Soliman, Ringen  
jetzt ganz alle fertig



Respect to the way to deal with  
complexity in the case of the  
view of the city of Istanbul



climbing up a staircase beginning in the bottom right corner, underpinned in the middle of the construction.<sup>53</sup> The staircase, as well as the roofs of the houses nearby align in the balcony of this minaret, unlike most of the alignments which are directed towards the gate in the background, exactly in the middle of the bottom left quadrant. In a similar way, the alignments of another street scene (FIG. 6) are assembled in the middle of the bottom right quadrant.<sup>54</sup> Once again a building with a remarkable façade design in the foreground, approximately parallel to the lower picture margin, is presented as the stage of an urban scene with people and animals. Again, the central feature of this woodcut is a minaret with free-standing stairs, although this time Lorck has chosen another perspective. In profile, a dromedary is shown in the foreground to the right. Lorck made several drawings of such exotic animals and especially of dromedaries.<sup>55</sup> Considering the unusual perspectives of the minarets with its stairs in keeping with other such scenes, one may venture an association with the contemporary discourse on *Ichnographia*, *Orthographia und Scaenographia* reflecting Vitruv's rules about the *dispositio* of a building.<sup>56</sup> Step by step, Lorck demonstrates what happens if alignments are situated in different quadrants and offers in his *Scaenographiae* an idea of a town which is constructed by perspective. Like the dromedary once used as an accessory in the scene of a town and another time playing the leading part, these scenes become parts of a greater whole, for example in a view. Among Lorck's woodcuts of mosques, there are two (FIG. 7-8) which suggest a much more prominent role of these woodcuts published in the *Turkish Publication* by affirmatively showing icons, such as a cube with geometrical markings.<sup>57</sup> This icon of the applied geometry, with squares and circles is situated in front of a mosque in the bottom right hand corner. Another woodcut in this sequence presents stacked cairns in front of another mosque, as if the first chapter in one of the Vitruv editions demands to be illustrated. Contrary to the declarations in Happel's *Thesaurus Exoticorum*, these mosques in Lorck's woodcuts are not buildings which can actually be found in Constantinople, but they are ideal constructions. The comprehensive constructions of perspectives align far to the right, and far to the left, outside the image; these *Scaenographiae* clearly allow the construction of ground-plans and elevations. The city of Constantinople obviously offered Lorck not only a field of investigations on ancient remains, but additionally on building types and manners of visualization. Concerning ancient remains in Rome, it was technically possible to visualize ground-plan, elevation and perspectives in one chart at that time as proved by the view of the Colosseum by the publisher Antonio Salamanca in 1538.<sup>58</sup> For a long time, this technique of visualization was destined to demonstrate the characteristics of that prominent elliptical building in Rome. Nonetheless, there has never been a question about the function of a perspective view since

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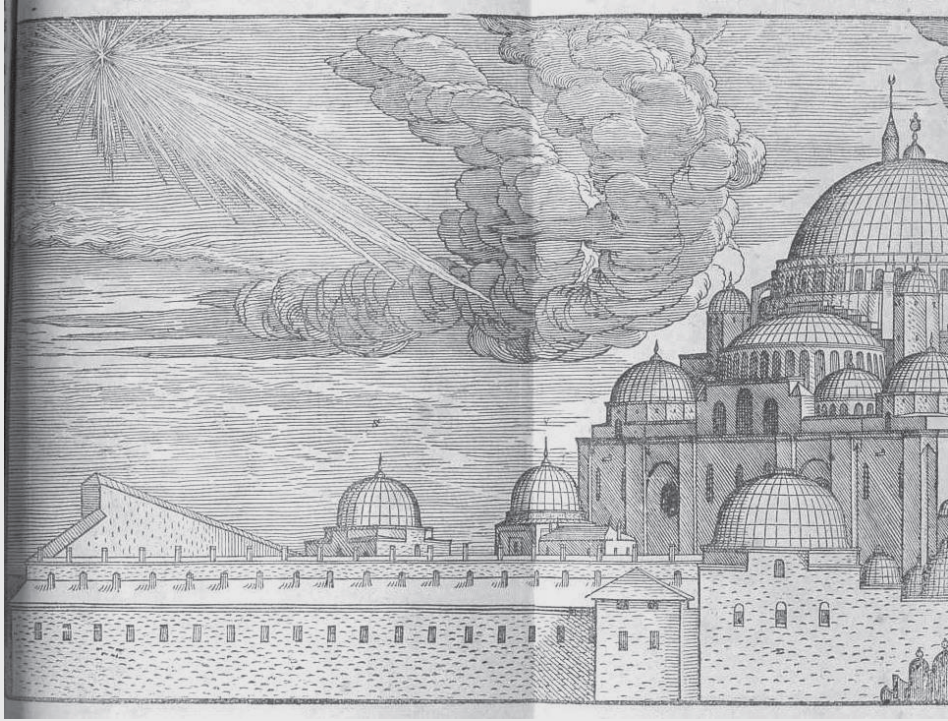
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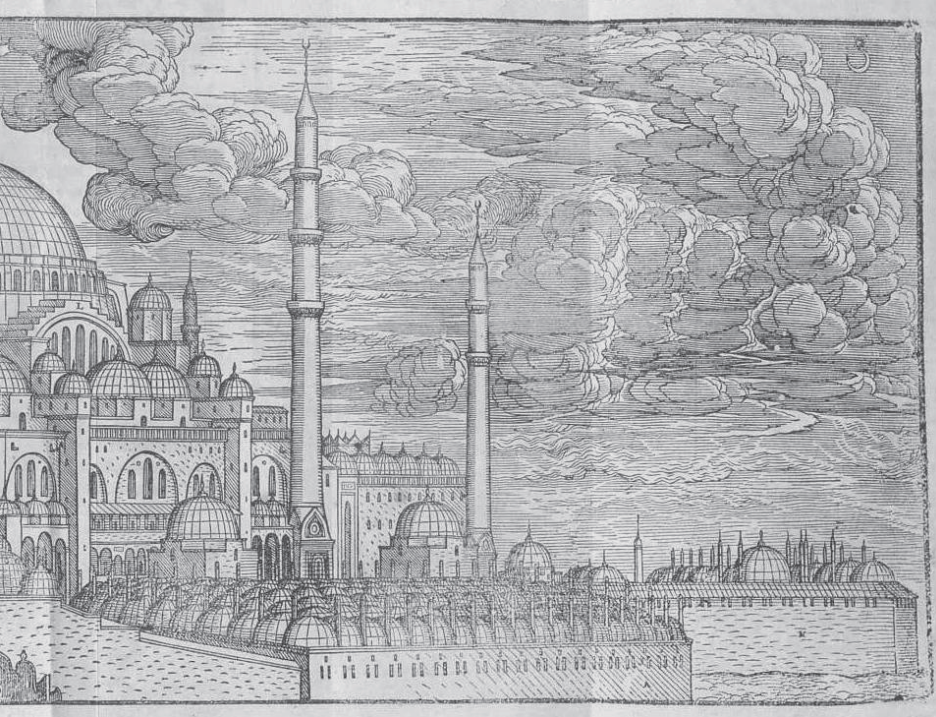
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FIGURE 10  
 Melchior Lorck, *View of the Süleymaniye Mosque*, woodcut, 1570, as published in the *Thesaurus Exoticorum* by Eberhard W. Happel, 1688, Herzog August Bibliothek Wolfenbüttel, Germany, M: Gv 2° 26.

then: such a type of demonstration by visual means had definitively to make the construction of a ground-plan and an elevation possible. That means, it had to enable tools of multi-perspective visual interpenetration of a space. Lorck's views of some of such mosques as ideal constructions offer views of foreign building types as well as more abstract insights to the architecture of the Ottoman Empire at a time in which some reports of travellers were available, but hardly any knowledge of the Ottoman architecture and building practice beyond or on the theory of architecture.<sup>59</sup>

It is all a  
 Question of  
 Perspectives  
 – Conclusion

Melchior Lorck's work is underestimated; his view of Constantinople and especially his masterful handling of perspectives deserve much more attention. Thus, the portrayal of all prominent mosques on the seven hills of the "New Rome" may warrant particular attention. The Hagia Sophia, which had been



built under Roman rule, may be seen as an exponent of the “Old Rome”, the Süleymaniye mosque, as its counterpart, representing “New Rome”. However, Melchior Lorck did show the Süleymaniye mosque on one of his 1626 and 1646 published woodcuts of the *Turkish Publication*, too (FIG. 9-10), using a different perspective; the mosque is seen over the wall of the old Serail. The edge of this wall is used in the view (FIG. 9) as an important pledge of the perspective construction, whereas the woodcut (FIG. 10) shows the mosque above this complex as if standing on a substructure; the Süleymaniye mosque appears more impressive as a result. As if handling a geometrical field, Melchior Lorck spun the mosque around as he needed it for special pictorial issues: in the view the mosque is slightly tilted backwards, on the woodcut slightly tilted forwards – the viewer faces exactly what he should face in order to receive a certain piece of information – it is all a question of perspectives.

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## Notes

- 1 Erik Fischer, Ernst Jonas Bencard and Mikael Bøgh Rasmussen, *Melchior Lorck*, 4 vols. (Copenhagen: Vandkunsten Publ., 2009), for the so called *Turkish Publication* see vols. 2 and 3, for *The Constantinople Prospect* see vol. 4. See Eugen Oberhummer, *Konstantinopel unter Sultan Suleiman dem Grossen, aufgenommen im Jahre 1559 durch Melchior Lorichs aus Flensburg* (München: Oldenbourg, 1902); Karl Wulzinger, “Melchior Lorichs Ansicht von Konstantinopel als topographische Quelle,” in *Festschrift Georg Jacob zum siebzigsten Geburtstag, 26. Mai 1932*, ed. by Theodor Menzel (Leipzig: Harrassowitz, 1932), 355-368; Maria-Magdalena Müller-Haas, “Ein Künstler am Bosphorus: Melchior Lorck,” in *Europa und der Orient 800-1900*. Exh. cat. Martin-Gropius-Bau Berlin, ed. by Gereon Sievernich et al. (Gütersloh (et al.): Bertelsmann Lexikon Verlag, 1989), 241-244 and 794-798; Stéphane Yerasimos and Cyril Mango, *Melchior Lorich's Panorama of Istanbul 1559* (Bern: Ertug & Kocabiyik, 1999); Nigel Westbrook, Kenneth Rainbury Dark and Rene van Meeuwen, “Constructing Melchior Lorich's Panorama of Constantinople,” *JSAH Journal of the Society of Architectural Historians* 69, no.1 (2010): 62-87, for a digitalization of the Constantinople Prospect see <http://jsah.ucpress.edu/content/69/1/62.figures-only>.
- 2 Stéphane Yerasimos, *Les voyageurs dans l'Empire Ottoman (XIVe-XVIIe siècles): Bibliographie, itinéraires et inventaire des lieux habités* (Ankara: Société turque d'histoire, 1991); Amanda Wunder, “Western Travellers, Eastern Antiquities, and the Image of the Turk in early modern Europe,” *JEMH Journal of Early Modern History* 7, no. 1-2 (2003): 89-119; Fischer, Bencard and Bøgh Rasmussen, *Lorck*, vol. 1, 87-106; Mikael Bøgh Rasmussen, “Enemy Enticements. A Habsburg Artist in Süleyman's Capital City,” *Caliope* 19, no.1 (2014): 159-195.
- 3 Fischer, Bencard and Bøgh Rasmussen, *Lorck*, vol. 4, 7-8.
- 4 Fischer, Bencard and Bøgh Rasmussen, *Lorck*, vol. 4, 7-8; Melchior Lorck: *Byzantium sive Constantineopolis*, c. 1560-65, drawing, c. 0,44 m × c. 11,32 m, Library of the University of Leyden, The Netherlands, Inv. Nr. BPL 1758; Jan Cornelisz Woudanus: *Bibliotheca Lugduno-Batavae*, 1610, engraving, 33,10 cm × 40,80 cm, Library of the University of Leyden, The Netherlands, P 315-III N 22.
- 5 Werner Müller-Wiener, *Bildlexikon zur Topographie Istanbuls: Byzantion – Konstantinopolis – Istanbul bis zum Beginn des 17. Jahrhunderts* (Tübingen: Wasmuth, 1977); Maurice Cerasi, “Da Costantinopoli a Istanbul: I secoli XV-XVII,” in *Metamorfosi della città*, ed. by Leonardo Benevolo (Milano: Scheiwiller, 1995), 73-148; Çiğdem Kafescioglu, *Constantinopolis/Istanbul: cultural encounter, imperial vision, and the construction of the Ottoman capital* (University Park: The Pennsylvania State University Press, 2009). For “Representation of power in the Ottoman architecture” see Özlem Kumrular, *The Ottoman World, Europe and the Mediterranean* (Istanbul: The Isis Press, 2012), 195-208.
- 6 Charlotte Colding Smith, *Images of Islam* (London: Pickering & Chatto, 2014) and Palmira Johnson Brummett, *Mapping the Ottomans: sovereignty, territory, and identity in the early modern Mediterranean* (Cambridge: Cambridge University Press, 2015). For the image of religious enmity see Norbert Haag, “Erbfeind der Christenheit’. Türkenpredigten im 16. und 17. Jahrhundert,” in *Repräsentationen der islamischen Welt im Europa der Frühen Neuzeit*, ed. by Gabriele Haug-Moritz and Ludolf Pelizaeus (Münster: Aschendorff-Verlag, 2010), 127-149.
- 7 For example Pierre Gilles, *De Topographia Constantinopolleos et de Illius Antiquitatibus*, 4 vols. (Lugduni: Rovillius, 1561); Pierre Gilles, *The Antiquities of Constantinople*, 2. ed. based on the translation by Kimberly Bird (New York: Italica Press, 1988). For the conventions of archaeological discourses of

- that time see Wunder, *Image of the Turks*, for the discussion on nemesis see Almut Hofert, *Den Feind beschreiben: Türkengefahr und europäisches Wissen über das Osmanenreich 1450-1600* (Frankfurt am Main: Campus Verlag, 2003); Eckhard Leuschner and Thomas Wunsch, ed., *Das Bild des Feindes: Konstruktionen von Antagonismen und Kulturtransfer im Zeitalter der Türkenkriege. Ostmitteleuropa, Italien und Osmanisches Reich* (Berlin: Gebrüder Mann Verlag, 2013).
- 8 Georg Braun and Hans Hogenberg, *Civitates Orbis Terrarum*, re-edition as *Städte der Welt: 363 Kupferstiche revolutionieren das Weltbild. Gesamtausgabe der kolorierten Tafeln 1572-1617*, ed. by Stephan Füssel (Köln: Taschen, 2011), vol. 1, pl. 52.
- 9 Erwin Panofsky, "Die Perspektive als ‚symbolische Form‘," in *Erwin Panofsky: Deutschsprachige Aufsätze*, Bd. 2, ed. by Karen Michels and Martin Warnke (Berlin: Akademie-Verlag, 1998), 664-756 (Primarily *Vorträge der Bibliothek Warburg 1924/1925*, ed. by Fritz Saxl (Leipzig - Berlin: Teubner, 1927), 258-330). For the history of reception see the contributions of the editors, for the discussion on the iconic turn see Christopher Wood: "Introduction," in *Erwin Panofsky: Perspective as Symbolic Form*, ed. by Christopher Wood (New York: Zone, 1991), 7-24.
- 10 Siegfried Krakauer, *Theorie des Films: die Errettung der äußeren Wirklichkeit*, re-edition (Frankfurt am Main: Suhrkamp, 2009). See Ulrich Raulff, "Auch die Marx-Brothers in Arkadien: Kamerafahrt durch den Humanistenkrimi: Als Erwin Panofsky und Siegfried Krakauer von den Movies lernten," *Frankfurter Allgemeine Zeitung* 47 (1996), 282 vom 3. 12. 1996, L13.
- 11 Colding Smith, *Images of Islam*.
- 12 Klaus Krüger, *Curiositas: Welterfahrung und ästhetische Neugierde in Mittelalter und früher Neuzeit* (Göttingen: Wallstein, 2002).
- 13 Fischer, Bencard and Bøgh Rasmussen, *Lorck*, vol. 4, 7-8. Lorck's view of Constantinople was rediscovered in a damaged condition in mid-19th century and split up into twenty-one sheets of paper in 1869.
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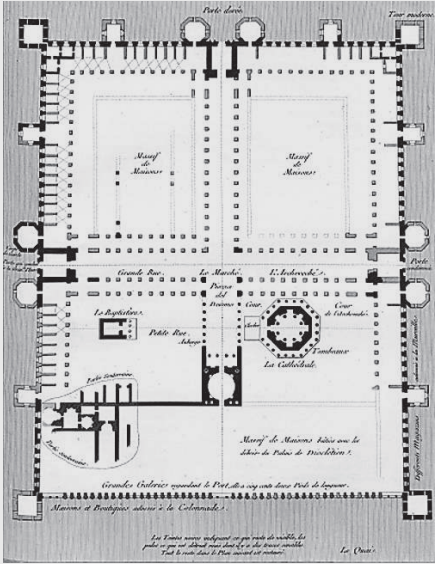
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# Transformacije splitskog Peristila tijekom 13. stoljeća\*

Joško Belamarić

„Termitski“ rad generacija Splitskana transformirao je Dioklecijanovu palaču u srednjovjekovni grad. Ipak, njenu praiskonsku prostornu matricu bilo je moguće osjetiti i kada su je prekrile inkrustacije romaničke i gotičke, renesansne i barokne arhitekture. Izvorni geometrijski red, u svojoj gotovo vojničkoj postrojenosti unutrašnjih i vanjskih arhitektonskih elemenata, preživio je kao armatura srednjovjekovnih uličnih linija. Ma koliko uska bila pročelja tih novih kuća i palačica uzidanih u antičke arkade, prizidanih uz ostatak nekoga carevog bloka, nadozidanih na rimskim temeljima – zlačani sjaj kvadera klesanih od bračkoga i trogirskog vapnenca od kojih su složene i antičke spolije koje su posvojile, daju i najmanjoj od tih gradnji slikovitost koju možemo razumjeti i zavoljeti, i koja nam pomaže da se lakše familijariziramo s autoritetom imperijalne palače.<sup>1</sup> Danas, ipak, teško možemo pojmiti da je na mjestu uske krivudave ulice koja vodi od Zlatnih vrata do Peristila, utisnute između srednjovjekovnih kuća nepravilnih građevinskih linija, izvorno postojala *via praetoria* (Robert Adam prvi ju je nazvao *cardo*) široka dvanaest metara – od Peristila uža za samo 60 centimetara. (Zajedno s trijemovima znatno je čak šira!)

Jedinstvenu poetiku tog prostora u kojemu se organička srednjovjekovna gradnja superponira ili interpolira u gotovo kruto vojnički red antičke arhitekture možda je najbolje interpretirao škotski arhitekt Robert Adam izvukavši iz nje generalni princip za novi način orkestriranja unutrašnjeg rasporeda svojih projekata. Adam i njegovi „Mirmidonci“ godine 1757. arhitektonski su snimili sve vidljive dijelove Dioklecijanove palače u Splitu, iz čega je nakon sedam godina priprema nastala temeljna knjiga *Ruins of the Palace of the Emperor Diocletian at Spalatro in Dalmatia* (1764.). U njoj Adam po prvi put analizira i interpretira ne samo formu, nego i izvornu funkciju pojedinih dijelova Palače, pa mu dugujemo većinu imena njenih elemenata.<sup>2</sup> Za razliku od velikih prethodnika koji su crtali i pokušali interpretirati samo izvorni izgled palače, Adam je u njoj vidio i gigantski palimpsest. Od osobite je važnosti to što je baš u Splitu, pažljivom analizom suodnosa pojedinih dvorana u njihovom ritmičkom slijedu duž osovina kretanja – opisujući prije svega putanju koja se razvija od Zlatnih vrata i duž široke avenije s trjemovima (*cardo*) koja vodi izravno na Peristil, preko Protirona, Vestibula i Atrija do Kriptoportika – došao do zakona koji je nazvao *Climax in Architecture*. Njime je objasnio mehanizme orkestracije u rasporedu hodnika, odaja, soba, dvorana – prema preciznim hijerarhijskim odnosima podređenog i ceremonijalnog, uskog i širokog, manjeg i većeg, nepravilnog i pravilnog. Mnogo prije Alfreda Frazera i ostalih, shvatio je da je Protiron nad Peristilom pravo pročelje carske rezidencije. Shvatio je, kao nitko prije (a možda ni poslije) stvarnu narav Peristila – koji nije forum, ali je srce toga neobičnog kasnoantičkog zdanja što ga nazivamo carevom palačom.

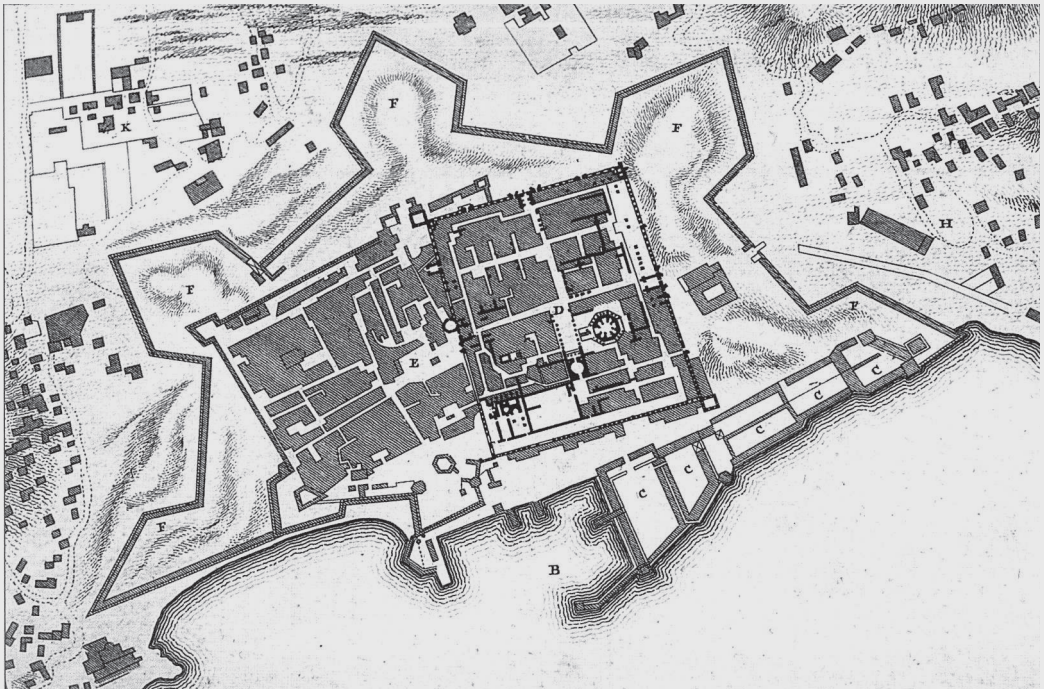


SLIKA 1

Louis-François Cassas, Plan Exact de ce qui existe du Palais de Diocletien, 1802.

SLIKA 2

Robert Adam, Plan Splita s ucrtanim ostacima Dioklecijanove palače, 1764.



Stupovi trijemova duž *carda* i *decumanusa* sa strana izvorno su, u svom monotonom nizanju, nosili vodoravni arhitrav. Onome koji je ulazio u Palaču, kroz bilo koja od kopnenih vrata, ukazivali su se samo portici koji izravno vode k srcu građevine, do pravokutnog prostora Peristila. Tu bi doživio vizualni šok našavši se pred prozračnim kolonadama, bez tereta kojeg bi nosile. Prostorni ugođaj dobio je snažno auličko značenje, čitav stilski registar tu je posve izmijenjen. Kolonade su ga poput nekih transparentnih zidova usmjeravale prema glavnome monumentalnom pročelju carske rezidencije, dok su istodobno naglašavale izdvojenost dviju sakralnih cjelina u kojima su stajali carev mauzolej s istočne strane te sa suprotne, zapadne strane manji prostilni hram s dva *tholosa* pred njim (tzv. Kibelin i Venerin hram).<sup>3</sup> Unutar suhe i gotovo anorganičke arhitekture Palače, Peristil je mjesto koje je zavodilo slikovitošću. Neobičnost mu dolazi otud što stupovi ne podržavaju neprekinutu gredu (po tradicionalnome rimskom sustavu), nego niz gotovo lebdećih lukova koji se razvijaju izravno s korintskih kapitela. Naravno, postoje raniji primjeri motiva lukova postavljenih izravno na stupove, međutim tek je u Splitu – na Peristilu i Protironu, kao i na južnom pročelju Palače – on dobio konzekventno značenje.

Peristil, koji je *sancta sanctorum* Dioklecijanove palače, danas doživljavamo kao zaokruženu cjelinu solidnoga vizualnog integriteta i vjerojatno nismo svjesni u kojoj mjeri je sve to što vidimo rezultat cijele serije stilski raznovrsnih graditeljskih pothvata i izmijenjenih funkcija. Mauzolej najgorljivijeg progonitelja kršćana ironijom sudbine postao je srednjovjekovna katedrala grada koji se ugnijezdio u njegovoj palači. Poviše skladnog sklopa kasnoantičkih građevina od sredine 13. stoljeća gradio se zvonik koji je svojom monumentalnošću mogao odgovarati višestruko većem gradu. On je, istina, bio najoriginalnija građevina srednjega vijeka na hrvatskoj obali, ali u isto vrijeme i završni kršćanski čavao u lijesu poganske careve palače.

Nema zapravo elementa kasnijih građevina na Peristilu, osim izvornih arkatura, koji nije doživio neku preinaku. Trebali bismo nabrajati čitav niz rekonstrukcijskih i restauratorskih, u pravilu purističkih zahvata koji su tom prostoru odredili današnji lik.<sup>4</sup> Dovoljno je da usporedite zapadnu stranu Peristila – s inkrustacijama iz vremena romanike, gotike, renesansne i baroka – sa suprotnom, istočnom arkaturom koja danas stoji kao skulpturalna dijafragma oko koje su, i iz nje same, malo-pomalo uklonjene sve naknadne građevinske intervencije, ali i izvorne tranzene koje su ublažavale dojam „skulpturalnosti“.

Metamorfoza carske palače u nastanjeni grad danas nam izgleda trenutnom i iznenađujućom poput čuda, a zapravo se odvijala sporo i postupno, i to od prvoga dana njenog nastanka. Zlatna vrata bijahu zazidana najkasnije početkom 6. stoljeća, što je omogućilo da se u stražarskom hodniku poviše

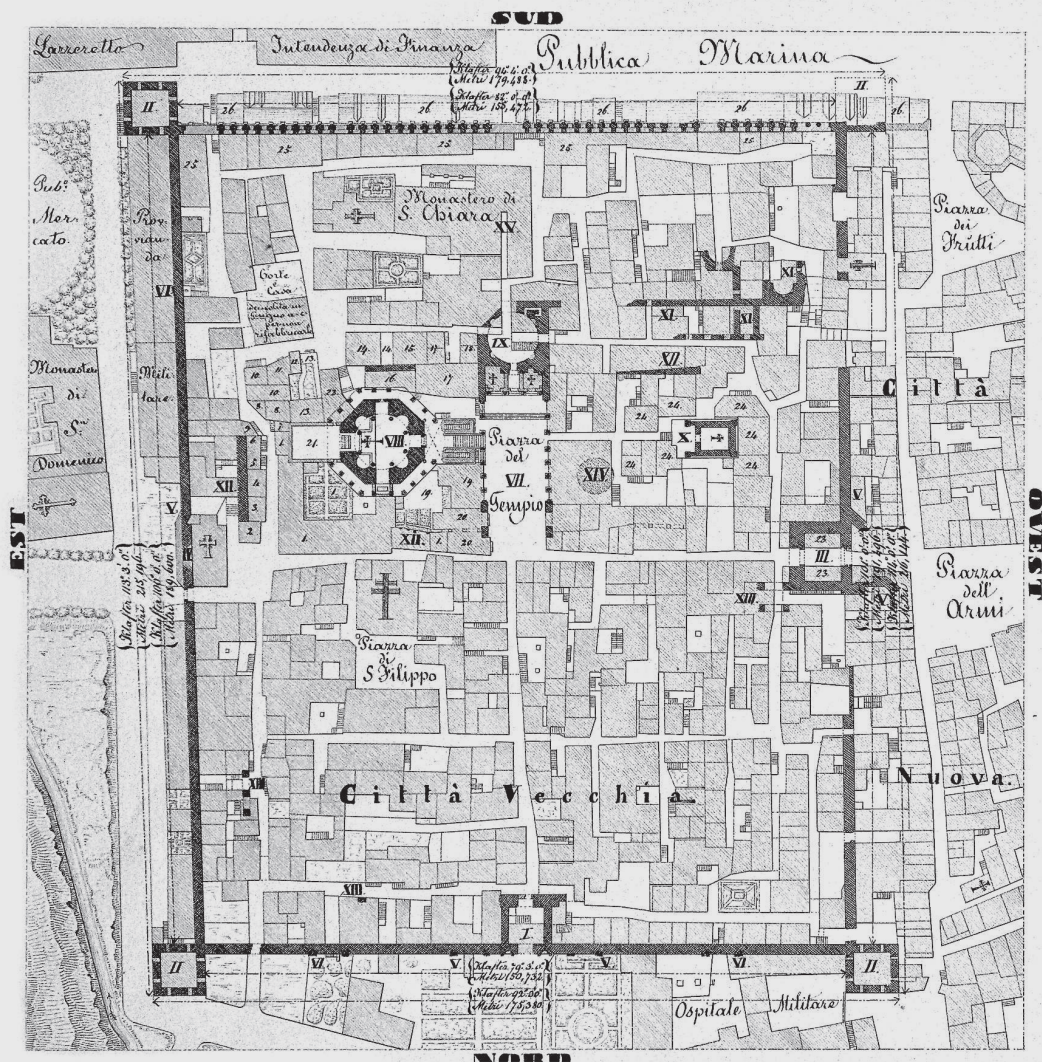
njih ugnijezdi ranokršćanska kapela posvećena svetom Martinu, dočim se novi glavni ulaz u grad formirao na Željeznim vratima, a ubrzo potom na Pisturi, na vrhu (današnje) Bosanske ulice. Čini se da su Zlatna vrata u to doba preživjela tek u nekom reduciranom obliku, s pragom za koji je, primjerice, upotrijebljen jedan kameni balvan s arhitrava urušenog trijema na *cardu* ili *decumanusu*. Daleko smo, međutim, od preciznijeg opisa procesa iz kojega bismo shvatili kako su glavne i perimetralne ulice mogle malo-pomalo poprimiti karakterističan izgled srednjovjekovnog *souka*, kako se postupno transformirao aulički izgled rezidencijalnoga južnog dijela Palače. Na više mjesta možemo razumjeti kako su, primjerice, pločnici ulica, pa i samog Peristila, bili sustavno ekstrahirani ili kako su veće građevine pretvorene u kamenolome. Zida se zvonik koji svojim rječnikom, sintaksom i gramatikom emulira najreprezentativnije forme Peristila i Zlatnih vrata – po čemu je na svoj način renesansniji od kasnije Jurjeve, Alešijeve i Firentinčeve arhitekture u ovom gradu – a istodobno se za njegovu gradnju bere kamen iz zapuštenih i urušenih carskih dvorana. Paradoks je i to što ćemo u Palači na više mjesta naći ostatke mozaika (ipak, samo elementarnih ornamentalnih obrazaca), a malo što od pločnika: prvi se očito nisu mogli reutilizirati, pa ih je to barem djelomice spasilo!<sup>5</sup>

Želimo, međutim, u ovom tekstu pratiti samo transformaciju prostora Peristila tijekom 13. stoljeća. U dosadašnjoj literaturi malo se govorilo o tome, ako nije bila riječ o gradnji zvonika katedrale. U pionirskoj studiji Cvita Fiskovića o romaničkim kućama u Splitu i Trogiru spominje se samo međukatni vijenac „od izmjenično izdubjenih četvorina (*échiquier*)“ kuće Luccari – u novijoj literaturi češće spominjanoj kao Skočibučić – u jugozapadnom dijelu Peristila.<sup>6</sup> Duško Kečkemet je pak prije više od 60 godina pisao o romaničkoj loži otkrivenoj u palači Grizogono-Cipci.<sup>7</sup> Ako se još ponegdje spomenuo neki element romaničkog sloja Peristila, bilo je to uzgredno i bez svijesti da na njemu zapravo nije bilo točke koja u dugome splitskom 13. stoljeću nije dobila novo ruho, a čitav prostor novi sjaj reprezentativnoga gradskog trga.

Signala intenzivne gradnje u to doba ima mnogo. Baza trećeg stupa u Protironu isklesana u trogirskom kamenu, s karakterističnim ugaonim listovima i profilom koji se razlikuje od antičkih baza susjednih stupova, svjedoči o romaničkom restauratorskom zahvatu koji je onodobnim Splićanima morao izgledati kao pravi inženjerski pothvat, što je i bio.<sup>8</sup> Možemo pretpostaviti da je izveden u vrijeme kada je u Protironu vjerojatno postojala loža. Sudeći po dokumentima, prostor Protirona ostao je važan reper srednjovjekovnoga Splita. Na pročelnom zidu Protirona ili u zazidu središnjeg interkolumnija – Andrija Buvina, *pictor de Spaletto*, autor znamenitih rezbarenih, izvorno polikromiranih vratnica katedrale, naslikao je lik sv. Kristofora, očito u

SLIKA 3

Vicko Andrić, „Ikonografija“ ostataka  
Dioklecijanove palače ucrtanih na planu  
suvremenog Splita, 1854.



Transformacije splitskog Peristila  
tijekom 13. stoljeća



velikom formatu.<sup>9</sup> U glasovitom primjerku *Historia Salonitana* Tome Arhiđakona iz arhiva obitelji Garagnin-Fanfogna u Trogiru od 1903. u Széchény biblioteci u Budimpešti, na f. 2 napisana je gotičkim pismenima bilješka: *hoc t(em)p(ore) Edificate fueru(n)t lanue maiores cu(m) figuris et Istorijs de nativitate et pa(s)sione d(omi)ni n(ost)ri yh(ies)u xpi(sti) Eccl(es)ie s(an)c(t)i Dompnij de Spaletu p(er) mag(ist)r(u)m Andrea(m) Buvina(m) p(i)nctore(m) de Spaletu et sub eode(m) t(em)p(o)r(e) depicta fuit ymago et figura s(an)c(t)i i Xpofori i(n) plancato Dompnij p(re)d(i)c(t)i p(er) p(re)d(i)c(t)um mag(ist)r(u)m A(ndream) sub annis d(omi)ni n(ost)ri Y(esu) X(risti) cu(r)rent(ibu)s MCCXVIII m(en)s(is) ap(ri)lis die XXIII exeunte.*

Vezujući poput svih dosad spomenuti datum samo uz postavljanje značenitih Buvininih vratnica na portal katedrale, nisam dosad uočio – i tome se čudim – da bilješka govori da se na svetkovinu sv. Jurja te 1214. godine istodobno s monumentalnim vratnicama kolaudirala i freska s prikazom sv. Kristofora u Protironu! Morao je to biti čin koordiniranog programa. Gotovo neuobičajeno podcrtavanje točnog datuma, na svoj način također ističe značenje koje je *ymago et figura sancti Xpofori in plancato Dompnij* imala u percepciji srednjovjekovnih Splitskana. Možemo se pak pitati je li se uopće radilo o freski ili o reljefu, ili čak kipu. No, na ovo tek nabačeno zapažanje kanim se opširnije vratiti na drugom mjestu.<sup>10</sup>

Leteće, fluidne dijafragme bočnih strana Peristila i stupovlje Protirona morali su se srednjovjekovnom Splitskaninu i namjerniku činiti gotovo eteričnim. Po nekoj logici propadanja antike u tom gradu očekivalo bi se da prve padnu, ali su, obujmljene srednjovjekovnim kućama, preživjele bolje od ičega u Palači. Tako su sačuvale savršenu pravilnost izvornog prostora, pravokutni format gradskoga odnosno katedralnog trga.<sup>11</sup> Ushit koje su izazivale najbolje zrcale oblici zvonika.

U začudnom dijalogu poganske antike i kršćanskoga splitskog srednjeg vijeka nastalo je i najoriginalnije arhitektonsko djelo hrvatske umjetnosti – zvonik katedrale sv. Dujma. Gordi arhitekti i graditelji splitskog zvonika kao da su se vodili Sullivanovom tezom: „Glavno je svojstvo visoke zgrade da je visoka (...) Ona mora biti ponosna i uznosita do posljednjeg centimetra, dižući se u čistom ushitu, tako da od vrha do dna bude jedna jedinica.“ Ono po čemu se splitski zvonik razlikuje od ostalih dalmatinskih katedralnih zvonika jest njegova stilska koherentnost, bez disonantnih crta koje bismo očekivali od gradnje, koja se odvijala tijekom tristo godina. Njegova gotička faza iz 14. i 15. stoljeća posve je slijedila izvorni projekt iz 13. stoljeća. Dovoljno je u tom smislu pogledati na sraz stilova trogirskog zvonika koji se transparentnošću želi takmičiti s njime.<sup>12</sup>

Nakon postupnog, ali odlučnog purificiranja prostora užega gradskog središta, osobito oko katedrale, taj zvonik je malo-pomalo postao strano

tijelo nad Peristilom u percepciji svojih stanovnika i u očima namjernika. 87 Ostao je bez znatnog dijela svoga izvornog prostornog konteksta, bez grozda crkvice i kuća koje su se dijelom kongenijalno, dijelom parazitski bile nanizale duž njegove strane Peristila i duž nekadašnjeg *decumanusa*, gdje je nova Nadbiskupska palača (izgrađena 1667., zacijelo na mjestu ranijih romaničkih kuća) zatvorila cijeli katedralni blok. Time je oblikovan vizualni okvir koji je nastavio čuvati izvorni doživljaj mauzoleja/katedrale kojemu se moglo pristupiti samo s pločnika Peristila. Tako je bilo sve do rušenja stare Nadbiskupske palače 1924. godine, čime je katedrala bila izložena neposrednom pogledu a novostvorenog trga, dočim je Peristil na određeni način postao njegov pobočni džep.

U Splitu se moralo dogoditi što i u Zadru: nakon sredine 13. stoljeća municipalne institucije sele s Peristila (*Platea cathedralis*) na novi trg (*Platea Sancti Laurentii*) pred zapadnim zidinama Dioklecijanove palače, gdje se postupno formirao novi gradski centar – na današnjoj Pjaci.<sup>13</sup> Novi trg spominje se prvi put 1255. godine. Riječ je o klasičnom procesu odvajanja političke od crkvene vlasti. Najkasnije godine 1277. postojala je, čini se, zasebna komunalna palača (*palatium communis*) kao jedna od prvih izrijekom spomenutih na našoj obali.<sup>14</sup> U njoj je (*nella corte di Spalato*) kliški zapovjednik Petar prisegao Splicićanima vjernost. Moguće je da se ta palača nalazila zapadno od Peristila, gdje je 1953. godine otkrivena romanička loža koja joj je mogla pripadati.<sup>15</sup> Čini se čak da su neko vrijeme supostojale dvije općinske palače.<sup>16</sup>

Kečkemet je smatrao da je prva splitska komunalna palača sagrađena oko 1240. godine u doba prvog načelnika Gargana, ili neposredno nakon njega, sučelice katedrali, interpolirana po sredini zapadne arkade Peristila.<sup>17</sup> Loža s dva luka, koji se i danas vide u prizemlju palače Grisogono-Cipci, može se po stilu arhitektonske plastike i kapitela zaista datirati u 1260-e godine.<sup>18</sup> Riječ je o svežnjastom pilonu (*piliere*) veoma složenog profila koji će gotika uskoro pročistiti u karakteristični oblik kvadriloba (*Vierpass*): ovdje pak vidimo četiri ugaona tričetvrt stupa s četiri pilastra po sredini svake stranice, s kutnim profilima između njih. U stopama s ugaonim listićima naslućuje se gotika.

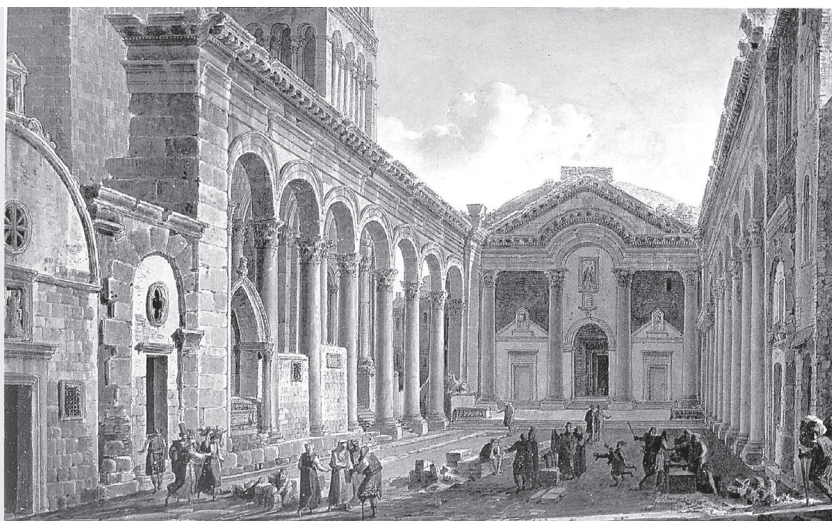
Ta splitska palača s ložom na uglu između Peristila i ulice koja s njega vodi prema krstionici sv. Ivana mogla je ostati u upotrebi sve do sredine 14. stoljeća, kada je konačno dovršena gradnja nove vijećnice na trgu sv. Lovre.<sup>19</sup> Akvareli Louisa François Cassasa (Th. Mommsen zvao ga je *fur insignis* – znameniti lupež) slikani su kao u sordinu ili pod šelakom. Slijedio je u više kompozicija Charles-Louisa Clérisseaua, Adamova crtača i mentora, a osobito u njegovim tlorisima i rekonstrukcijama Palače. Ali ondje gdje smo kod njegovoga genijalnog zemljaka u nedoumici prikazuje li ono što

vidi ili što bi želio vidjeti, Cassas je pouzdan poput nekoga romantičnoga geometra. Toliko pouzdan da su se braća Marasović 1980-ih, slijedom njegove vedute zapadnog krila Peristila, mogla odvažiti na rekonstrukciju cijelog kata što ga je Nikola Firentinac bio petsto godina ranije podigao za obitelj Cipci (Čipčić) nad vijencem koji kruni arkadu tog dijela Peristila.<sup>20</sup> Sačuvani vijenac nad prizemljem kuće Luccari u jugozapadnom dijelu upozorava da je izvorno bila riječ o romaničkoj interpolaciji, koja je bila posve preoblikovana u kasno renesansno doba.<sup>21</sup> Osobito karakteristična je balkonata koja se protegla između kapitela i tjemena dvaju lukova: makar su je antikvari 19. i dobrog dijela 20. stoljeća morali doživljavati kao kameni flaster na Dioklecijanovoj arkaturi, ona je arhitektonski dramatizira, na svoj način paradoksalno, i monumentalizira. No, Cassasov akvarel otkriva čitav romanički kat kuće Luccari koji je bio izgrađen očito u dahu s čitavim pročeljem. (Riječ je o jednoj od rijetkih palača u povijesnom tkivu Splita koja ima interno dvorište oko kojeg se razvijaju četiri stambena krila). Taj kat imao je tri gracilne bifore čiji izgled možemo dočarati iz sačuvanih komparativnih primjera s više splitskih kuća iz druge polovice 13. stoljeća. Jasno je, dakako, da je čitav taj kat nestao kad je, vjerojatno u kasnom 19. stoljeću, bio zamijenjen onodobnom konfekcijskom arhitekturom. Jedan dosad neobjelodanjeni akvarel Johna Gardnera Wilkinsona potvrđuje Cassasa, dapače pokazuje u kolikoj mjeri je ovaj dio Peristila bio propao u samo pedesetak godina.

Cassas nam je osobito dragocjen u prikazu središnje palače koja se ugnijezdila unutar četiriju lukova sjeverozapadnog dijela peristilske arkade. Povedeni današnjim izgledom ove palače, njezinu arhitekturu obično krstimo kao baroknu, makar iz ovog akvarela vidimo da su barokni karakter imali samo interpolirani balkoni i prozori te zanimljivi jonski portal u lijevoj polovini kuće u prizemlju. Imao je, dakle, konzole s jonskim volutama ispod vijenca sa strana nadvratnika – što je još jedan eho portala Malog hrama i mauzoleja u neposrednoj blizini.

Desni dio ima sve elemente lijepe kasnoromaničke/ranogotičke lokalne arhitekture s kompozicijom podređenom osovinama kasnoantičkih lukova. Isto smo već zapazili na lijevom dijelu kuće čiji su barokni dijelovi interpolirani u ranije zidno platno. Cassas, naime, želi podcrtati činjenicu da je čitava kuća građena u vezu solidnog *opus quadratum*. Očito je, dakle, da je platno današnjeg pročelja palače Grisogono-Cipci iz temelja prezidano početkom 19. stoljeća.

Cassas nam, u tom do tada sačuvanom srednjovjekovnom dijelu kuće, prikazuje i jedan slikoviti prozor strme trokutaste edikule na plastično izbočenim konzolama. Vjerojatno je bila riječ o bifori nalik onoj (naglasimo – mramornoj) na prvom katu najljepše splitske palacine toga vremena, na



SLIKA 4  
 Detalj slike splitskog zaštitnika sv. Dujma  
 sa prikazom Splita, konac 18. stoljeća.

SLIKA 5  
 Charles-Louis Clérisseau, Peristil  
 - katedralni trg u Splitu, 1757.

SLIKA 6  
 Louis François Cassas, Peristil  
 - katedralni trg u Splitu, 1782.

SLIKA 7  
 Charles-Louis Clérisseau,  
 Protiron Dioklecijanove palače u Splitu, 1757.

početku „srednjovjekovnog karda“, pred Zlatnim vratima.<sup>22</sup> Zanimljiv je i prikaz prozorčića nad portalom u prizemlju, ispod te bifore: vjerojatno je bila riječ o nadsvjetlu za skladišni prostor jedne *statio* (kako u dokumentima zovu dućane ili konobe – „stacjun“ u lokalnom govoru).

Ne bi trebalo sumnjati da je nad vijencem arhikolonata, gdje danas vidimo rekonstruirani kat što ga je 1470-ih godina podigala radionica Nikole Firentinca,<sup>23</sup> prije stajao kat, valjda poput onoga kakvog smo vidjeli na kući u jugozapadnom uglu Peristila. Bile su to vjerojatno najviše kuće u gradu. Ovdje nam ritam otvora, dosljedno proveden po osovini interkolumnija arhikolonata, govori da je projektant želio postići gotovo klasicistički efekt, svjesno se akomodirajući autoritetu antičke arhitekture, sukladno onome što smo već zapazili na zvoniku.

Važne su nam i Casasove informacije o romaničkoj kući koja je interpolirana u luk trijema *decumana* koji se naslonio na sjeverozapadni pylon peristilske arkade, te o kući koja stoji na uglu čitavog bloka, na uglu Peristila i početku Krešimirove, odnosno *decumana*. Tamo, primjerice, gdje danas vidimo biforu (valjda iz Alešijeve radionice i iz sredine 15. stoljeća) sa stupom od rumene rapske breče, što će vjerojatno biti traženi efekt kojim se željelo ugoditi polikromiji peristilskih stupova. Tamo gdje Casas pokazuje običan pravokutni prozor, možda su izvorno stajali pragovi neke gotičke monofore, naknadno iščupani. Bifora koju danas vidimo očito je spolija ugrađena vjerojatno također tijekom 19. stoljeća.

Osobito je zanimljiva duboka streha krova koja se izravno vezuje uz vijenac peristilske arkade, kao da joj se nastoji akomodirati. To je vjerojatno tim više što u Splitu ne poznajemo slični primjer, makar ga nalazimo na ranorenesansnoj Paladinijevoj „zimskoj palači“ u Hvaru, pa u Korčuli, Dubrovniku. (U Splitu i u Trogiru je vjerojatno bilo puno više takvih dubokih streha, samo što se nisu uočivale. U Korčuli za njih znamo samo na temelju lokalnog karakterističnog detalja – po 1 kamena konzola na svakom kraju krova, ugrađena u lastavicu, tamo gdje su takvi krovovi stršali iznad ostalih.) Stupovi kolonade stajali su na izoliranim blokovima (kao i na suprotnoj strani Peristila pred katedralom) čineći se još monumentalnijim, omogućavajući pristup portalima kuća.<sup>24</sup>

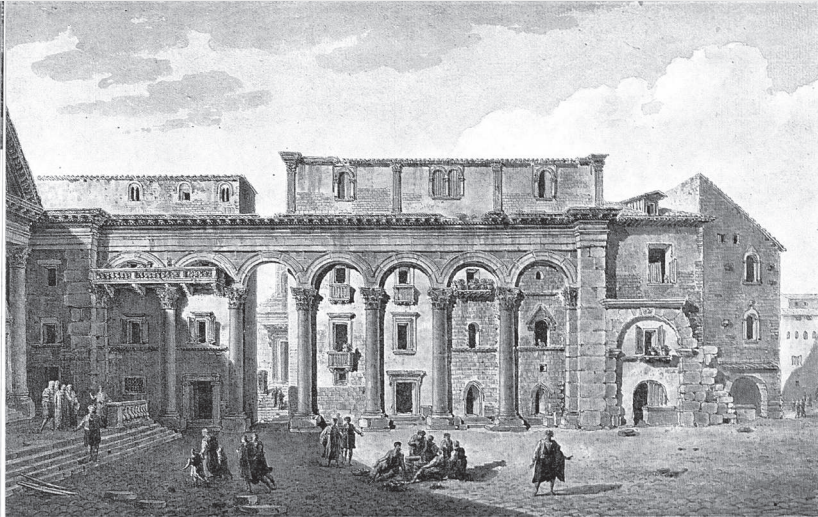
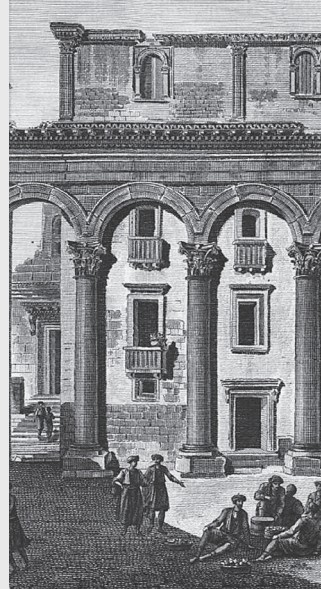
Iz svega zaključujemo da je u vrijeme gradnje zvonika čitava zapadna strana Peristila bila posve preoblikovana. Ako je suditi po ujednačenoj visini međukatnih vijenaca, moglo se to dogoditi „u dahu“.<sup>25</sup>

Romaničkih kuća bilo je i na suprotnoj strani Peristila. Tri manje kuće koje su se nalazile između crkve sv. Roka i položaja kasnije Nadbiskupske palače, najvjerojatnije su sagrađene na mjestu ranijega romaničkog niza kuća. Pretpostavku da se radilo o romaničkim kućama potkrepljuje pročelje romaničke kuće koje je postalo sjevernim zidom crkve sv. Roka, koja je

oblikovana najvjerojatnije obuhvativši dvije romaničke čestice.<sup>26</sup> Format su im najvjerojatnije, kao i u arkadama Peristila, odredili interkolonijalni nekadašnjih trijemova *decumanusa*. Crtež Vicka Andrića datiran 1. kolovoza 1846. godine, koji prikazuje presjek palače u pravcu sjever-jug preko prostora Peristila, daje izgled pročelja i odnose visina tih triju kuća koje su se nizale između Sv. Roka i Nadbiskupske palače.<sup>27</sup> Dijelom je sačuvana samo ona (formata oko 6 × 5,40 metara) koja danas čini istočni dio crkve sv. Roka.<sup>28</sup> Danas osamljena crkvića sv. Roka jedini je ostatak nekadašnjeg bloka koji je sa sjeverne strane zatvarao prostor katedrale. U purifikatorskom bijesu 19. i većeg dijela 20. stoljeća više puta se postavljalo pitanje i njenog rušenja, posebno radi opstrukcije pješačkog prometa koji je slobodnije prokolao nakon rušenja crkve Dušica (1944. godine) i odzidavanja i rekonstrukcije Srebrnih vrata (1945.–1952. godine). Spasio ju je prije svega autoritet Cvita Fiskovića.<sup>29</sup>

U stražnjem sjevernom dijelu crkve očuvalo se pročelje romaničke kuće 13. stoljeća s karakterističnim dijelovima od kojih su najzanimljivija dva portala s pragovima uzdignutim skoro metar iznad današnje razine ulice. Slična vrata, na romaničkim kućama u Umbriji i Abruzzima, nazivali su *porta dei morti* jer su prema predaji kroz njih iznosili umrle i uvodili nevjeste. Fisković je, vjerojatno opravdano, smatrao da su veća vrata pripadala dućanu, a manja vodila prema stubama na kat.<sup>30</sup>

O značaju ulice koja se tu formirala, posebno nakon što su u istočnom zidu bila početkom 14. stoljeća oblikovana Nova vrata, svjedoči jedna glava Statuta iz 1312. godine,<sup>31</sup> u kojoj je „određeno i naređeno da je tadašnji načelnik zajedno s rečenim službenicima (...) dužan dati popločati ulicu od Plokate (sv. Dujma) pa do Novih vrata (otvorenih uz stara *Porta argentea*)“.<sup>32</sup> Zanimljivo je da je za primjer trebao uzeti način kojim je popločana ulica „od grota“ (*in gruptis, via publica gruptarum ili via in gruptis*), a to je središnja komunikacija kroz Podrume, koja je tada očito bila već reprezentativna komunikacija, uz koju su bila formirana dva niza kuća – nakon što je perforiran antički svod nad kojim je izvorno stajao *tablinum*, jedna od važnih dvorana carske Palače.<sup>33</sup> U rekonstrukciji središnjeg dijela Podruma 1959. godine čitav taj srednjovjekovni gradski sklop nestao je bez traga, što je možda i veći gubitak od rušenja većeg dijela jugoistočnoga gradskog kvadranta. Tajnik dužda Petra Orseola, kroničar đakon Ivan našao je 1000. godine za Split, metropolu čitave Dalmacije, najpohvalnije izraze – *nobilissima et valida urbs*. Kordobski kartograf El Idrisi u prikazu hrvatske obale (zove je Goruasia), na karti svijeta koju je 1154. načinio za normanskog kralja Rogera (*Tabulla Rogeriana*) ne zaboravlja spomenuti da su ulice u Splitu (Asbâlató) „popločene kamenom“. Naravno, moguće je da je riječ o orijentalnoj hiperboli jer kasniji gradski statut opominje da se *in placato archiepiscopalis* (a to

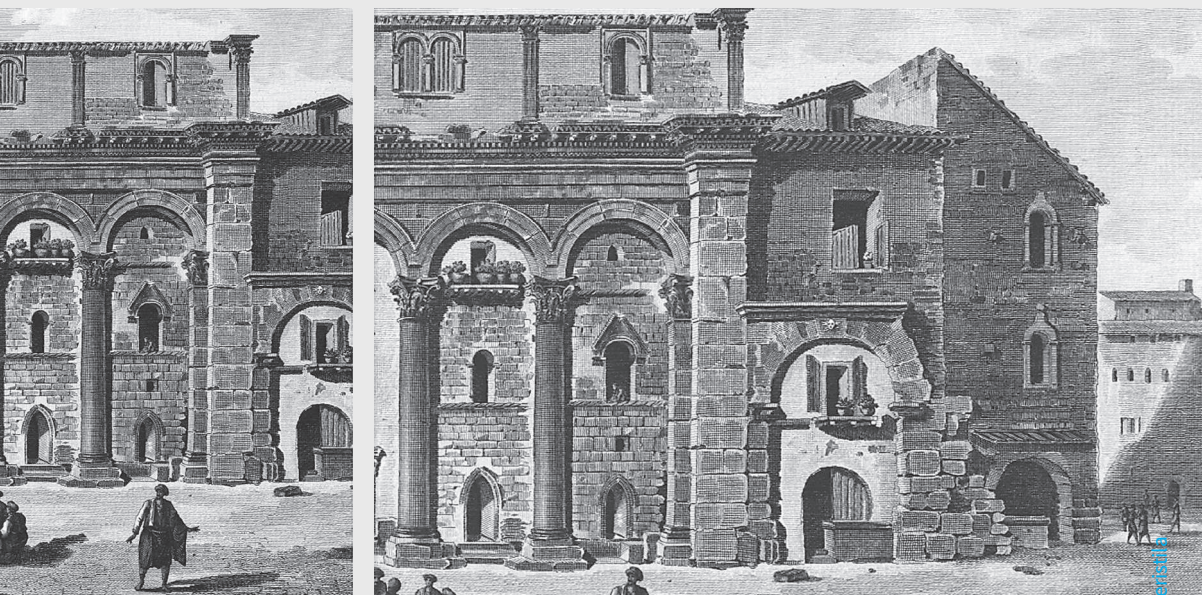


SLIKA 8

Kapitel svežnjastog pilona prve općinske lože,  
u zapadnom krilu Peristila.

SLIKA 9

Louis François Cassas, Zapadno krilo Peristila  
– katedralni trg u Splitu, 1782.



SLIKA 10  
Louis-François Cassas, Zapadno krilo Peristila  
– katedralni trg u Splitu, 1802, detalj.



je pločnik Peristila pred katedralom – *platea ante ecclesiam, quę uocatur planctus*) “ne smije (se) napunjati gnojem ili kojim drugim smećem. (...) Slično tome trg koji se zove Pistura“.<sup>34</sup>

Drugi, češće reproducirani Cassasov akvarel Peristila, u pogledu prema Protironu, daje nam informacije o baroknom popločavanju katedralnog trga, o čemu piše suvremeni splitski polihistor Julije Bajamonti.<sup>35</sup> Usporedbom s nekoliko godina ranijim Clérisseauovom perspektivom iz istoga očišta, samo nešto užeg kuta, dobivamo dragocjene podatke o manjim, ali značajnim izmjenama koje su se tada dogodile.<sup>36</sup>

Gradove doživljavamo kao bića. Lako ih možemo zamisliti u personificiranom liku, kao što su Grci i Rimljani predstavljali vlastite gradove. Sanjamo ih kao agregate odvojene oštrom linijom od ostatka svijeta; kao model u ruci srednjovjekovnog sveca zaštitnika. Bilo da su nastali u jednom dahu, kao slika promišljenoga prostornog reda, ili ako rezultat beskrajno dugog rasta nalik rastu neke školjke – mnogi gradovi su u stvarnosti doživjeli niz pravih povijesnih rasjeda koji su stubokom mijenjali njihov fizički lik. Čak i u gradu poput Splita, koji je stoljećima organski rastao, možemo pratiti kako se izvorna, uistinu arhetipska slika može na gotovo iznenađujući način preobraziti u posve drugačiji, ali zaista jednako vrijedni „vizualni integritet“, mijenjajući pritom i korisnike i funkciju i stilske predznake, postajući jedan posve novi, neponovljivi amalgam.<sup>37</sup>

Split, s Dioklecijanovom palačom u središtu, bijaše tijekom 19. i 20. stoljeća svojevrsan poligon isprobavanja suvremenih konzervatorskih doktrina – od romantičnih, „bioloških“ do socrealističke „aktivne zaštite“. Ova rasprava imala je za cilj da pokaže samo dio povijesnih slojeva koji su obilježili prostor srca tog grada koji nikad nećemo do kraja razumjeti. O stupnju, međutim, tog razumijevanja ovise zahvati koje u njemu projektiramo i provodimo. Dosadašnji, tijekom protekla dva stoljeća, u mnogome su poništili dobar dio one povijesne stratigrafije u samom središtu Splita na kojoj su nastali aksiomi moderne teorije zaštite spomenika, od Dvoržaka i Karamana do Fiskovića, koji su isticali da su se „drugdje rimske ruševine očuvale samo ispod ili pored novih kulturnih slojeva, no u Splitu su s njima srasle, prožimaju ih ili obrubljuju kao da je povijest nakanila na jednom mjestu stvoriti monumentalni simbol staroga i novoga svijeta u njihovoj uzastopnosti i genetskom povezivanju, ali ne u neplodnom obrascu, već kao tvorevinu s naizgled neiscrpnim pojedinostima koje povijesno i slikarski potiču maštu.“<sup>38</sup>

Kada se zbroje sve kasnoromaničke intervencije oko Peristila tijekom 13. stoljeća, čini se da nam daju za pravo, čak i u ovako brzom preliminarnom pregledu, da govorimo o značajnom programu arhitektonske obnove tog prostora: bio je to svojevrsni *renovatio urbis*, pogotovo ako imamo na umu

integralnost i čitav raspon zadataka koji je tu ostvaren, od gradnje zvonika katedrale i njenog novog portala, preoblikovanja unutrašnjosti krstionice preko puta, gradnje prve komunalne vijećnice s ložom, niza reprezentativnih stambenih kuća, regulacije ulica do Peristila i od njega.

- \* Ovaj rad financirala je Hrvatska zaklada za znanost projektom *Dalmatia – a Destination of the European Grand Tour in the 18th and the 19th Century / Dalmacija kao odredište europskog Grand Toura 18. i 19. stoljeća*, GRAND TOUR UIP-11-2013-7091.
- 1 Dobar uvod u temu daju: Igor Fisković, "Srednjovjekovna izgradnja i identitet grada Splita," *Kulturna baština* 19 (1989.): 28-50; Ivo Babić, "Urbana poetika Splita u Dioklecijanovoj palači," *Kulturna baština* 19 (1989.): 51-64.
  - 2 Peristil, Vestibul, Kriptoportik... Bio je prvi koji je, primjerice, shvatio postojanje *temenosa* oko središnje sakralne zone u palači, što je ranijim proučavateljima, poput Paladija, Spona i Fischera von Erlacha izmaklo. Vidi: Joško Belamarić, „Robert Adam’s Lesson of Split,” in *Robert Adam and Diocletian’s Palace in Split*, eds. Joško Belamarić i Ana Šverko (Zagreb: Školska knjiga, 2017.), 285-307.
  - 3 O interpretacijama izvorne funkcije i atribuciji ovih hramova, te njihovom istraživanju: Jerko Marasović, Katja Marasović, Snježana Perojević, "Kultne građevine Dioklecijanove palače u Splitu," *Histria antiqua* 13 (2005.): 427-436; Tomislav Marasović, "O hramovima Dioklecijanove palače," *Prilozi povijesti umjetnosti u Dalmaciji* 35 (1995.): 89-103; Katja Marasović, Vlasta Marčić, "Sklop građevina jugozapadno od Peristila," *Kulturna baština* 33 (2006.): 75-98; Sanja Buble, "Spoznaje o građevinama zapadnog temenosa Dioklecijanove palače u Splitu – kronologija," *Kulturna baština* 39 (2013.): 263-294. Barem južni, „Kibelin” hram (bilo bi ga prikladnije zvati *monoptheros*) mogao je u ranosrednjovjekovno doba biti konvertiran u kršćansku crkvu ako je suditi po nalazu zabata oltarske pregrade u kripti hrama. Tomislav Marasović, *Dalmatia praeromanica, ranosrednjovjekovno graditeljstvo u Dalmaciji – 3 korpus arhitekture: srednja Dalmacija* (Split – Zagreb: Književni krug, Muzej hrvatskih arheoloških spomenika, Arhitektonski fakultet sveučilišta u Zagrebu, 2011.), 285-286.
  - 4 Za zamašni recentni zahvat obnove, vidi: Ivka Lipanović, Goran Nikšić, i Mladen Matijaca, *Peristil 2003.-2013. Izložba o konzervatorsko-restauratorskim radovima na Peristilu Dioklecijanove palače u Splitu* (Split: Grad Split, 2013.).
  - 5 Za pločnik s rozetom koja je skupljala oborinske vode na raskršću glavnih uličnih avenija: Jerko Marasović i Tomislav Marasović, *Dioklecijanova palača* (Zagreb: Zora, 1968.).
  - 6 Cvito Fisković, "Romaničke kuće u Splitu i u Trogiru," *Starohrvatska prosvjeta* III/2 (1952): 169, br. 38; Milan Ivanišević, "Promišljanje o rodovima Lukari u Splitu i Lukarević u Dubrovniku," *Kulturna baština* 41 (2015.): 5-40, posebno 8-10, 21-22.
  - 7 Duško Kečkemet, "Romanička loža u Splitu," *Prilozi povijesti umjetnosti u Dalmaciji* 8 (1954.): 107-110.
  - 8 Romanički karakter ove baze prvi je uočio Georg Niemann, *Dioklecijanova palača u Splitu*, prev. Mirjana Marasović (Split: Književni krug, 2005.), potom i Ernest Hebrard (& Jacques Zieller), *Spalato, Le*

## Bilješke

- palais de Dioclétien* (Paris, 1912.); vidi ranije Auguste Choisy, *Histoire de l'architecture*, I. (Paris: Gauthier-Villars, 1899.), 546, koji je primjer uzeo kao rimski. O nastanku i razvoju ugaonih ojačanja baza stupova (*griffe* = pandža) kao srednjovjekovnog motiva opširno, jasno i pregledno piše i crta Viollet le Duc.
- 9 Stambene kuće bile su tijekom 13. stoljeća interpolirane i unutar prostora Protirona o čemu govore tragovi njihovih temelja otkriveni u arheološkom sondiranju ispod pločnika dviju kapela, kao i još uvijek vidljivi tragovi ranogotičkih prozora u samom zidu Protirona, Više: Ivo Vojnović, *Konzervatorski elaborati za Vestibul i Protiron Dioklecijanove palače* (Split: Ministarstvo kulture, konzervatorski odjel u Splitu, 2009.), 78.
- 10 Čini se da je Kristoforov prikaz u Protironu posljednji put spomenut u jednoj ispravi iz 1517. Lovre Katić, "Imbreviature splitskog notara de Salandis (1514.–1518. godine)," *Starine JAZU* 47 (1957.): 184-185. Za spomenutu marginaliju vidi: Frane Bulić, "Osservazione sull'anno dei battenti della porta maggiore del Duomo di Spalato di Andrea Buvina," *Bullettino di archeologia e di storia dalmata* XXXV (1912.): 72-74; Ljubo Karaman, "Buvinove vratnice i drveni kor splitske katedrale," *Rad Hrvatske Akademije znanosti i umjetnosti* 275 (1942.): 62. Sačuvana ikonografska evidencija je kontradiktorna. Iz Casasova akvarela s prikazom Protirona – a riječ je o inače pouzdanom slikaru izoštrenih opservacija – čak bi se reklo da je na zidnom platnu kojim je ispunjen prostor između središnjih stupova naslikan baš lik sv. Kristofora, što je prvi zapazio Igor Fisković. Da dodatno istakne plasticitet luka i dubinu Protirona, Clérisseau je tu naslikao ruševni zid krnjeg završetka – na slici po kojoj je Adam dao načiniti grafiku otisnutu u svojoj knjizi. Ova grafika bila je vodilja Cvitu Fiskoviću u rješenju prezentacije koju je proveo 1946. godine, odgovarajući njome na zahtjeve da se obje kapele i taj zid uklone iz Protirona. Cvito Fisković, "Prilog proučavanju i zaštiti Dioklecijanove palače u Splitu," *Rad Jugoslavenske akademije znanosti i umjetnosti* 279/2 (1950.): 37. Na jednom od nepubliciranih predavanja Goran Nikšić je objasnio kako je zahtjev za uklanjanje kapela došao kao posljedica zahvata na Peristilu desetljeće i po kasnije. Fiskovićev zahvat je imao sasvim drugačije, isključivo estetske motive, koje on jasno iznosi u publiciranim radovima. U krajnjoj liniji, Fiskovićeve estetika je usporediva s onom Clérisseauovom, jer obojica naglašavaju romantičnu ljepotu ruševine, dok je arhitektonsko-inženjerska logika luka i zazida u srednjem interkolumniju potpuno zanemarena. Na žalost i ta Fiskovićeve estetska logika je uskoro zanemarena u Marasovićevom zahvatu kad je rekonstruiran krov protirona, pa danas imamo na tom mjestu antologijski primjer konzervatorskih nesporazuma nataloženih kroz vrijeme. Nikšić je sa svoje strane pokušao popraviti stvar tražeći da se razmotri mogućnost uklanjanja krova i povratak na ranije stanje. Prevladalo je uvjerenje da je zadržavanje krova (uz dodatna ojačanja i veze sa zabatom Protirona i zidom Vestibula) neophodno za stabilizaciju konstrukcije (stupovi Protirona se naginju bočno i prema naprijed). Međutim, na akvarelu iz Ermitaža, Clérisseau prikazuje – kao i Nobile (vidi: Marko Špikić, "Od arheologije do kulturne politike: Pietro Nobile i dalmatinski spomenici," *Peristil* 50 (2007.): 201) – čitav zavid središnjeg interkolumnija s plastično izbočenom edikulom u njegovom centru, u kojoj je postavljen kasnogotički *Vesperbild*, kip Oplakivanja Kristova poput onoga koji se danas nalazi na pročelju crkve sv. Križi u Velom varošu u Splitu. Zoraida Demori Staničić misli da bi to zaista bila ta Pietà. Godine 1820. bila je tu pak postavljena spomen-ploča austrijskom caru Franji I. O tome: Duško Kečkemet, "Opis Splita u prigodi posjeta cara Franje Prvoga 1818.,"

*Kulturna baština* 9-10 (1979.): 64-66. Valja istaknuti da su do gradnje kapelica unutar Protirona i ispred njega postojale srednjovjekovne, vjerojatno gotičke kuće, čiji se tragovi još vide. Obje kapelice bile su posvećene Bogorodici – istočna Mariji od Bezgrešnog Začeca (1544.), zapadna Gospi od Zdravlja (1650.). Potonja je nazivana i Gospe od Pojasa, a prethodna je postala kapela sv. Karla Boromejskog.

- 11 Na drugom mjestu kanimo iznijeti zapažanja „o Peristilu prije Peristila” te o novim činjenicama koje nedvojbeno potvrđuju *pentimento* kojim se već u gradnji Palače odstupilo od zamisli gradnje tetrapilona na križištu dviju uličnih arterija u ime oblikovanja dviju peristilskih arkada. Najnovija arheološka sondiranja nedvojbeno su potvrdila da postoji nekoliko distinktivnih faza u ranoj povijesti ovog prostora. Temeljna stopa završnog pilona zapadne arkade Peristila prema *decumanusu* evidentno je probila masivni zid spomenute ranije građevine, pritom se uklinivši u rub temelja tetrapilona koji je, po svemu sudeći, bio srušen prilikom građenja tih arkada. Činjenica da su temelji konstrukcije arkada – koje su uzduž bočnih strana Peristila podignute u drugoj fazi gradnje Dioklecijanove palače, ali zacijelo prije dolaska cara u nju 305. godine – oštetili spomenutu platformu, dokazuje da je tetrapilon bio sagrađen (ili samo planiran, započet i nedovršen) u prvoj fazi gradnje. Na istom se mjestu namjeravamo vratiti diskusiji o naravi arheološko-restauratorske kampanje dovršene 1960. kada je pločnik Peristila spušten na današnju razinu, čime je poništen izgled trga koji je trajao stoljećima – tijekom srednjovjekovnoga, renesansnog, baroknog i kasnijeg razdoblja.
- 12 Za prvi opis splitskog zvonika trebamo čekati sredinu 16. stoljeća, odnosno gradskog kancelara Prokulijana iz Bara koji veli da se „sav od temelja uzdiže u nebo na prelijepim lukovima, stupovima i

prozorima”. On zna i da je taj „visoki i uzvišeni zvonik (darovima mnogih vladara i doprinosima velikodušnih ličnosti) nadodan Jupiterovom hramu, u prvom redu zbog darežljivosti blagodarne kontese Kolafise”, udovice gradskog potestata Ivana Frankopana. Ona je 1257. godine ostavila sto zlatnih romanata za njegovu gradnju. Antun Prokulijan, *Govor u pohvalu Splita*, Prokulijanov tekst objavljen 1567. godine prevela i priredila Ljerka Šimunković (Split: Dante Alighieri, 2015.). Vidi i: *Bulletino di archeologia et storia Dalmata* 23 (1900.): 127. Neobično je što suvremenik početka gradnje Toma Arhidakon ili par stoljeća poslije Marko Marulić nisu osjetili poriv da ga opišu ili spomenu. Dodajmo još samo da je danas gotovo neshvatljivo da je taj zvonik nastajao u gradu koji nikad nije imao više od 5000 stanovnika.

- 13 U Zadru je na dijelu nekadašnjeg foruma, južno od nadbiskupske palače glavni gradski trg funkcionirao sve do sredine 13. stoljeća. Municipalne institucije sele tada s Forum na Novi trg. (Obično se pretpostavljalo da se to dogodilo znatno prije.) Da je Forum mogao ostati gradsko središte sve do sredine 13. stoljeća, zaključujemo iz učestalosti vijesti o značaju novoga središta u to vrijeme i po relativno kasnome prvom spomenu karakterističnih komunalnih institucija vezanih uz novi glavni trg, a prije svega i iz činjenice što je, na primjer, Stup sramote vjerojatno baš nakon 1200-ih godina dobio svoju konačnu formu – postavljanjem skulpture grifona na njegovu vrhu, a možda i reljefne ploče u podnožju.
- 14 Godine 1240. i 1241. u vrijeme potestata Gargana i njegova nasljednika krčkoga kneza Ivana, sastanci su se održavali *in palatio publico*, za koju je služila kuća kneza Grubeše, ali i u „palači pokojnog kneza Ilje”. Nažalost, ne možemo znati gdje se ta palača nalazila. Vidi: Grga Novak, “Gradski bedemi, javne zgrade i ulice u srednjovjekovnom Splitu,” *Starohrvatska*

- prosvjeta* III/1 (1949.): 107-108; isto u: Grga Novak, *Povijest Splita I* (Split: Škuna, 2005.), 540-542 (prvo izdanje 1957.).
- 15 Vidi: Kečkemet, "Romanička loža," 96-110.
- 16 U petoj knjizi Splitskog statuta, pisanog 1312. godine, čitamo da je (očito nova) gradska vijećnica bila u gradnji i tek ju je trebalo dovršiti. Ljubo Karaman, "O starom gradskom domu u Splitu," *Novo Doba*, Božićni prilog, Split, 1933.; Ljubo Karaman, "O srednjovjekovnoj gradskoj palači u Splitu," *Radovi instituta Jugoslavenske akademije u Zadru* 2 (1955.): 35-46. T. Raukar daje živ primjer tog dualizma svjetovnog središta komune: „Temeljni dio Splitskog statuta ili Percevalov statut (*statutum vetus*) iz god. 1312. određuje da se žito smije prodavati samo na trgu ispred općinske palače gdje se nalazi i žitna mjera (*starium communis*), odnosno na Trgu sv. Lovre. Da tu nije riječ o trgu ispred katedrale, pokazuje i naziv *platea communis* (c. 30), koji se u Statutu, a i u dokumentima, ne daje tom trgu, nego ga se uvijek naziva *platea planchati* ili *plancha*. (...) Ali, reformacija iz 1337. god. određuje da se žito smije prodavati samo s mjerom (star) koja se nalazi *ad plancham*, dakle na trgu uz katedralu. To pokazuje da su u prvoj polovici 14. st. oba splitska trga imala gospodarsku važnost kao žitne tržnice, premda Trg sv. Lovre već tada smijem smatrati upravnim i poslovnim središtem komune." Tomislav Raukar, *Studije o Dalmaciji u srednjem vijeku*, (Split: Književni krug, 2007.), 269-270.
- 17 Sličan prostorni dijalog između najvažnijih sekularnih i crkvenih građevina u gradu u isto doba se uspostavljao na trogirskom gradskom trgu: gradska loža i predvorje katedrale grade se istovremeno.
- 18 *Lozia Spalatensis* – zacijelo ova – spominje se prvi put u ispravama 1267. godine. *Diplomatički zbornik Kraljevine Hrvatske, Dalmacije i Slavonije = Codex diplomaticus regni Croatiae, Dalmatiae et Slavoniae, volumen V.*, sabrao i uređio Tadija Smičiklas, 427 (Zagreb: JAZU, 1907.)
- Najbliže stilske paralele nalazimo u Trogiru, ali o tome na drugom mjestu.
- 19 Staru palaču s ložom u prizemlju mogla je tada, po Kečkemetovu mišljenju, kupiti obitelj Grisogono. Autor skreće pozornost na jednu ispravu iz 1403. godine, iz koje bi proizlazilo da su tri sina Ivana Prvislava Grisogona tada međusobno podijelila palaču, zazidala lukove lože, pregradila, „a u drugoj polovini XV. st. dogradili joj dio u današnjoj ulici sv. Ivana, načinivši joj tu glavni ulaz sa stubištem." Valja ipak kazati da u luneti tog portala stoji grb obitelji Cipci, kao i na kapitelima pilastara renesansnog kata nadozidanog poviše arhikolonata Peristila, dočim se grbovi Grisogonovih nalaze na zapadnom dijelu čitavog bloka. Vidi: Arsen Duplančić, "Arhivsko-bibliografski podaci o nekim splitskim spomenicima iz Arheološkog muzeja," *Vjesnik za arheologiju i povijest dalmatinsku* 100 (2007.): 213-214.
- 20 Jerko Marasović i Tomislav Marasović, *Dioklecijanova palača*. Cassasov prikaz Peristila objavljen je u Louis François Cassas, Joseph Lavallée, *Voyage pittoresque et historique de l'Istrie et de la Dalmatie* (Paris: Imprimerie de Pierre Didot, 1802.). Vidi: Duško Kečkemet, "Louis Francois Cassas i njegove slike Istre i Dalmacije 1782.," *Rad JAZU* 379 (1978.): 92.
- 21 Fisković, "Romaničke kuće," 169, br. 38. Za pitanje vlasništva ove kuće vidi: Milan Ivanišević, "Promišljanje o rodovima Lukari," 21-22.
- 22 Kompozicija novog pročelja poništila je slikovitost staroga, dosljedno provodeći dvostranu zrcalnu simetriju u postavljanju portalu, prozora i balkona. Usporedbom Cassasova crteža i akvarela s aktualnim stanjem vidimo da su izvorni barokni balkoni bili gotovo na istim mjestima kao danas – ali manji, na tri a ne na dvije konzole, s ravnim balustrima, razdvojeni od vijenca prozora pod njima. U prizemlju su portali znatno povećani praktički ga u cijelosti perforirajući. Model portala te balkonskih konzola i balustera uzet je s

- palače Cindro na *decumanusu*. Usput samo, spomenuta palačica na početku „srednjovjekovnog carda“ osobito je lijep primjer splitskoga „kasnoromaničkog klasicizma“. Dovoljno je u tom smislu vidjeti kako se na njoj ističe međukatni vijenac prvoga kata – *cima recta*. Teško je reći što je za taj stil indikativnije, ako je čitav profil spoliran s neke od Dioklecijanovih gradnji u blizini ili ako je nastao doslovnim kopiranjem antičkog profila.
- 23 Jerko Marasović, Tomislav Marasović, “Pregled istraživanja, obnove i revitalizacije Dioklecijanove palače u Splitu od 1965. do 1975.,” *Arhitektura* 154 (1979.): 16-22.
- 24 Kontinuirani stilobat obnovljen je u restauratorskom zahvatu 1960. godine transformirajući se u kamenu klupu nad trima stubama krepidoma.
- 25 Komisija talijanskih akademika tijekom fašističke okupacije 1941. – 1943. godine predlagala je da se kuće uzidane u stupovlje Peristila povuku, da bi se izolirali njegovi stupovi i lukovi. Katovi nad vijencem trebali su se srušiti. Fisković, “Prilog proučavanju i zaštiti,” 36.
- 26 Vinko Madiraca, “Sondažna arheološka istraživanja na prostoru crkve sv. Roka i Peristila Dioklecijanove palače u Splitu,” *Kulturna baština* 37 (2011.): 127-142.
- 27 Nakon rušenja Nadbiskupske palača, koja je izgorjela u požaru 1924., ali je bila napuštena još od 1840. godine, nastojalo se doći do projekta kojim bi se uspostavio izgubljeni okvir katedrale. Arhitekt-urbanist Schürmann izgradio je 1925. godine novi plan. Konzervatori su pak ostali skloniji ranijem Niemannovu. Schürmann W., “Ein Vorschlag zur Neugestaltung der Domkirche in Split,” *III. prilog Vjesnika za arheologiju i historiju dalmatinsku XLVII-XLVIII*, Split 1925.; ranije: Ljubo Karaman, *Pitanje odstranjenja zgrade stare biskupije u Dioklecijanovoj Palači u Splitu* (Split: Zem. štamp., 1920.) Neobično je što se nakon Drugoga svjetskog rata posve izgubilo zanimanje za ovu temu. Andrićev crtež vidi u: Duško Kečkemet, *Vicko Andrić arhitekt i konzervator 1793.–1866.* (Split: Regionalni zavod za zaštitu spomenika kulture, Književni krug, 1993.).
- 28 Za detaljni opis crkve i romaničkih kuća koje je obuhvatila, s nizom novih opservacija u vezi izvornog izgleda trijema duž *decumanusa* i njegova odnosa prema *temenosu* Dioklecijanova mauzoleja, vidi: Ivo Vojnović, *Konzervatorski elaborat za rekonstrukciju crkve sv. Roka na splitskom Peristilu* (Split: Ministarstvo kulture, konzervatorski odjel u Splitu, 2009.); *Peristil 2003.–2013. Izložba*. Madiraca, “Sondažna arheološka istraživanja.” Premda u arheološkom sondiranju relativno uskog prostora zapadno od sačuvanog pročelja romaničke kuće sa spomenutim dvama portalima nije pronašao nikakvih indicija ranije gradnje, pretpostavio je, zacijelo opravdano, da je i tu postojala romanička kuća, s pročeljem okrenutim Peristilu. Baš kao što je na mjestu današnje kuće Brajević, koja zatvara sjeverni dio čitavog prostora, također stajala jedna značajnija romanička kuća karakterističnoga glatkog kamenog pročelja zidanog u sugestivnom *opus quadratumu*. Nad drugim katom kuće, koja je prezidana nad djelomično sačuvanim romaničkim prizemljem, nalazi se preneseni međukatni profilirani vijenac prvotne kuće. Jednako reprezentativna morala je biti romanička kuća na *cardu* sjeverno od ove (od sredine 15. stoljeća unutar sklopa koji je preoblikovao Ser Baptista de *Augubio*). Vojnović je tijekom sondiranja njenih zidova na drugom katu pronašao niz romaničkih otvora, a u luneti jednoga od portala i izvrsno slikanu fresku s prikazom antitetički postavljenih paunova. Zanimljivo je, inače, što su temelji romaničkih kuća pronađeni oko sv. Roka bili izvedeni izravno nad rimskim pločnikom.
- 29 Cvito Fisković se i ovdje pozivao na estetske razloge zbog kojih bi crkvicu trebao sačuvati: njeno pročelje je, naime,

- preuzelo statičku ulogu srušenog trijema glavne ulice, pa se na nju upirao fluidni ali masivni arhikonolat Peristila. „Tim njeno pročelje skladno i logično zatvara kompoziciju čitave istočne strane Peristila, za što bi niski i prazni otvor trijema bio premalen. Stoga je pogrešan Kellerov prijedlog da se njeno pročelje prenese u otvoreni luk trijema. Time bi se uništila ravnoteža koja je ovdje nastala.“ Građena je vjerojatno 1477. (restaurirana 1516.), nakon što je već 1469. godine u susjednom luku, na početku istočnoga peristilskog arhikonolata podignuta crkvice posvećena sv. Fabijanu i Sebastijanu (od 1770. godine crkva sv. Sebastijana i Barbare, potom samo sv. Barbare) s kojom je činila cjelinu dok nije 1922. godine uklonjena. Fisković, “Prilog proučavanju i zaštiti,” 35; Arsen Duplančić, “Arhivsko-bibliografski podaci,” 204-207.
- 30 Slična su vrata na kući na obližnjoj Bulićevoj poljani i u ulici kraj Malog hrama. Vide se i u Dubrovniku još u kasnogotičkim kućama. Fisković, “Romaničke kuće.”
- 31 *Statut grada Splita: splitsko srednjovjekovno pravo = Statuta civitatis Spalati: ius Spalatense medii aevi*, prir. Antun Cvitanić (Split: Književni krug, 1998.), L. V., c. 3.
- 32 Nova vrata su otvorena do zazidanih Srebrnih vrata Palače. Vidi: Arsen Duplančić, *Splitske zidine u 17. i 18. stoljeću* (Zagreb: Mala biblioteka Godišnjaka zaštite spomenika kulture Hrvatske, 2007.), 9, 55, bilj. 14; Arsen Duplančić, “O splitskim zvoncima,” *Kulturna baština* 37 (2011.): 151 i dalje.
- 33 T. Raukar pak upozorava „da su trgovačka skladišta (*magazenum*) bila smještena u ulici koja je kroz središte podrumskog dijela Dioklecijanove palače vodila u stari dio grada. To je *via gruptarum* ili *via in gruptis*, za koju Statut svjedoči da je bila popločana.“ Raukar, *Studije o Dalmaciji*, 268-270. Vidi i: Joško Belamarić, “Kuća u Splitskom statutu – građenje, održavanje, rušenje,” *Ars Adriatica* 5 (2015.): 67-80.
- 34 *Statut grada Splita*, L. V., c. 8. Godine 1348., u doba velike kuge, „prihvaćeno je da se zaposle četiri čovjeka koje će plaćati komuna, a dužnost im je da čiste ulice splitske komune kako bi grad Split bio ugodna mirisa, a ne zagađen smradom (*ut ciuitas Spalati sit bono odore opulenta et non fetido polluta*).“ *Statut grada Splita*, Ref., c. 15. Unatoč svemu tome imamo 1470-ih godina spomen *Calle puzzolente* – negdje oko Grotta. Skicu socijalne povijesti mirisa i nečistoće u splitskoj povijesnoj jezgri daje Anatolij Kudrjavcev, *Vječni Split* (Split: Logos, 1985.), 171 i dalje.
- 35 Julije Bajamonti, *Zapis o gradu Splitu*, prev. Duško Kečkemet (Split: Književni krug, 1962.), 11-12.
- 36 Radovi na površini Peristila koje registrira Cassas vezani su za regulaciju splitskih ulica i trgova povodom pripremanja velike svetkovine prijenosa sv. Dujma u novu kapelu u katedrali. Arkade među stupovima izvorno su bile zatvorene u donjem dijelu kamenim tranzenama – *claustra* – u visini do 2,40 m, a između dvaju stupova kroz koje se prilazi stubištu prema mauzoleju postojao je donji prag vrata, koja su zatvarala ulaz u istočno dvorište. Na nekim stupovima još se vidi utor u bazama, u kojima su bile uglavljene te rešetkaste pregrade. U Adamovoj knjizi, sl. XX, jedna od tih tranzena još je na svojem mjestu, lijevo uz prolaz prema stubištu u katedralu. Daniele Farlati, *Illyricum Sacrum I* (Venetiis: apud Sebastianum Coleti, 1751.) na tabli (*Turris S. Domnii*) između str. 390 i 391. također slika jednu. Zacijelo je uklonjena tijekom radova na preuređenju trga i pristupa katedrali povodom svečanog prenošenja tijela svetog Dujma iz stare u novu kapelu 1770. godine. Cassasov akvarel i grafika po njoj nastala, objavljena 1802. godina, pokazuje da je u međuvremenu nestala, a na njenom mjestu bio je podignut zid, čini se s nekom komemorativnom tablom s natpisom. O razlikama u stanju između stupova na istočnoj strani Peristila, Vojnović, *Konzervatorski elaborat*. O

- sarkofazima unutar istočnog arhikolonata vidi: Igor Fisković, "O grobnim spomenicima u srednjovjekovnoj Dalmaciji," *Dometi* 5/XVII (1984.): 33-54; Arsen Duplančić, "Reutilizacija antičkih sarkofaga i dvojica splitskih kanonika iz XV. i XVI. stoljeća," *Vjesnik za arheologiju i povijest dalmatinsku* 107/1 (2014.): 331-365.
- 37 Zadnjih godina vodi se poticajna diskusija oko pojma vizualnog integriteta povijesnih cjelina i pojedinačnih spomenika u širem prostornom kontekstu, odnosno zaštititi karakterističnih vizura. Većina ljudi pod sintagmom „vizualni integritet“ podrazumijeva urbane cjeline homogenoga arhitektonskog tkiva, koje bi ugrozila gradnja neke zgrade izvan povijesnog mjerila, osobito nebodera. S druge strane riječ *integrity*, uza sve ono što stvarno sadržava, može izazvati i asocijacije na puristička načela kojima se u brojnim povijesnim gradovima nastojala „vratiti“ stilska homogenost, i to najčešće uklanjanjem najkasnije nastalih objekata, „disparatnih stilskih odlika“. Pojam je skovan u tzv. *Bečkom memorandumu o svjetskoj baštini i suvremenoj arhitekturi* 2005. godine. Proizašao je iz razgovora 600 eksperata iz 55 zemalja na skupu: "World Heritage and Contemporary Architecture – Managing the Historic Urban Landscape". Dokument koji je ondje proizveden na traženje *The World Heritage Committee* „to provide guidance on regulating the needs for modernization of the urban environment while also safeguarding their replaceable heritage that constitutes historic cities," bio je s velikim nadama publiciran, a potom nažalost gotovo bojkotiran.
- 38 Max Dvořák, "Restaurierungsfragen – Spalato," *Kunstgeschichtliches Jahrbuch* 3 (1909.): 117-118. Franko Ćorić, "Max Dvořák: restauratorska pitanja – Split," *Kulturna baština* 38 (2012.): 141-162. O purifikacijama uokrug Peristila i katedrale: Karaman, "Buvinove vratnice," 18; Babić, "Urbana poetika Splita," 59-60. Bilo bi instruktivno sva ta rušenja ucrtati na katastru grada „s naznakom rođenja i smrti“ tih građevina. Posebno je sugestivna usporedba katastra povijesne jezgre Splita iz 1831. ili plana iz 1903. godine s današnjim stanjem koje pokazuje niz lakuna u najužem gradskom središtu, nastalih u spomenutim purifikacijama. Za spomenuti plan vidi: Duplančić, "Arhivsko-bibliografski podaci," 188. Karakterističan je gubitak krasne romaničko-gotičke kuće 1932. godine na *decumanusu* radi proširenja Krešimirove ulice. Fragmenti bifore sačuvani su u Arheološkom muzeju, a grb u Muzeju grada Splita. Vidi: Cvito Fisković, "Glava sred svoda Arnirove kapele Jurja Dalmatinca u Splitu," *Kulturna baština* 7-8 (1978.): 45. Crtež kuće prije rušenja donosi Fisković, "Prilog proučavanju i zaštiti," 100.

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# Texts and maps

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Dubrovnik:  
*Civitas et Acta Consiliorum*  
1400–1450.  
Mapping methodology  
and data analysis  
*Ana Plosnić Škarić*  
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*Una omnes:*  
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**Dubrovnik:**  
***Civitas et Acta Consiliorum***  
**1400–1450.**  
**Mapping methodology**  
**and data analysis**\*

Ana Plosnić Škarić  
Alessandra Ferrighi

... urbs Ragusina ... sit commodissimo loco sita, edifitiis  
 communibus et privatis ornata, legum ordinibus recte disposita,  
 et consuetudinum laudabilium numero magno referta<sup>1</sup>

Phillipus de Diversis, 1440

Philippus de Diversis, an Italian humanist who left Venice to become a public schoolmaster in Dubrovnik, praised the city in which he lived and worked and described it in his famous book *Situs aedificiorum, politiae et laudabilium consuetudinum inclitae civitatis Ragusii*.<sup>2</sup> In the introduction, he portrayed Ragusa, which is the Latin name for Dubrovnik, as a city situated in the most opportune place, adorned with public and private buildings, well regulated owing to its laws and numerous laudable customs. Thus, before providing a detailed depiction, Diversis emphasised the most important characteristics of the fifteenth century Dubrovnik: good governance and the beauty of its urban form.

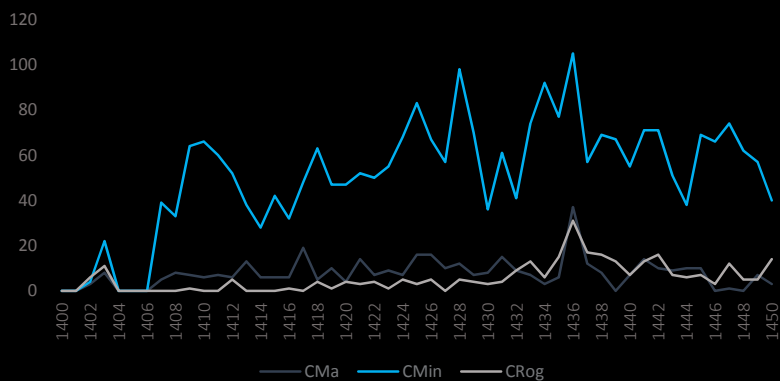
It is precisely this relationship, the relationship between these two characteristics that is the topic of our research. The core of the research focuses on the deliberations of the three city councils of Dubrovnik: the Major Council, the Minor and the Senate, from the first half of the fifteenth century. These as yet unpublished volumes, written predominantly in Latin, are kept at the Državni arhiv u Dubrovniku / the Dubrovnik State Archives. All the deliberations concerning urban space and its buildings are systematically collected and transcribed from these volumes and then uploaded onto the project website, thus becoming available as an open source. As such, they are meant to facilitate further in-depth research on urban development. The aim of this paper is to present the collected documents as well as the structure of the map searchable database of the transcribed deliberations.

There are thirty-five volumes containing the deliberations from the first half of the fifteenth century (FIG. 1). The first three volumes, called *Reformationes*, involve the deliberations of all three Councils.<sup>3</sup> In 1415, it was decided that each Council should have its separate volume. By the mid-fifteenth century, nine volumes comprising the deliberations of the Major Council had been recorded, twelve comprising those of the Minor, and eleven involving those of the Senate.<sup>4</sup> Together, these volumes have 7972 *folia* (15,944 pages). The Major Council was mostly responsible for passing new or enhanced laws, the Senate decided about political issues, and the Minor Council was the executive body. These Councils governed the city and its surroundings, known as the Dubrovnik Republic, for several centuries.<sup>5</sup> It was exclusively patricians who were permitted membership of the Councils. The segregation of this social class ended in 1332 with

**Archival Sources:**  
*Acta Consiliorum*

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Reformationes	ff	delib	Acta Consilii Maioris	ff	delib	Acta Minoris Consilii	ff	delib	Acta Consilii Rogatorum	ff	delib
32 (1402–04)	222	54	1 (1415–19)	155	39	1 (1415–18)	211	159	1 (1415–18)	139	5
33 (1407–11)	294	297	2 (1419–23)	148	39	2 (1418–22)	259	191	2 (1418–20)	147	5
34 (1412–15)	318	152	3 (1423–28)	234	61	3 (1422–26)	299	260	3 (1420–26)	302	21
			4 (1428–33)	310	48	4 (1426–29)	284	269	4 (1427–31)	278	14
			5 (1434–38)	240	66	5 (1430–32)	230	136	5 (1431–35)	295	33
			6 (1440–42)	174	24	6 (1432–35)	296	241	6 (1435–38)	250	76
			7 (1442–45)	276	31	7 (1435–38)	266	227	7 (1438–41)	280	24
			8 (1445–47)	17	6	8 (1438–41)	299	166	8 (1441–43)	290	33
			9 (1449–53)	280	10	9 (1441–43)	245	157	9 (1444–46)	280	15
						10 (1444–46)	264	149	10 (1446–48)	246	16
						11 (1446–48)	245	151	11 (1448–51)	290	21
						12 (1448–51)	285	166			
summa	834	503		1158	324		3183	2272		2797	263
summa summarum		folia 7972	deliberationes	3362							



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FIGURE 1

Overview of the researched volumes, number of folia and number of transcribed deliberations (drawing by A. Plosnić Škarić).

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FIGURE 2

Quantity of the deliberations passed by the Major Council, the Minor Council and the Senate per year (drawing by A. Plosnić Škarić).

the closure of the Major Council.<sup>6</sup> This act defined Dubrovnik's nobility: all adult males of patrician families became members of the Major Council, which enabled them to be elected to other governmental functions such as the membership of the Minor Council and the Senate. Governed by the nobility, this aristocratic republic existed until 1808.

The Councils' deliberations were almost completely preserved from the year of 1301 until the end of the Dubrovnik Republic.<sup>7</sup> Those that were passed by 1397 were edited and published as completely transcribed documents, between 1879 and 2011.<sup>8</sup> Although the full transcription of all volumes is the best strategy when the publication of archival materials is in question, this is, due to the quantity of these volumes, an extensive task. However, both published and unpublished volumes have been used by the researchers of the urban form of Dubrovnik since 1914. The deliberations from the first half of the fifteenth century are cited by: Hans Folnesics in his study on Dalmatian architecture,<sup>9</sup> Cvito Fisković in his works on Dubrovnik stonemasons and builders,<sup>10</sup> Lukša Beritić in his studies on urban development, fortifications and the city's buildings that perished,<sup>11</sup> Ilija Mitić in his article on Orlando's column,<sup>12</sup> Nada Grujić in her studies on the Rector's Palace<sup>13</sup> and by Nada Grujić and Danko Zelić in the article about the building of the house of Duke Sandalj Hranić,<sup>14</sup> and by Renata Novak Klamenčič in her studies on the Great Fountain, the Church of Saint Blaise, the Rector's Palace, as well as on the stonemasons that worked in the city.<sup>15</sup> Important deliberations regarding urban buildings and spaces were also published and discussed by historians: Risto Jeremić and Jorjo Tadić in their studies on health history,<sup>16</sup> Zdenka Janeković-Römer, in her works on social history,<sup>17</sup> Relja Seferović and Mara Stojan in their article on the aqueduct,<sup>18</sup> and Srđan Rudić in his paper on the house of Hrvoje Vukčić Hrvatinić.<sup>19</sup> These authors published transcriptions of 170 deliberations, and signatures of 364 more, thus citing a total of 534 deliberations from the first half of the fifteenth century. Their works reveal the necessity for in-depth research into these volumes, especially regarding the fact that the aforementioned period was among the most prosperous ones in the history of Dubrovnik.

For the purpose of carrying out our research, we defined as relevant, and thus collected, all information about the physical changes of the urban tissue, the use of different spaces and buildings, and the aspects of governmental control over them, as well as the management of related processes. Every deliberation containing any of the above-mentioned information is completely transcribed since only full transcriptions can provide data for the widest possible range of phenomena for further analysis.<sup>20</sup> These deliberations disclose that the Major Council passed new laws regarding



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FIGURE 3

A

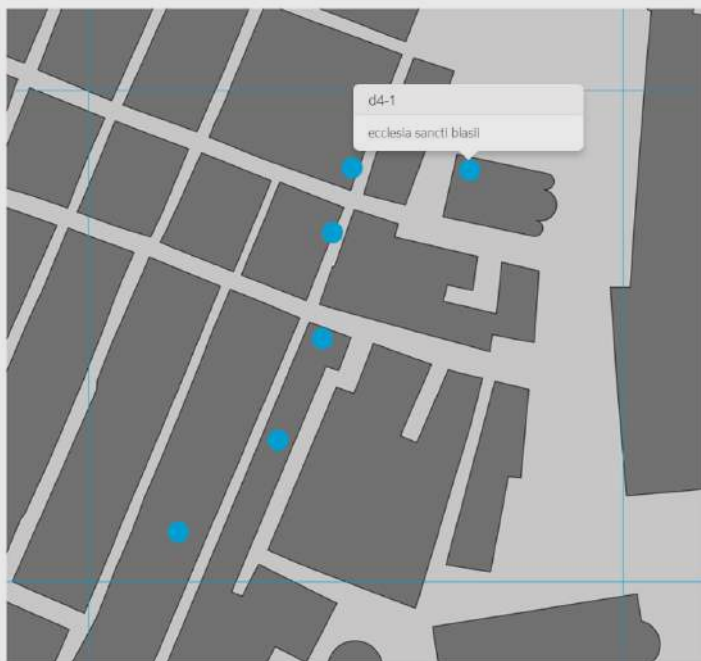
Database homepage:  
Dubrovnik  
1400–1450 Map.

B

Table of contents.

C

Transcriptions of  
the related  
deliberations.



- d4

- ecclesia Sancti Blasii

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**1403-03-03** **Modus festi XC martirorum singulo anno fieri.**

In maiori consilio ballotis LXIII. Prima pars est de firmando ordine portatum pro solempnitate fieri in die XL martirorum videlicet VIII marci. Captum per ballotis XXXV.

Cum gloriosissima dies fuerit illa quadraginta martirorum quorum precibus proditorum tractatorum dolove et iniquo pensatos? contra quietum et pacificum statum communis regiminis civitatis nostre Ragusii mirachulose divina potencia revelavit. Ideo dignum et iustum est ipsam diem orationibus et luminariis cereis quolibet anno imperpetuum expensis nostri comunis honorifice venerari hoc modo, videlicet: Omnes processiones presbiterorum et fratrum cuiuscunque regule in **nostra chatedrali ecclesia sancte Marie** illo die more solito congregentur et tres relique per thesaurarios nostros extrahantur. Et dominus rector Ragusii omnesque consillarii de nostro consilio rogatorum cum comitiva solite ire cum ipso domino rectore ad festum sancti Blasii teneantur et debeant associare prefasas reliquias et processiones quilibet cum uno doplerio ascenso in manu illius ponderis et stature sicut sunt illi qui portantur in festo sancti Blasii de mense februarii sub pena yperperorum decem pro quolibet de dicto consilio rogatorum qui fuerit in Ragusio et non venerit ad portandum dictum doplerium. Et qui vadit per Plateam excusacionem non habeat. Volentes quod qui de dicto consilio rogatorum dormierit in civitate Ragusii in illa nocte precedente festum non vadat extra civitatem nisi quod portaverit doplerium. Et si aliquis de dicto consilio rogatorum non venerit pro aliqua eius infirmitate et si non scusaverit illo die per se vel alium mixtando ad presenciam rectoris ad iurandum statum ille talis quod ipsa pena yperperorum decem quod debitor scribatur in camera. Et pena illa subito exigitur. Que processiones cum dictis reliquiis circumdenter **loziam** nostre **Platee** laudes voce alta solempniter decantant. Et intrent **ecclesiam sancti Blasii** super altare magno dicte ecclesie ipsos reliquias deponantur que sic stent donec celebrabitur missa solepnis. Quo missa finita dicte reliquie ad eorum locum cum processioribus et cum quatuor dopleriis ascensis reportentur. Insuper omnes doplerii sint capelarii dicte ecclesie sancti Blasii per oblationem solempnatis supradictis? (Ref 32, ff. 206v-207r)

**1408-01-24** Pro aurificibus et petranis

Item captum est quod aurifices vadant retro et petrani vadant ante cum solempnibus pro honorando festum Sancti Blasii patronis nostri et deinceps non fiat questio inter eos. (Ref 33, f. 42v)

**1412-12-14**

Captum fuit [in minori consilio] de dando ecclesie Sancti Blasii pro servicio ecclesie modis viginti calcis. (Ref 34, f. 53r)

**1413-06-16**

Captum fuit [in minori consilio] quod cum denariis venditionis possessionum Nixe Stanoevich quos ipse Nixa legat [i] in eius ultimo testamento ut ex ipso debebat fieri quoddam pulcrum altare in ecclesia Sancti Blasii de Platea, ornari debebat altare maius dicte ecclesie Sancti Blasii. (Ref 34, f. 78r)

**1416-12-10** Pro ecclesia sancti Blasii

Captum fuit de portando ad maius consilium de dando de bonis nostri comunis sive denariis in manibus procuratorum ecclesie sancti Blasii [perperos centum] annuatim de denariis dohane magne ad hoc ut in dicta ecclesia fiant decentes celebrationes officiorum prout convenit dicte ecclesie que est caput et basis huius civitatis. (CMin 1, f. 97v)

**1416-12-12** Pro Sancto Blasio [ball. LXXVII] Prima pars est de dando de denariis nostri comunis de doana maiori procuratoribus Sancti Blasii gloriosissimi honoratis et protectoris nostri pro offitiano et aliis opportunitatibus dicte ecclesie ad reverentiam et honorem dicti sancti yperperos centum.

Captum per LXXV, contra II. (CMa 1, f. 50v)

**1416-12-12** Pro eodem [Sancto Blasio] [ball. LXXVII]

Prima pars est de dando dictos yperperos centum dicte ecclesie

Sancti Blasii perpetually quolibet anno ad dictam doanam [maiozem]. Captum per LVI, contra XXX.

Missae ad librum. (CMa 1, f. 51r)

**1417-06-03**

Captum fuit de faciendo policiam procuratoribus sancti Blasii pro ponendo laborenia in opere de yperperis trecentis ad dohanam magnam. (CMin 1, f. 139v)

**1418-04-21** Pro procuratoribus sancti Blasii

Captum fuit de faciendo apodoxiam ser Martolo de Zamagno et ser Nicolino de Gondola procuratoribus sancti Blasii de ypp. ducentis ad dohanam magnam pro laborenis sancti Blasii. (CMin 1, f. 200v)

**1418-05-10** Pro procuratoribus sancti Blasii

Captum fuit de faciendo gratiam procuratoribus sancti Blasii **quod emere possint pro eorum denariis modis centum calcis** ab illis quibus eis melius videbitur pro laborenis necessariis per eos faciendis. (CMin 1, f. 203r)

**1419-01-27** Pro intubatione sedilium positarum ab extra per conchas Sancti Blasii

Captum fuit de precipiendo officialibus laborenerum **quod intubati faciant sedilia Sancti Blasii ab extra circum quaque per chonchas dicte ecclesie.** (CMin 2, f. 40r)

**1419-09-02** Pro ecclesia Sancti Blasii

Captum fuit de faciendo procuratoribus Sancti Blasii apodissiam de ypp. centum ad dohanam fortici **pro pretio columnarum renovandarum in dicta ecclesia sancti Blasii.** (CMin 2, f. 82r)

**1419-10-08** Pro ecclesia Sancti Blasii

Captum fuit de portando ad maius consilium de dando ecclesie Sancti Blasii de Platea pp. mille **pro faciendo construi unum tabernaculum** in dicta ecclesia **supra altare magnum rami deauratum cum intalibus et laborenis** sicut procuratoribus dicte ecclesie videbitur de quibus denariis fiat appodissia ad dohanam magnam. (CMin 2, f. 87v)

**1419-10-28** Pro tabernaculo ecclesie Sancti Blasii de Platea [ball. LXXX] Prima pars est de dando de denariis nostri comunis ecclesie Sancti Blasii de Platea yperperorum mille **pro faciendo construi unum tabernaculum in dicta ecclesia supra altare magnum ramis deauratum cum intalibus et laborenis prout procuratoribus dicte ecclesie videbitur.** Captum per omnes. (CMA 2, f. 11r)

**1419-10-29** Pro polica procuratorum Sancti Blasii

Captum fuit de faciendo unam poliam ypp. mille ad dohanam magnam procuratoribus Sancti Blasii pro tabernaculo futuro supra altare dicte ecclesie secundum partem captam in maiori et generali consilio civitatis Ragusii in hoc eodem millesimo die videlicet 28 mensis presentis octobris. (CMin 2, f. 91r)

**1419-12-04** Pro ypp. mille dandis procuratoribus Sancti Blasii pro tabernaculo [idem] (CMin 2, f. 94v)

**1420-04-13** Pro ecclesia Sancti Blasii

Captum fuit de dando procuratoribus ecclesie Sancti Blasii **pro salegio ecclesie predictae et reparatione altaris** de denariis nostri comunis ypp. quinquaginta ad fondecum et alios ypp. quinquaginta ad gabellam beccarie. (CMin 2, f. 123r)

**1420-07-11** Pro lapicidis Sancti Blasii pro cuppis gratis

Captum fuit de consentendi **de gratia lapicidis qui incidunt lapides et marmora pro ecclesia Sancti Blasii in Glustica cuppos mille** pro eorum opportunitate ad incidendum dicta laborenia verum cum eorum denariis. (CMin 2, f. 140r)

the use of buildings and spaces in the city, that it decided upon masters who were accepted in public services and elected officials responsible for the management of public works. The Senate made decisions regarding the safety of the city and the plan for the rebuilding of the most significant public edifice, the Rector's Palace, after it had been destroyed by fire in 1435. As an executive body, the Minor Council delivered deliberations almost daily to ensure the implementation of the decisions passed by the other two Councils as well as those that were passed in its meetings. Furthermore, it had the order and cleanliness of the city maintained, and ensured the proper functioning of all its spaces and buildings. A total of 3362 deliberations were transcribed (including 170 of those previously mentioned, along with 364 published signatures): 386 from the Major Council, 275 from the Senate, and 2656 from the Minor Council (FIG. 2).

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### Mapping Methodology

Since the research is primarily concerned with questions regarding the physical appearance of the urban fabric, all these transcriptions were uploaded to a database that was structured as map-searchable.<sup>21</sup> Solely for that purpose, a special map was created, under the supervision of Danko Zelić, and in accord with the state of art concerning the urban development of Dubrovnik. The map presents the city's layout in the first half of the fifteenth century. Throughout the centuries, the urban form of Dubrovnik was constantly changed due to the rebuilding, improvement, and embellishment of the existing structures (each of these was commonplace in every prosperous city). But, in 1667 a disastrous earthquake struck the city and numerous buildings were completely destroyed. Afterwards, the city was built anew, mainly following the urban layout that had been created by the end of the thirteenth century.<sup>22</sup> However, some parts were dramatically altered. For these two reasons, not many buildings or parts of buildings, which were erected or which already existed in the first half of the fifteenth century, are preserved. The archival data collected for this research provide abundant information on the urban form from the period. The new data should be carefully considered, not uncritically compared with the contemporary urban tissue. Thus this special map was created to offer an adequate introduction to the urban form of Dubrovnik in the first half of the fifteenth century.

The map is divided into segments and each segment includes a table of contents, indicating the buildings and spaces that are recorded in the deliberations and that existed or still exist in that part of the city. Every table of contents opens by placing the cursor on the information sign (FIG. 3A).<sup>23</sup> When clicked, the magnified segment opens a new page (FIG. 3B). Clicking on the borders of the segment may take you to the adjacent set of

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segments. In the upper-right corner of each page there is a small city map, with the marked position of the magnified segment. On this small map, it is also possible to go to any other segment, simply by clicking on it. On the magnified segments, blue dots are inserted, indicating a position of a building or a space recorded in the deliberations. When the cursor is placed on a dot, the table of contents opens and any building or space is named. Once the user clicks on it, a new page opens with all the deliberations recording that building or space (FIG. 3C). The deliberations are uploaded in chronological order. Their number varies, from one to several dozens or even hundreds.

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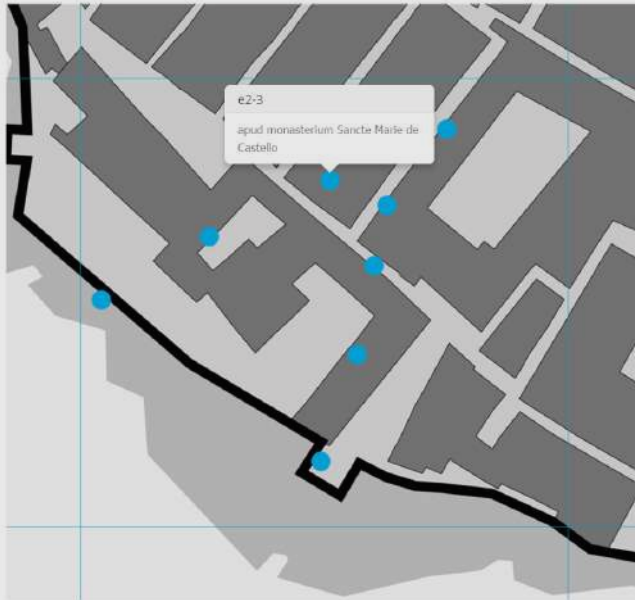
The symbol used for mapping is a blue dot, regardless of the preservation of the building which it refers to, or the precision of its location, or the type of data recorded in a certain deliberation. The aim of this database is to offer the thus far unknown and unpublished archival sources, and not their interpretation. Furthermore, the database developed along with the archival research and the deliberations were uploaded subsequently as they were transcribed, which required a simple configuration.

Thus, as regards the preservation of the physical appearance, a dot can be linked with the deliberations referring to the structures that are completely preserved, such as those passed for the erection of the column with the relief of the knight Orlando, which has been preserved until today.<sup>24</sup> The deliberations testifying to the erection of the Small Arsenal can be related only to the traces of the sidewall arches that are still discernible, although the building is demolished.<sup>25</sup> The dot can be linked with the decisions made for the buildings whose remains were found in archaeological excavations, such as the Romanesque cathedral, which was completely destroyed in the great earthquake and whose foundations were discovered inside the Baroque one built in the late seventeenth century<sup>26</sup> or with provisions on edifices, of which no physical structures preserved, such as the Church of Saint Peter, Lawrence, and Andrew.<sup>27</sup>

The mapping methodology for deliberations comprises the use of any kind of spatially-related information (FIG. 4A). The locations of fortifications, public buildings, communal houses, churches, and convents, as well as the houses given to the noblemen from the hinterland, are known.<sup>28</sup> However, the location of the majority of the private houses that are recorded in archival sources remains unknown. This is due to a lack of information that could be used to determine their location.<sup>29</sup> The location of many private houses is defined by their position near a public or ecclesiastical building by using the prepositions *prope*, *apud*, *iuxta*. In such cases, a dot is inserted next to such a building, relying on the user's knowledge of the Latin language (FIG. 4B). If their location was recorded using the street name, a dot was

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FIGURE 4  
Spatially-related information  
used for mapping:

- A exact location,
- B near some building,
- C the street name,
- D *in sexterio*.



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inserted in the middle of that street (FIG. 4C). The location of some private houses is determined even more vaguely, by their position in one of the six quarters of Dubrovnik – *sexteria*. Also, a dot for each *sexterium* is inserted in the vicinity of the church after which it was named, and these pages open with the map presenting this administrative division of the city (FIG. 4D).<sup>30</sup> However, there are many private houses whose location is unknown. The deliberations regarding these houses or the spaces in their vicinity, as well as the deliberations that refer to large parts or the entire city, are also uploaded onto the website. To facilitate their use they are organised into special thematic strands. In total, there are 160 dots inserted into the map segments, which lead to the pages with the transcriptions that refer to a certain building or space, and 24 more links on the database home page that lead to the separate pages referring to special thematic strands.

### Data Analysis

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Out of a total of 3362 transcribed deliberations 91.42 per cent refer to the buildings and spaces in the city: 36.43 per cent to the public buildings, including the fortifications and communal houses, 24.42 to the public spaces and the port, 7.61 to the sewage canals, 12.96 to the ecclesiastical buildings and property, and 10.94 to the private houses and plots (for details see: FIG. 5). The types of data reveal various aspects of governmental concern and control. This period saw a major campaign led for both the restoration and building of the new segments of fortifications. All significant public buildings – the Rector’s Palace,<sup>31</sup> *Sponza* (where customs offices, storage places, guest rooms and the public school were located), the communal *loggia*, the Great and the Small Arsenal, *fonticus* (the main wheat storage facility and the place where the selling of communal wheat was permitted), salt storages, and the slaughterhouse and the butcher shop – were constantly rebuilt, adapted and repaired. The aqueduct and two public fountains were erected to have enough water to supply the citizens, while the existing cistern and public wells were well maintained. The communal houses, built along the main street called *Platea / Stradun*, and in the northern part of the city, which used to be rented out to merchants and craftsmen, were repaired whenever necessary. The houses given by the commune to the politically-important noblemen from the hinterland were carefully embellished (*domus dominorum*). The sewage system was extended and the canals were cleaned on a regular basis. The port also had to be cleaned up and all construction materials and broken vessels removed, while its security chain, made of iron and wood, had to be annually repaired. Considerable attention was paid to the street pavements and their repair, as well as to cleanliness and viability: special permissions were required for setting up stalls and wooden storages for merchandise. Regarding the use of

public spaces, certain deliberations could be found in every medieval city: keeping pigs inside the city walls was strictly prohibited, all dogs had to be kept on a lead, no person could enter the city carrying arms, all those who walked at night had to light a candle, gaming was allowed only in two public places (where guards were also stationed). A curious rule that forbade the citizens of Dubrovnik to throw snowballs or have snowball fights probably had to be, due to the climate, very rarely applied.

Regarding the physical appearance of private houses a major campaign was initiated already in the late fourteenth century and it ended in 1413. In order to prevent disastrous fires in the city, all the owners of wooden houses were encouraged to demolish them and replace their houses with stone ones.<sup>32</sup> When they were to build new houses, regardless of their being either substitutions for wooden ones, or of their being built on empty plots, or despite the fact that the old ones underwent significant repairs and embellishment, the owners were obliged to inform the Minor Council about their works. The works had to be inspected to ensure that there would be no usurpation in a public street or place. In the Dubrovnik Republic, private property was highly esteemed and protected by the law. It was only on rare occasions that private houses were taken over by the government, merely for the purpose of the common benefit. In such cases, the owners were adequately reimbursed. The property of orphans and widows was particularly protected by the government. In addition, a permission had to be obtained in case of renting, selling, or giving these houses as a dowry.

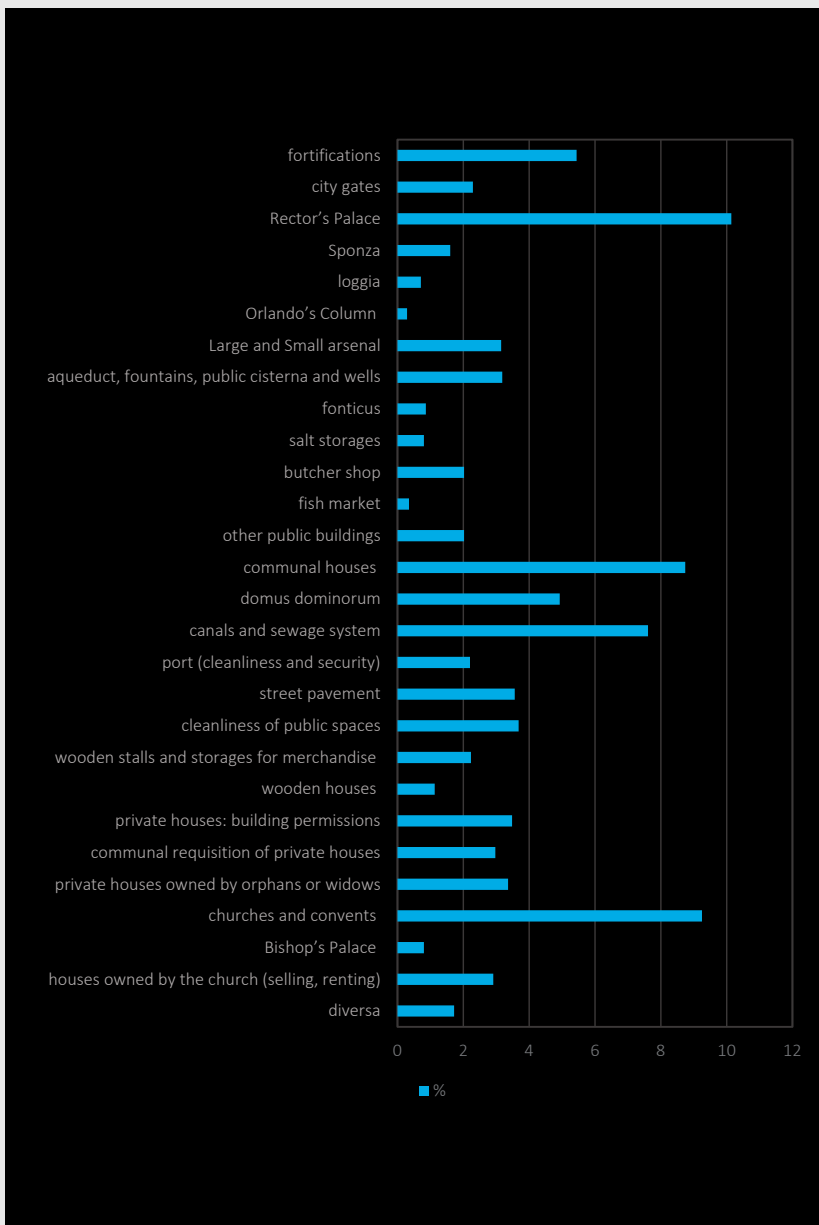
The deliberations regarding the rebuilding and embellishment of ecclesiastical edifices can be divided into those initiated by the government, and pleas from ecclesiastical persons – the latter was accepted or rejected by the Councils. The government also intervened in the use of ecclesiastical spaces, which ranged from demanding decent behaviour in the Cathedral (*De non ballando in ecclesia Cathedralis*), up to the most practical decisions on storing communal wheat in magazines in the Archbishop's Palace, or the Dominican and Franciscan monasteries. For selling and renting houses in the city that were the property of the church, the government required an independent assessment (FIG. 6).

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Officials were entrusted with the management of all public works.<sup>33</sup> The most important were *officiales laborerorum* who managed almost all the works on fortifications, public buildings and communal houses. In 1427 the number of these officials doubled. Half of them, known as *ordinarii* or *de scripta*, supervised only the construction works, while the others, known as *de pagamento*, were entrusted with administering the accounts and were assisted by a scribe. These officials were elected by the Major Council from

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FIGURE 5  
 Data analysis. Deliberations referring to buildings and spaces in the city (drawing by A. Plosnić Škarić).

### officiales

officiales laboreriorum communis ordinarii; officiales laboreriorum communis de pagamento; scriba officialium laboreriorum

massarii bladorum

officiales salinarii

officiales aqueductus fontane

officiales laboreriorum regiminis; officiales ad permutandum sedilia regiminis; officiales super picturis in parvo consilio fiendis

officiales domus voivode Sandagli; officiales domus voivode Radossavi

officiales ad faciendum fieri et fabricari pontem Plociarum

officiales ad ponendum in formam modus netandi gattos factas in Ragusio sub terra; officiales ad faciendum fieri/construendum ghactum; officiales ad faciendum mundari cloachas (ad rugas seu inter domos)

officiales pro nettando portum; officiales pro reparacione portus; officiales pro cathena portus

officiales pro saligiando civitatem

officiales ad faciendum mundari civitatem; officiales pro civitate munda tenenda; officiales super immundicias (pro specialibus viis et partibus civitatis)

officiales ad extimandum domum seu terrenum ecclesiarum

officiales monasterii Sancte Clare

officiales ad extimandum domos et casalia accipiendas in Commune

rector et minus consilium ad videndum terminos laboreriorum domus

FIGURE 6

Officials that were elected or appointed to manage the buildings and works in the city (drawing by A. Plosnić Škarić).

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among its membership and, at the beginning of every year, their names were re-entered in the books of the Minor Council. The transcriptions of the election processes are uploaded into the website as a special thematic strand, and they make up 6.11 per cent of all database documents. The other officials were not responsible for such a wide range of buildings or spaces. Their names can be found throughout the database, along with the deliberations regarding the works of which they were in charge. The *massarii bladorum* resolved all issues regarding wheat, including repairs and modifications of the storerooms, as well as digging holes in the south-western part of the city, where most grain was stored. Unlike them, the *officiales salinari*, responsible for salt, were only occasionally entrusted with less demanding repairs of salt storages.

Along with these officials, who were elected annually, special ones were entrusted with the duty of supervising the works on distinctive edifices. In the first half of the fifteenth century these were: since 1436 the officials entrusted with the construction of the aqueduct and two public fountains; in 1424, 1433 and 1435 the officials entrusted with the redecoration of the rector's chambers and the hall of the Minor Council; since August 1435 the officials entrusted with the rebuilding of the Rector's Palace after the disastrous fire; since 1429 the officials entrusted with the erection and embellishment of the houses given to the noblemen from the hinterland (*domus voivode Sandagli* and *domus voivode Radossavi*), and in 1449 those responsible for the building of the bridge by the city of Ploče gate. Such was the extent of the duties the *officiales laboreriorum* had to perform that it was obviously not possible for them to devote their full effort to the works on these distinctive edifices.

Also, there were officials who were responsible for the upkeep of the pavements and for the cleaning, security of and repairs to the port. All the above-mentioned officials were elected among the patricians from among the membership of the Major Council. For street maintenance and the cleanliness of the streets and squares, it was the commoners who were appointed and responsible. However, if pollution was caused by the inhabitants of certain houses, it was them who had to organise the pollution removal. Similarly, the patricians were appointed to manage the construction of the new canals in the sewage system, and it was the responsibility of the occupiers of the houses who were using them to keep them clean. Special officials were appointed to assess the private houses that were taken over by the commune, and similar procedures were required for renting or selling the houses and plots that were the property of the church. For the rebuilding of the Convent of the Poor Clares, to enhance the conditions of the isolation of the nuns (who were all patrician daughters), the officials

were selected particularly carefully. However, there was a matter in which no appointed officials could be fully trusted: the potential usurpation of the public space for getting building permits. It was the rector and all the members of the Minor Council who had to inspect the works, allowing the further building or demanding the removals. 121

To ensure the quality execution of public works, the government hired professionals, whose work was supervised and managed by officials. The most important among them were chosen by the Major Council, who defined their duties, annual salaries, and, eventually, their privileges. These deliberations are uploaded as a separate thematic strand, and they make up 2.11 per cent of all database documents. Apart from some stonemasons (*lapicide*) and builders (*muratori*), there were masters specialised in building vaults (*magistri voltarum*), digging holes for grains (*magistri fossarum*), and engineers (*ingenarii*). Among the latter, Onofrio della Cava from Naples deserves special mention as a person who worked on the most distinctive buildings in Dubrovnik: the aqueduct, public fountains, and the Rector's Palace. However, detailed executive contracts were never listed in the *Acta Consiliorum* books but now they have to be searched for in other volumes in the Archives of Dubrovnik.

For this research, we drew encouragement from the results presented in the works of the researchers of the history and urban form of Dubrovnik: Folnesics, Jeremić, Tadić, Fisković, Beritić, Mitić, Grujić, Zelić, Janeković-Römer, Novak Klemenčič, Seferović, Stojan, and Rudić. In their books, articles and chapters, which began to be published more than a century ago, they discussed the deliberations concerning the distinctive buildings from the first half of the fifteenth century. However, the database of all deliberations presented here, which were passed by the City Councils during this period, clearly indicates a wide range of topics that could be further researched, and that cover all aspects of governmental concern and control over public, private and ecclesiastical buildings and spaces in the city, as well as the management of the related processes. Its availability as an open source prompts a call for and facilitates further research.

## Conclusion

## Notes

- \* This work was fully supported by the Croatian Science Foundation's funding of the project *Dubrovnik: Civitas et Acta Consiliorum. Visualising the Development of the Late Medieval Urban Fabric* DUCAC-UIP-11-2013-9492.
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- 20 Ana Marinković has transcribed deliberations from the first ten volumes passed by the Senate. Danko Zelić has transcribed deliberations from the thirty-first and thirty-third volumes of *Reformationes*, seven volumes from the Major Council (1-5, 7-8), and two volumes from the Minor (6 and 9). Ana Plosnić Škarić has transcribed deliberations from thirty-second volume of *Reformationes*, two volumes from the Major Council (6 and 9), ten volumes from the Minor (1-6, 7-8, 10-12), and from the eleventh volume passed by the Senate.
- 21 <http://ducac.ipu.hr/project/mapping/>, accessed March 2017. All the project researchers participated in discussions about mapping, but the transcriptions were uploaded and mapped by Ana Plosnić Škarić. Having made final decisions on the mapping methodology, she herself takes full responsibility.
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- 28 Beritić, *Utvrdjenja grada*; Beritić, “Ubikacija nestalih građevinskih spomenika;” Beritić, *Urbanistički razvitak*; the location of communal houses is well known due to the separate volumes in which they were recorded, see: Irena Benyovsky Latin, and Danko Zelić, *Knjige nekretnina dubrovačke općine (13.-18. st.) = Libri domorum et terrenorum communis Ragusii deliberatis ad affectum (seac. XIII-XVIII)* (Zagreb – Dubrovnik: Zavod za povijesne znanosti HAZU u Dubrovniku, 2007) and the chapter of Danko Zelić in this volume; on houses donated to the noblemen see: Grujić, and Zelić, “The Palace of Duke Sandalj;” Rudić, “O kući Hrvoja.”
- 29 Regarding these, see the methodologies used in the chapters of Irena Benyovsky Latin and Ivana Haničar Buljan, Renata Novak Klemenčič, and Matko Matija Marušić in this volume.

- 30 Beritić, “Ubikacija nestalih građevinskih spomenika.” The *sexterium* of Saint Blasé cannot be found where the church bearing the same name is mapped, but it should be looked for in the segment C2, where the first church of this patron saint was built. The sixth *sexterium* was not named after the church, but its name was Pustijerna.
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**Una omnes:  
le accademie  
letterarie a Milano  
tra XVI e XVII secolo  
nella banca dati  
“milanoassociazioni”**

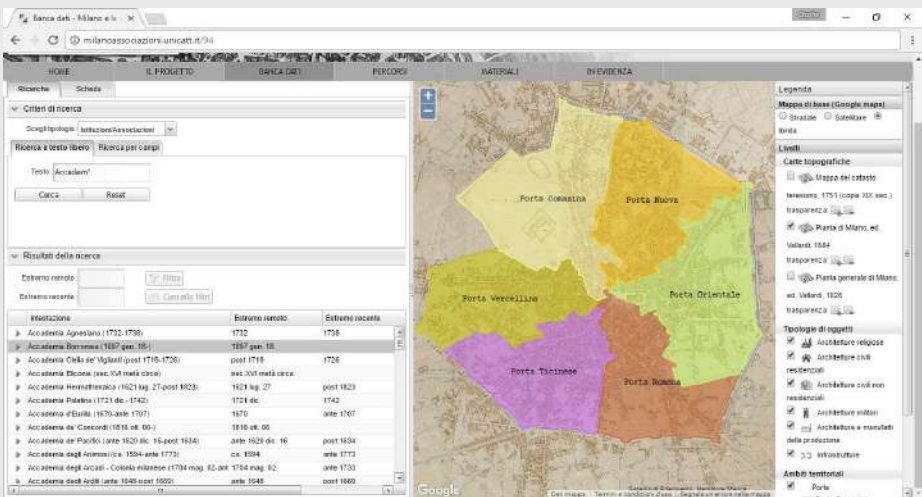
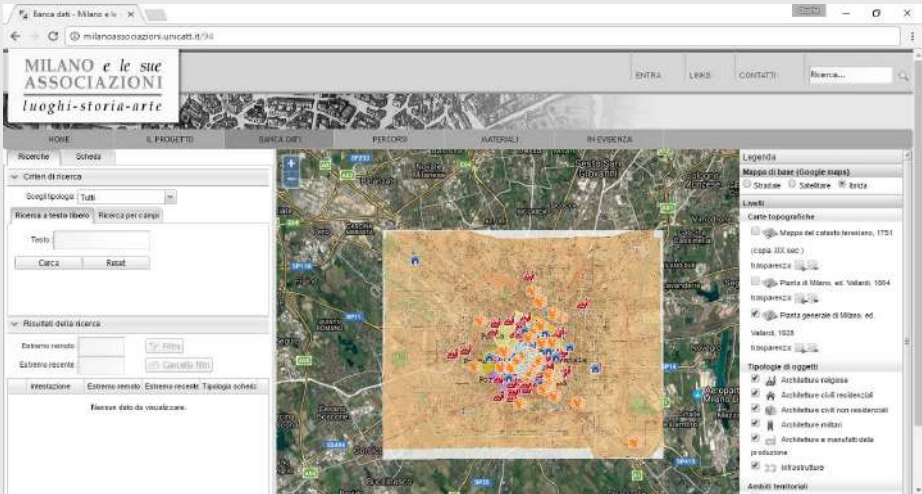
Alessandro Corsi

Il presente contributo intende valorizzare l'apporto fornito dagli strumenti di georeferenziazione e di raccolta sistematica di dati per lo studio delle accademie letterarie. In particolare si vuole evidenziare come la banca dati "milanoassociazioni" (FIG. 1),<sup>1</sup> nata dalla collaborazione tra l'Università Cattolica e la Fondazione Golgi-Redaelli, possa offrire un valido sostegno alla comprensione delle intersezioni fra i personaggi che compongono le élites di pensiero nella Milano tra la fine del XVI e la prima metà del XVII secolo e l'effettiva proposta culturale veicolata dai consessi accademici. Come recentemente hanno dimostrato i risultati prodotti nell'ambito dello sviluppo dell'Italian Academy Database,<sup>2</sup> l'analisi del materiale dato alle stampe dalle accademie compiuta a partire dall'organizzazione e catalogazione dei documenti in una banca dati permette di colmare, almeno in parte, le lacune generate dalla componente di semi-oralità che caratterizza questi fenomeni associativi. Sfruttando i collegamenti ipertestuali contenuti nelle schede del portale *Milano e le sue associazioni* e l'interazione con l'architettura urbana milanese realizzata tramite la sovrapposizione delle mappe storiche, si è voluto mettere in correlazione le fonti letterarie, documentarie e iconografiche relative alle accademie con i luoghi di riferimento nei quali si riunivano gli eruditi. Alla base di questa operazione vi è l'obiettivo di favorire una prospettiva di studi uniforme che consenta, grazie alla possibilità di osservare i progressi in un ampio lasso temporale, di approssimarsi a quella lettura dello "spirito dei tempi" che Maylender identificava agli inizi del XX secolo come lo scopo principe delle indagini nel campo delle accademie letterarie<sup>3</sup>.

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La necessità di ripercorrere la via segnalata dallo storico istriano e di integrare le fonti con la geografia cittadina è una premessa fondamentale per poter avanzare un'analisi equilibrata del complesso caso milanese, che si apre solo alla metà del Cinquecento, in netto ritardo rispetto ai principali centri culturali della penisola.<sup>4</sup> L'immagine che riassume le difficoltà e le intenzioni iniziali è l'emblema del primo manipolo di letterati milanesi, i Trasformati. Si tratta del platano fruttifero avvolto nel cartiglio contenente il motto virgiliano tratto dal secondo libro delle georgiche, *et steriles platani malos gessere valentes*. I frutti sono le liriche in volgare degli accademici, riuniti per la prima volta in un unico albero e sbocciati su un terreno che sino a quel momento era apparso sterile. Esso si rivelerà estremamente fertile, come si deduce dall'inserimento del lemma 'accadem\*' nella maschera di ricerca predisposta per la consultazione della banca dati "milanoassociazioni" (FIG. 2). I numerosi risultati che compaiono a schermo, oltre a registrare per mezzo degli estremi anagrafici il "nascere, prosperare ed intisichire"<sup>5</sup> di ciascuna accademia, offrono una sintesi dettagliata del fiorire di queste esperienze letterarie,

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FIGURA 1

La homepage della banca dati “milanoassociazioni”, con a sinistra la maschera di ricerca, al centro la carta operativa con le schede georeferenziate, ed a destra i filtri, tra cui le mappe di Google, le tre carte storiche con la relativa funzione di trasparenza e la legenda degli oggetti presenti a schermo; <http://milanoassociazioni.unicatt.it/94> (running on the Google Maps).

FIGURA 2

I risultati ottenuti con l’inserimento del termine “accadem\*” dopo aver indicato quale criterio di ricerca la voce “Istituti/Associazioni”. Si noti la possibilità di ordinare le schede alfabeticamente in base alla loro intestazione, e cronologicamente distinguendo fra i due estremi temporali.

riportandone i tratti distintivi peculiari nei diversi campi con cui sono organizzate le singole schede.

A rendere oscuri e irregolari gli esordi di tali fenomeni associativi a Milano non è solo il prevalente aspetto orale della produzione accademica, ma la mancanza di un mecenate che finanziasse un progetto culturale solido con cui fossero in grado di sostenersi e autoalimentarsi a lungo.<sup>6</sup> Dall'analisi comparata tra le diverse accademie, compiuta attraverso il confronto sul *database* dei relativi archi cronologici di sopravvivenza, si evince immediatamente che il primo impulso organizzato sia promosso dai gesuiti con scuole di Brera, la cui accademia più antica sorge tra gli anni Sessanta e Settanta del Cinquecento e termina i propri raduni solo con la soppressione dell'ordine.

Già contemplata nelle pagine della prima *Ratio studiorum*,<sup>7</sup> l'accademia si pone insieme alle pratiche spirituali come un elemento strutturale e complementare di una proposta paideutica finalizzata alla formazione di una classe dirigenziale capace di sostenere il peso degli incarichi di governo e contemporaneamente di ambire a quella liberalità di pensiero propria della perfezione cristiana.<sup>8</sup> Nel vivace contesto di una fruizione culturale che vedeva coinvolte le generazioni afferenti alle scuole site nel sestiere di Porta Nuova di Milano, le esercitazioni letterarie delle due Accademie Partenie (partorite da Maria), ossia gli Animosi e gli Arisofi, assumono un rilievo di primordine nell'economia del vissuto scolastico quotidiano, andando ad intercettare l'esigenza ed il desiderio di professori e studenti di mettere alla prova le proprie capacità compositive attraverso l'attività teatrale, poetica e retorica che si teneva parallelamente alle lezioni.<sup>9</sup>

L'effettiva istituzionalizzazione delle due assemblee avvenne tra il 1597 e il 1598 con la pubblicazione ufficiale dei due emblemi.<sup>10</sup> Essi racchiudono gli assi portanti su cui si modellava la partecipazione alle riunioni. Seguendo l'*iter* di studi, la prima accademia cui gli studenti accedevano era l'Accademia degli Animosi, la quale riuniva i ragazzi che frequentavano la classe di retorica. Le adunanze si svolgevano sotto le insegne raffiguranti un gruppo di cervi intenti a percorrere un fiume sotto il vigilante sguardo di un altro cervo di maggiori dimensioni. Secondo la lettura allegorica dell'animoso Fabrizio Visconti, i cervi rappresentano i giovani accademici che giungono a nuoto, esercitandosi tra i flutti dell'eloquenza, alle sponde della perfezione indicate dagli occhi del loro professore. Disposti in fila concatenata, essi sostengono e "inanimano" i loro compagni con il proprio capo, seguendo l'indicazione del motto *Dant animos vices*.<sup>11</sup> La scelta dell'animale è funzionale alla descrizione dei parametri essenziali propri dell'ideale protagonista delle dinamiche pertinenti al processo formativo. Al pari del cervo, il soggetto è per sua natura puro (Deut 12, 15) ed abile a sconfiggere le tre serpi maligne,

ossia peccato, vizio e passione.<sup>12</sup> Sciogliendo le immagini della dialettica gesuita, il proposito dell'accademia si dichiara essere quello di "istillare ne' cuori dei garzonetti a poco a poco il pretioso liquore della virtù et indirizzare li scolari a quello stato di perfetti cristiani"<sup>13</sup> in un percorso che fonda le sue radici sulle quattro virtù morali,<sup>14</sup> che compaiono nelle pubblicazioni accademiche per le lauree in Brera sotto forma di quattro putti intenti a sorreggere l'intera impalcatura dei frontespizi.<sup>15</sup>

Nel segno del cervo sono implicitamente incluse tutte le fatiche sostenute dagli allievi e dai maestri che, scandite dai rigidi orari settimanali, prevedevano il susseguirsi di attività indirizzate sia alla crescita intellettuale, sia a quella spirituale, con spazi dedicati alla catechesi e alla preghiera comunitaria, come l'insegnamento della Dottrina Cristiana, gli esercizi spirituali, le messe e le orazioni quotidiane dispensate anche per mezzo delle congregazioni mariane di studenti coordinate dai padri gesuiti di Brera. La discendenza e la protezione della Vergine, rivelata dal nome stesso di Parteni, è formalizzata dal vincolo istituzionale che obbliga gli accademici di qualunque grado a prender parte attiva alla congregazione mariana di riferimento per il loro anno di studio.<sup>16</sup> L'intreccio fra entità associative di diversa natura è voluto e mirato all'adempimento degli scopi formativi prefissi dalla *Ratio*. La rielaborazione armonica dei medesimi concetti è compiuta con modalità differenti a seconda dei momenti di aggregazione che componevano la settimana di studi. Si genera così un canone letterario e valoriale che trova una perfetta corrispondenza nella disciplinata successione delle esercitazioni scolastiche.

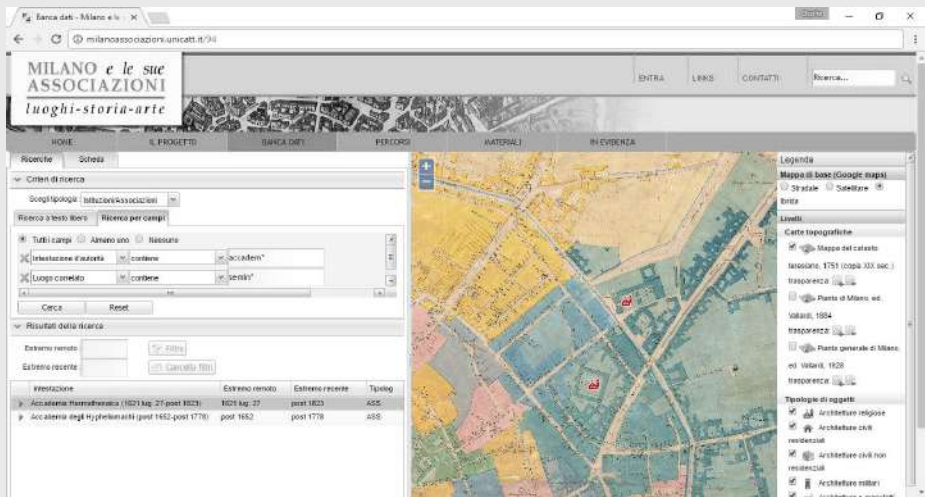
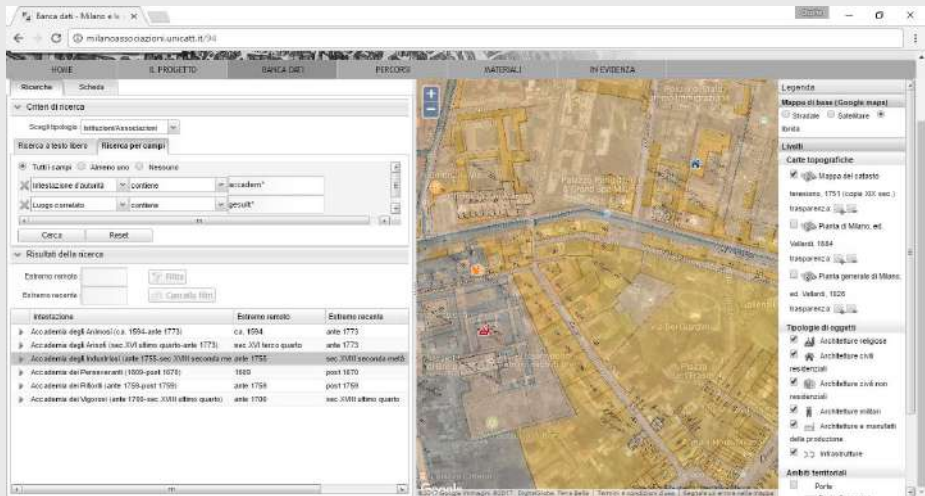
Tornando all'emblema, l'acqua in cui i cervi nuotano rappresenta il bacino letterario dei testi classici in cui i giovani si devono immergere durante i ritrovi. La metafora idrica è rafforzata dai tratti che caratterizzano le due sponde: i cervi si discostano da una boscaglia incolta per raggiungere tra le correnti del sapere la perfezione, individuata in una civiltà che assume le spoglie di un complesso urbano in cui la *tecne* ha permesso l'erezione di chiese, abitazioni, torri e mulini. Da quella stessa acqua attinge la noria, simbolo dell'Accademia degli Arisofi, che accoglieva i ragazzi delle classi superiori. Coordinando per mezzo della ruota tutte le menti degli studiosi, che nell'effigie corrispondono ai vasi capaci di empirsi del sapere tratto dal pozzo della conoscenza, la noria sintetizza l'idea stessa di accademia secondo l'accezione dei Parteni Maggiori, il cui obiettivo era quello di favorire la condivisione degli esiti della specula filosofica riversandoli in una vasca da cui tutti potessero agilmente abbeverarsi. Il moto di estrazione verticale dal mondo della *sofia*, facilitato dai progressi tecnico-scientifici dell'uomo,<sup>17</sup> li rende letteralmente "più che sapienti", Arisofi secondo la lezione greca.

Il costante ricorso escatologico alla perfezione determina la deontologia con cui l'accademico può procedere nelle sue aspirazioni letterarie. Il primo passo per compiere la raffinazione del pensiero è la rinuncia sistematica all'ambizione di un assoluto dominio dello scibile.<sup>18</sup> Come il soldato valoroso, ciascun accademico deve essere rispettoso dei superiori, pronto a sostenere con la ferocia del campione le prove dello studio, consapevole dei propri limiti e capace di cooperare con i colleghi degli altri reparti al fine di uniformare l'assalto alla sapienza.<sup>19</sup> Letteralmente *Una omnes*, come recita il motto dell'accademia.

L'urbe della Perfezione, perno attorno al quale ruota l'intero apparato scolastico modulato dalla *Ratio*, è considerata nei due emblemi da due punti di vista prospettici opposti. Questo prototipo di città ideale riepiloga i contorni della *res publica literaria* secondo la declinazione gesuitica milanese, nei cui spazi utopici, ma fisicamente riconoscibili, prendono le proprie mosse le due accademie che avevano luogo in Brera. È interessante notare la suggestione creata dai numerosi rimandi all'identità cittadina milanese, che emergono dal rapido confronto tra la scheda degli Arisofi e quella della prima accademia di carattere pubblico e ufficiale di Milano, gli Inquieti. Riunitasi per la prima volta nel 1594 nella residenza milanese del marchese di Caravaggio Muzio II Sforza (1576-1622), l'Accademia degli Inquieti annoverava fra i propri rappresentanti alcuni fra i principali eruditi del tardo Cinquecento lombardo, tra cui professori dell'università di Pavia, del calibro di Gherardo Borgogni e Ludovico Settala, e membri dell'Accademia milanese dei Facchini della Val di Blenio, come Giacomo Antonio Tassano e Giovambattista Visconti.<sup>20</sup> Anche questo drappello di eccellenze letterarie dell'epoca aveva adottato sin dalle prime battute la Madonna in qualità di protettrice, in piena continuità con la tradizione devozionale mariana milanese, e per emblema la noria ornata dal motto virgiliano *Labor omnibus unus*.

In secondo luogo la presenza di rinvii diretti alle insegne milanesi nelle imprese delle due Partenie, ossia il blasone sforzesco e la basilica di S. Fedele sorretta in grembo dalla Vergine, si pone come efficace didascalia dell'intero impianto iconografico. Attraverso il ricorso simbolico si procede alla sovrapposizione tra le spoglie fisiche di Milano e quelle raffigurate di Perfezione, creando un equilibrio che porta ogni singolo accademico, a prescindere dal proprio luogo di nascita, ad avere come rivendicazione di innalzare "la patria nostra di Milano"<sup>21</sup> e di spingere il proprio messaggio "in tante bande fuori da Milano".<sup>22</sup> La compagine meneghina si trasforma così nel palcoscenico all'interno del quale avviene l'effettiva unificazione della repubblica delle lettere.

Grazie alla banca dati "milanoassociazioni" è possibile seguire la realizzazione materiale di questa roccaforte letteraria da parte dei gesuiti ottenuta



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FIGURA 3

La proiezione su carta georeferenziata della cittadella accademica dei gesuiti. Attraverso la sovrapposizione della mappa del catasto teresiano (1751) e la ibrida GoogleMaps, è possibile osservare l'evoluzione della pianta urbanistica cittadina e l'attuale riuso degli edifici nel quale avvenivano i raduni accademici.

FIGURA 4

L'acropoli accademica composta dalle compagini associative del Seminario e del Collegio Elvetico, ricavata attraverso la selezione del criterio di ricerca "Istituti/associazioni" e l'inserimento dei termini "accad\*" nella voce "Intestazione d'autorità" e "semin\*" in quella relativa al "Luogo correlato".

attraverso l'aggregazione delle accademie che facevano riferimento ai numerosi collegi in Porta Nuova. Alla fondazione dei Perseveranti nel 1609, occorsa per volontà dell'arcivescovo Federico Borromeo (1564-1631) nel collegio dei Nobili, seguiranno i Vigorosi, gli Industriosi del Collegio de' Patellani e i Rifioriti. Questo reticolo di accademie sviluppatosi nel corso dell'età moderna dava vita nelle vie della Milano barocca a quella cittadella di studi ben riconoscibile sulla mappa della banca dati attraverso la ricerca incrociata fra i termini 'accadem\*' e 'gesuit\*' (FIG. 3).

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È significativo il fatto che il primo intervento a sostegno di questo progetto avvenga per mano dell'arcivescovo, a segnalare la condivisione del modello gesuitico. Il Borromeo, che dall'arrivo a Milano si era gradualmente avvicinato agli ambienti della cultura legati alla cerchia degli Inquieti, aveva particolarmente a cuore il regolato esercizio delle lettere da parte dei giovani.<sup>23</sup> Prima ancora di intraprendere la sua azione pastorale in territorio ambrosiano aveva avviato, nel privilegiato contesto pavese del Collegio Borromeo, l'Accademia degli Accurati, che si riuniva ogni giovedì e delle cui "imprese" si faceva inviare accurati ragguagli.<sup>24</sup> Per sua iniziativa fu aperta nel 1621 nel Seminario l'Accademia Hermathenaica, cui donava quale patrono S. Ambrogio e sceglieva la divinità greca quale emblema, sulla scorta delle parole rivolte da Cicerone ad Attico *Quod ad me de Hermathena scribis per mihi gratum est; est ornamentum Academiae proprium meae, quod et Hermes commune omnium et Minerva singulare est insigne eius Gymnasi.*<sup>25</sup> A rivelare l'intento programmatico alla base della fondazione nel seminario è l'ampia incisione che sovrasta il foglio del dibattimento di laurea degli hermathenaici in cui, sotto lo sguardo di Atena ornata dallo scudo con la testa di Medusa e la lancia da cui pende il motto ΑΜΦΟΙΝ ΕΝΕΚΑ (per mezzo di entrambi),<sup>26</sup> avviene l'unione fra la rappresentazione della sapienza, sostenuta dai filosofi – si riconoscono a sinistra Socrate, Platone e Aristotele – e dell'eloquenza, dal cui lato compaiono Cicerone ed altri due retori distinguibili dal cartiglio nelle loro mani.<sup>27</sup> La conciliazione tra retorica e filosofia, materie degli anni di studio degli accademici, è ambientata nel cortile del Seminario di Porta Venezia, in cui, con un tocco di eccezionale realismo, è possibile scorgere in secondo piano i giovani seminaristi che passeggiano tra gli ambulacri.

Alle riunioni dell'Hermathenaica prendevano parte già prima della morte del Borromeo anche gli studenti del Collegio Elvetico,<sup>28</sup> istituito fondato da S. Carlo per l'educazione degli aspiranti preti che avrebbero condotto la loro azione pastorale nei cantoni svizzeri e nei grigioni. Per volontà del vescovo Alfonso Litta (1608-1679) essi si dotarono nel 1652 di un proprio circolo, che prenderà il nome di Accademia degli Ypheliomachi (i combattenti che stanno sotto il Sole). Ispirati e condotti nel progresso delle lettere dal Febo



Apollo, i giovani perfezionavano nelle adunanze gli strumenti retorici e filosofici di cui si sarebbero avvalsi per contrastare l'avanzata dell'eresia calvinista e luterana, come simbolicamente è ritratto nelle testate di laurea degli accademici.<sup>29</sup> È possibile ricostruire puntualmente la vita di queste assemblee grazie agli zibaldoni della seconda metà del Settecento, dai quali affiora sia la partecipazione congiunta delle due accademie ai grandi eventi diocesani, sia il continuo scambio di studiosi che si recavano da un plesso all'altro, anche più volte alla settimana, per prender parte alle riunioni.<sup>30</sup> La georeferenziazione permette così di rilevare il costituirsi in Porta Orientale, sul tratto di naviglio che collega il Seminario al Collegio Elvetico, di una seconda acropoli accademica, che, fondata da Federico Borromeo, venne abbattuta solo nel 1786 con la confisca del Collegio da parte del governo austriaco in ottemperanza alle istanze riformatrici di Giuseppe II (FIG. 4).

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La mano degli intellettuali che gravitava intorno all'Ambrosiana emerge anche nel caso degli Accademici Incerti, che per iniziativa del sacerdote milanese Felice Osio (1587-1631) si riunirono dal 1615 nelle aule del Collegio Taeggi, una delle più antiche istituzioni scolastiche pubbliche cittadine.<sup>31</sup> A fronte di una consistenza documentaria esigua, è in questo caso il riassunto delle vicende biografiche del fondatore raccolta nella relativa scheda a fornire lo spunto per l'interpretazione del fenomeno associativo. Allievo del primo prefetto dell'Ambrosiana, Antonio Olgiati, l'Osio iniziò ad insegnare nelle classi di umanità e retorica del Seminario di Milano subito dopo aver ottenuto la laurea teologica, allontanandosi nel 1615 per accettare l'incarico offerto dal prestigioso collegio di Porta Ticinese. Chiamato a Bergamo nel 1618 si renderà protagonista nella formazione dell'Accademia di S. Maria che raccoglieva i seminaristi della diocesi orobica (FIG. 5).<sup>32</sup> Nel 1621 succederà al gesuita Paolo Beni (1552-1625) nella cattedra di retorica dell'università di Padova,<sup>33</sup> con lo specifico incarico da parte del governo di Venezia di fondare la biblioteca dell'ateneo sull'esempio dell'Ambrosiana. In questo vagar peregrino che lo vede accolto in alcuni fra i centri più raffinati della pianura padana in qualità di rappresentante del modello culturale promosso dall'arcivescovo di Milano, la fondazione degli Incerti appare come un chiaro tentativo di ampliare la portata del progetto educativo gesuitico all'intero panorama cittadino, attraverso una rilettura dei contenuti che consentisse di inserirsi anche nei canali tradizionalmente legati al patriziato.<sup>34</sup> A confermare queste impressioni sono le lettere di Girolamo Borsieri (1588-1629),<sup>35</sup> erudito comasco appartenente al *milieu* borromaico, in cui, rivolgendosi all'Osio e all'Accademia degli Incerti, rende noti i dettagli relativi ai progressi di quest'ultima. Nel discorso per l'elezione dell'impresa egli scrive: "Sarebbe una miseria troppo strana se havendo costì tanti alberghi Mercurio, e Bacco, non ve n'havesse almeno uno anco Minerva

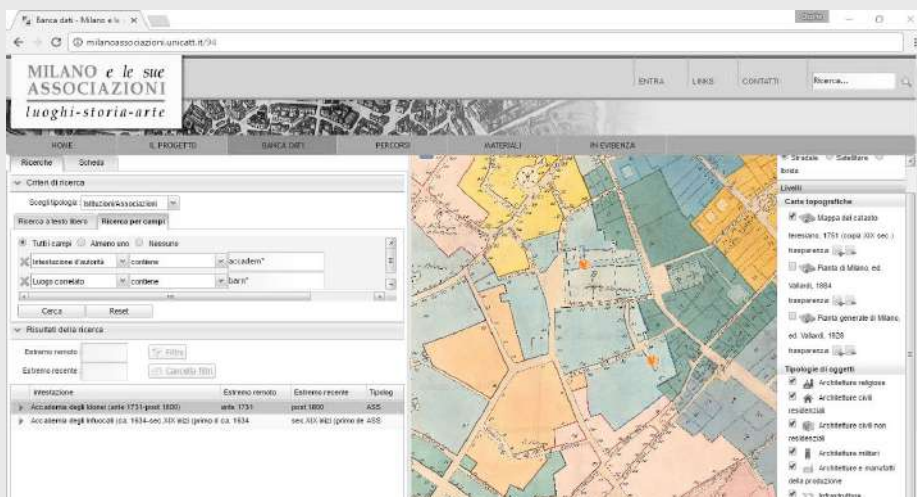
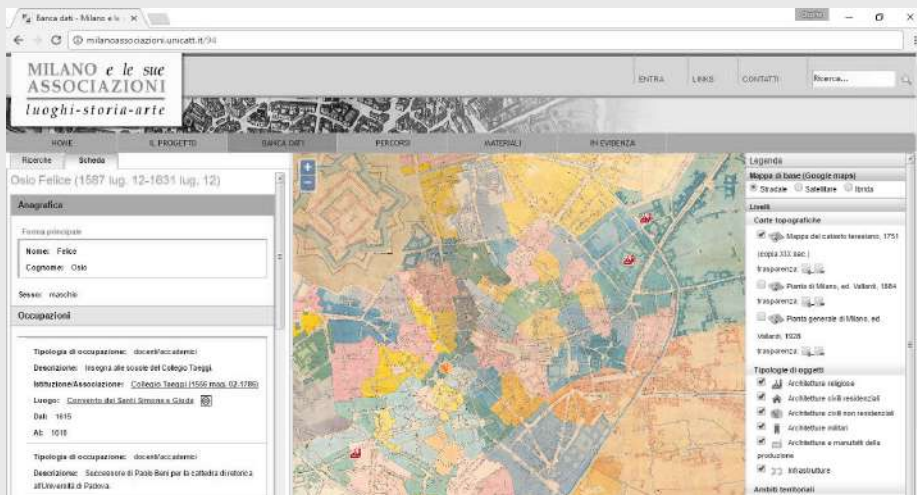
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[...]. Speranza forse non vana se pur fondata in uniformi desiderii rispetto a chi studia di studiar' agli studiosi. Io dico se pur fondata in desiderii di questa sorte, perché sicuro, ch'una Accademia non può durare se coloro, ond'è formata uniformemente non concorrono ad un profitto universale, senza contrasto d'interna superbia, benché ciascuno con attione particolare, nella guisa, che anco le membra d'un corpo animato concorrono tutte ad una vita, se ben con officii tra loro diversi".<sup>36</sup>

Non è difficile ravvisare nelle parole del Borsieri quel moto perpetuo che regola la noria degli Arisofi, alle cui riunioni doveva aver preso parte in gioventù sotto la guida di Cesare Isnardi,<sup>37</sup> lettore di greco gesuita celebrato dall'Osio nel compianto funebre dato alle stampe nel 1605.<sup>38</sup> Allo stesso tempo suona come profetica l'invocazione a Minerva, considerato che precede di pochi anni l'effettiva nascita dell'Hermathenaica. Ad essere condiviso e favorito fra questi ambienti è l'archetipo di uno studioso che si dedichi a "lo studiar la via di studiare", come ribadisce il Borsieri rivolgendosi proprio a Federico Borromeo, al fine di estirpare l'invidia all'interno delle assemblee, elevarne la qualità intrinseca e garantirne la sopravvivenza nel tempo.<sup>39</sup>

Il peso dell'intervento dell'arcivescovo nella costituzione di un reticolo accademico legato ai circuiti scolastici è ancora fortemente percepito nel XVIII secolo. Chiaro esempio di ciò è racchiuso nel resoconto dell'azione cavalleresca intitolata *Pallade adorna*, primo esperimento letterario degli Accademici Idonei che frequentavano il collegio Imperiale Longone gestito dai barnabiti.<sup>40</sup> Nel prologo è possibile leggere: "La pregiata simiglianza di cui fregiasi il titolo della presente Accademia deriva per sorte da quello, che in fronte d'uno de' suoi dottissimi volumi pose già il celebre letteratissimo Cardinale Federico Borromeo, all'ora che della coltura delle buone arti imprese a scrivere. Quanto egli adunque riconobbe di vezzo e de' eleganza nell'accennato coltivamento, ed esercizio di quelle, sì che abbellita viepiù ne apparisse la Dea delle Scienze, altrettanto di decoro e di splendore noi ravvisiamo negl'illustri letterati volumi della Milanese metropoli, per lo quale debbasi giustamente appellare Pallade Adorna".<sup>41</sup>

I barnabiti furono insieme ai gesuiti l'altro grande polo di riferimento a Milano per quanto concerne l'educazione dei giovani tra Sei e Settecento. Le scuole di S. Alessandro nacquero solo nel 1609 per volontà testamentaria del prelado romano Giambattista Arcimboldi, che scelse quale traccia per la redazione degli statuti la *Ratio studiorum* gesuitica.<sup>42</sup> Con tale decisione si rese obbligatoria la partecipazione degli studenti alla vita delle accademie e delle congregazioni mariane nelle medesime modalità evidenziate per le scuole di Brera. Il primo tentativo rilevante, di cui si ha notizia nelle fonti, di instaurare una accademia di stampo barnabite fu nel 1627, quando



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FIGURA 5

I centri in cui è attestata l'attività di Felice Osio a Milano nel corso della sua parentesi Milanese, ossia il Seminario ed il Collegio Elvetico in alto a destra, l'Ambrosiana al centro, e il Collegio Taeggi in basso a sinistra. Essi compaiono su mappa in seguito all'apertura della scheda dedicata all'erudito milanese.

FIGURA 6

La rappresentazione delle accademie barnabitchie in Porta Romana, ricavata dalla ricerca congiunta fra i termini "accad\*" e "barn\*" secondo le impostazioni di ricerca indicate in Figura 4.

il padre Ottavio Boldoni (1600 ca.-1680), futuro fondatore dell'Accademia degli Infocati, organizzò un'agone poetico intitolato *Ellinolatinomachia*.<sup>43</sup> Gli echi spiccatamente marziali di questo primo esperimento, che trovavano corrispettivo nelle centurie con cui erano organizzate le scuole e le congregazioni mariane, lasciano trasparire un tratto identitario caratteristico della dialettica adottata dagli Infocati. La prima comparsa della *proles augusta Tonantis Phoebe*<sup>44</sup> sulle scene letterarie avvenne per l'elevazione alla cattedra di Ivrea del barnabita Ottavio Asinari (1594-1656),<sup>45</sup> e già nell'agosto del 1635 si fecero notare da tutti i milanesi con l'erezione in S. Alessandro di una colossale impresa in occasione dell'insediamento dell'arcivescovo Cesare Monti (1594-1650).<sup>46</sup>

Il ritardo nell'avvio dell'accademia si deve agli ostacoli incontrati dalle Arcimbolde nell'affermarsi nel panorama cittadino. Essi sono riassunti in un piccolo verbale allegato agli *acta collegi* di S. Alessandro, redatto verosimilmente tra il 1650 ed il 1653.<sup>47</sup> All'interno di una feroce critica diretta al degrado delle scuole, da cui scaturiva una cattiva nomea per l'intero ordine, e alla concorrenza dei gesuiti che le privavano degli studenti migliori per lignaggio e capacità, trapela lo scoramento dei padri barnabiti per il fallimento di una politica accademica fondata sulla scelta di adottare insegnanti rinomati che potessero mantenere la docenza per un lungo periodo. Se da un lato ciò lascia intravedere le difficoltà concrete nel far presa sui giovani,<sup>48</sup> dall'altra dimostra come l'accademia fosse strumento imprescindibile nell'economia intellettuale delle scuole. Di fronte alla crisi, i padri barnabiti non pensano di interrompere l'attività degli Infocati, ma di riservare l'istituzione ai soli novizi dell'ordine.

I fatti diedero ragione all'intuizione del Boldoni. Dallo zibaldone delle scuole di S. Alessandro sappiamo che dal 1666 essi vissero una seconda giovinezza, incitati dalle fervide menti di personalità quali Paolo Carminati e Demetrio Suppensio.<sup>49</sup> Il risultato fu la definitiva affermazione delle scuole Arcimbolde e degli Infocati, che troveranno degna consacrazione sulle scene letterarie dell'epoca grazie all'opera *Semita parnassi et Musarum primitiae*,<sup>50</sup> in cui il Suppensio riassume nella prima parte gli elementi fondamentali per la produzione poetica e retorica impartiti durante lo svolgimento dei ritrovi e nella seconda riporta i prodotti letterari più significativi degli studenti di S. Alessandro. Con la nascita degli Idonei i barnabiti completarono in Porta Ticinese l'edificazione di una terza cittadella accademica, che riscosse un enorme successo nel Settecento rivaleggiando ad armi pari con il complesso formato dai collegi gesuitici (FIG. 6).

La possibilità di georeferenziare questa rete di rimandi testuali consente di identificare poli e vettori di diffusione culturale nella geografia cittadina. Al contempo la razionalizzazione e la sintesi dei dati, agevolata dalle opzioni di

scelta che si hanno a disposizione per ciascuna voce di cui sono composte le schede, permette di superare i problemi di catalogazione delle fonti e di classificazione delle tipologie accademiche. Ad emergere è l'assetto degli equilibri culturali nel piano urbanistico cittadino. Il successo del progetto culturale iniziato dai gesuiti e implementato dall'*entourage* di Federico Borromeo costringe a riconsiderare l'intero fenomeno accademico a Milano in età moderna a partire da due osservazioni: la prima è che, dal punto di vista quantitativo, attraverso l'obbligatoria partecipazione ai consessi per tutti gli studenti le accademie scolastiche popolavano la *res pubblica* letteraria di un numero impressionante di giovani amanti delle lettere. In secondo luogo va constatato che questi simposi furono in grado di plasmare una *forma mentis* comune a tutta la società alta dell'epoca. Essi rimasero un costante punto di riferimento sino allo scadere del XVIII secolo, avvalendosi di un impianto contenutistico unitario ed articolato, in quanto costituitosi dall'intreccio di immagini e *topoi* letterari che esaltavano l'aspetto identitario delle istituzioni rappresentate, ma altresì duttile, pronto ad adeguarsi al mutamento dei gusti attraverso rapidi aggiornamenti stilistici.

La fisionomia imponente di questa forza motrice culturale suggerisce una nuova chiave di lettura per le accademie pubbliche non scolastiche della seconda metà del Seicento e del Settecento, i cui esponenti, letterati di professione e non, avevano nella maggior parte dei casi preso parte durante i delicati anni dell'adolescenza alle riunioni che si tenevano a scuola o in collegio. In tal senso basta scorrere le schede di autori come Giuseppe Parini, nei cui discorsi per una fondazione dell'Accademia delle Belle Arti è pienamente percepibile l'impronta delle scuole Arcimbolde,<sup>51</sup> o Carlo Maria Maggi, che avrebbe impreziosito le adunanze dell'Accademia dei Faticosi e la sua opera teatrale<sup>52</sup> con le figure retoriche apprese in età giovanile nelle sedute degli Animosi,<sup>53</sup> per intendere il profitto nell'interpretazione dei fenomeni accademico-letterari che si ottiene dalla consultazione della banca dati.

#### Note

- 1 <http://milanoassociazioni.unicatt.it/94>, accessed March 30, 2017.
- 2 Simone Testa, *Italian academies and their networks, 1525-1700: from local to global* (Basingstoke-New York: Palgrave Macmillan, 2015); Denis V. Reidy, Lisa Sampson, Jane E. Everson, ed., *The Italian Academies 1525-1700: Networks of Culture*, *Innovation and Dissent* (Cambridge: Legenda, 2016).
- 3 Luigi Rava, "Michele Maylender e la sua opera sulle Accademie d'Italia," in Michele Maylender, *Storia delle Accademie d'Italia*, vol. 1 (Bologna: Cappelli, 1926-1930), XII-XVI.
- 4 Simone Albonico, *Il ruginoso stile: poeti e*

- poesia in volgare a Milano nella prima metà del Cinquecento* (Milano: Angeli 1990), 217-219.
- 5 Rava, "Michele Maylender," XIII.
- 6 Albonico, *Il ruginoso stile*, 181-317; Simone Albonico, "Profilo delle Accademie letterarie milanesi nel Cinquecento," in *Rabisch. Il grottesco nell'arte del Cinquecento* (Milano: Skyra, 1998), 101-110; Roberta Ferro, *Federico Borromeo ed Ericio Puteano. Cultura e letteratura a Milano agli inizi del Seicento* (Roma: Bulzoni, 2007), 19-21.
- 7 Ladislao Lukács, ed., *Monumenta pedagogica Societate Iesu. Nova editio penitus retractata. Ratio atque institutio studiorum Societatis Iesu (1586, 1591, 1599)*, vol. 5 (Roma: IHSI, 1986), 186, 448-454 (per l'edizione definitiva). Per un inquadramento generale, oltre alle notizie bibliografiche della nota precedente, Danilo Zardin, "La 'Pia Institutio' dei gesuiti. Congregazioni, libri di regole, manuali," in *I gesuiti e la Ratio studiorum*, ed. Marcus Hinz et al., (Roma: Bulzoni, 2004), 97-137.
- 8 Una riassunto efficace di questi intenti lo si può apprezzare a Milano nel *Catalogus lectionum* (1565), Ladislao Lukács, ed., *Monumenta pedagogica Societate Iesu. Penitus retractata multisque textibus aucta (1557-1572)*, vol. 3 (Roma: IHSI, 1974), 565.
- 9 Gianfranco Damiano, "Il Collegio gesuitico di Brera: festa, teatro e drammaturgia fra XVI e XVII secolo," in *La scena della gloria. Drammaturgia e spettacolo a Milano in età spagnola*, ed. Annamaria Cascetta, Roberta Carpani (Milano: Vita&Pensiero, 1995), 473-506; Giovanna Zanolghi, *Teatri di Formazione. Actio, parola e immagine nella scena gesuitica del Sei-Settecento a Milano* (Milano: Vita&Pensiero, 2002); Giovanna Zanolghi, "Il teatro nella pedagogia gesuitica: 'scuola di virtù'," in *I gesuiti*, 159-190.
- 10 Camillo Palazzi, *Discorso sopra l'acquisto della sapienza, ...* (Milano: nella stampa del q. Pacifico Pontio, 1597); Fabrizio Visconti, *Impresa dell'Accademia Partenìa minore ...* (Milano: nella stampa del q. Pacifico Pontio, 1598).
- 11 La catena rimarca un fondamento di fraternità negli studi, che esalta l'individuo ponendo quale caposaldo epistemologico l'accezione postridentina della conoscenza di se medesimo, cui milanesi erano avvezzi grazie all'azione pastorale di S. Carlo, Franco Buzzi, "Ante orationem prepara animam tuam'. Il de oratione di Carlo Borromeo e la spiritualità del suo tempo," *Studia Borromaica* 20 (2006): 43-90.
- 12 Visconti, *Impresa dell'Accademia Partenìa minore*, 7-10, 14.
- 13 Visconti, *Impresa dell'Accademia Partenìa minore*, 5.
- 14 Visconti, *Impresa dell'Accademia Partenìa minore*, 12-13.
- 15 Un esempio in Accademia degli Animosi, *Sfortiae Brippio Academiae Arysophorum Principi philosophiae laueream ...* (Milano: apud Io. Baptistam Paganellum, 1629).
- 16 Lukács, ed., *Monumenta pedagogica Societate Iesu*, vol. 5, 143; sulle congregazioni presenti in Brera, Danilo Zardin, "Confraternite e 'congregazioni' gesuitiche a Milano fra tardo Seicento e riforme settecentesche," in *Ricerche sulla Chiesa di Milano nel Settecento* ed. Antonio Acerbi, Massimo Marcocchi (Milano: Vita&Pensiero, 1988), 180-252.
- 17 Palazzi, *Discorso sopra l'acquisto della sapienza*, 8-13.
- 18 Palazzi, *Discorso sopra l'acquisto della sapienza*, 5.
- 19 Palazzi, *Discorso sopra l'acquisto della sapienza*, 7-8. Per gli Animosi, Visconti, *Impresa dell'Accademia Partenìa minore*, 50.
- 20 Paolo Morigia, *La Nobiltà di Milano ...* (Milano: nella stampa del q. Pacifico Pontio, 1595), 181-182; Albonico, *Profilo*, 109; Roberta Ferro, "Antichi e moderni in Lombardia: Girolamo Borsieri poeta barocco," in *Libertinismo erudito. Cultura lombarda tra Cinque e Seicento*, ed. Andrea Spiriti (Milano: Angeli, 2011), 101-103.
- 21 Visconti, *Impresa dell'Accademia Partenìa minore*, 3.

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- 22 Palazzi, *Discorso sopra l'acquisto della sapienza*, 2.
- 23 Della sterminata bibliografia sull'attività in campo scientifico del Borromeo e del progetto culturale dell'Ambrosiana mi limito per brevità a rinviare alle annate 18 (2004) e 19 (2005) di *Studia Borromaica*, da integrare con Marzia Giuliani, *Il vescovo filosofo. Federico Borromeo e 'I sacri ragionamenti'* (Firenze: Olschki, 2007); Marie Lezowski, *L'Abrégé du monde: une histoire sociale de la bibliothèque Ambrosienne* (v.1590-v.1660) (Paris: Garnier, 2015), in particolare 263-345. Interessanti suggestioni tra la riconosciuta necessità di un mecenate e l'attenzione a tutti i campi di studio nelle opere del Borromeo analizzate da Roberta Ferro, "Gli scritti di Federico Borromeo sul metodo degli studi," *Aevum* 75 (2001): 737-758.
- 24 Si veda, ad esempio, la lettera del rettore Giambattista Samarugo (19 marzo 1591), in G.149 Inf, Biblioteca Ambrosiana Milano (=BAM), 35r-35v. Una sintesi sul periodo pavese in Pamela M. Jones, *Federico Borromeo and the Ambrosiana. Art patronage and reform in Seventeenth-century Milan* (Cambridge: Cambridge University Press, 1993), 21-23.
- 25 Quintus Tullius Cicero, *Epistolae ad Atticum*, ed. David R. Shackleton Bailey, vol. 1 (Stoccarda: in aedibus B.G. Teubneri, 1987), 6.
- 26 Significativo che la citazione contenuta nel motto provenga dal passo del *Philopseudès* di Luciano, in cui Tychiades, dopo aver distinto le menzogne fra "utili" e proprie dei poeti, narra di essere giunto a casa di Euclates e di aver trovato lì riuniti in accademia i rappresentanti delle principali correnti filosofiche dell'antichità. Il Borromeo aveva accesso a tale fonte tramite il manoscritto proveniente dalla biblioteca Pinelliana, A.218 Inf, BAM, 300r-309r; sulla cui ricezione, Ferro, *Federico Borromeo*, 115-146.
- 27 Raccolta Civica di Stampe Bertarelli Milano (=RCSB), Tesi G-24.
- 28 *Diploma di laurea Vincenzo Salvio*, Archivio del Seminario Venegono Inferiore (=ASVI), BB.VI.5 2/1.
- 29 RCSB, Tesi m-2-68, ove si nota una figura femminile con i tratti iconologici di Vera Fede e di Sapienza, che illuminata dal sole e sostenuta dallo sguardo di Apollo esce dal Collegio Elvetico e sfida una seconda donna, che incarna le sembianze dell'eresia. Come nella testata degli Hermathenaici, la voluta commistione tra figure astratte e luoghi concreti nella medesima scena rimarca il movimento di ascesa alla repubblica delle lettere che veniva compiuto ogni settimana dagli studiosi nei luoghi a loro familiari.
- 30 Per il Seminario, *Zibaldone (1734-1742)*, ASVI, E.II.12/1; per il Collegio Elvetico, *Zibaldone (1770-1777)*, ASVI, E.II.12/5.
- 31 Carlalberto Ravizza, "Il collegio Calchi. Taeggi. Una dimenticata istituzione milanese," *Archivio Storico Lombardo* 133 (2007): 246-251.
- 32 Felice Osio, *Felicitas Osii ... Oratio habita Bergomi in solemnibus Academiae Mariana ...* (Bergamo: Apud Valerium Venturam, 1618). Per avere un'idea su mappa dei luoghi frequentati negli anni precedenti alla partenza per Bergamo si veda la Figura 5.
- 33 Maurizio Sangalli, "Between Church, University and Academies: Paolo Beni in Padua, 1599-1623," in *The Italian Academies*, 118-129.
- 34 In simile direzione anche il tentativo di Vitaliano Borromeo di spostare la sede dei Faticosi nelle scuole Cannobbiane, Roberta Carpani, *Scritture in festa. Studi sul teatro tra Seicento e Settecento* (Firenze-Roma: Serra, 2008), 49-50.
- 35 Sandro Piazzesi, *Girolamo Borsieri. Un colto poligrafo del Seicento* (Firenze: Firenze University Press, 2009); Paolo Vanoli, *Il "libro di lettere" di Girolamo Borsieri: arte antica e moderna nella Lombardia di primo Seicento* (Milano: Ledizioni, 2015). Descrizione dell'epistolario in Vanoli, *Il "libro di lettere"*, 87-108.

- 36 Girolamo Borsieri, "Lettere accademiche, le storiche, e le famigliari," Sup. 32.2.43, Biblioteca Comunale Como, 164v.
- 37 Borsieri, "Lettere accademiche," 66r.
- 38 Felice osio, *Felicis Osii ... Querela in obitum patris Caesaris Isnardi ...* (Milano: apud Iacobum Mariam Medam, 1605).
- 39 Borsieri, "Lettere accademiche," 80r. Sull'avvicinamento del Borsieri a Federico Borromeo, Roberta Ferro, *Antichi e Moderni*, 105-106.
- 40 Davide Daolmi, "I balli negli allestimenti settecenteschi del collegio imperiale Longone di Milano," in *Creature di Prometeo. Il ballo teatrale dal divertimento al dramma*, ed. Giovanni Morelli (Firenze: Olschki, 1996), 3-86.
- 41 Accademia degli Idonei, *Pallade adorna della vetusta chiarezza de' nobili letterati milanesi ...* (Milano: nella stamperia di Giuseppe Pandolfo Malatesta, 1731), 1v.
- 42 *Instrumento dell'erettione del Collegio Arcimboldo*, Archivio Barnabiti Milano (=ABM), cartella B.2, fascicolo 4.1. Sull'avvio delle scuole, Angelo Bianchi, "Le Scuole Arcimboldi a Milano nel XVII secolo: professori, studenti, cultura scolastica," *Barnabiti Studi*, 18 (2002): 55-78; un confronto con la *Ratio* gesuitica in Alberto Tamburini, "Ordres et congrégation enseignants à l'époque de la Contre-Réforme: Barnabites, Somasques, Scolopes," *Revue historique* 660 (2011): 821-825.
- 43 *Cronaca di S. Alessandro*, ABM, cartella E.1, fascicolo 2.2, 56.
- 44 Galeazzo Bossi, *Phoebus Panegyrica dictio de Daniele Comite ...* (Milano: Apud Dionysium Gariboldum, 1636), A<sup>2</sup>v-A<sup>3</sup>r.
- 45 *Acta collegi*, ABM, cartella E.1, fascicolo 2.1.1. Notizia di un'accademia stabile già nel 1632, con gli spettacoli per l'elezione del principe dell'accademia, *Cronaca di S. Alessandro*, ABM, cartella E.1, fascicolo 2.2, 78.
- 46 Ottavio Boldoni, *Theatrum temporaneum aeternitati ...* (Milano: apud haer. q. Pacifici Pontij, 1636); per un'analisi Cecilia Cavalca, "Festeggiamenti per l'arcivescovo. Il Theatrum temporaneum aeternitati di Sant'Alessandro per Cesare Monti," in *La scena della gloria*, 717-729.
- 47 *Ragioni per cui bisognerebbe levar le scuole di S. Alessandro*, ABM, cartella B.2, fascicolo 4.3, ove il caso del Boldoni è portato dai padri diffinitori a dimostrazione delle loro tesi. I primi segnali di crisi emergono tra il 1647 ed il 1650, ma è negli *acta* del triennio successivo che si riscontra una corrispondenza quasi letterale dei motivi per cui sarebbe stato conveniente rimuovere le scuole, § *De Rebus ad opus litterarium et scholas pertinentibus*, ABM, cartella E.1, fascicolo 2.1.5.
- 48 Sulla frigidità delle riunioni degli Incerti, Borsieri, "Lettere accademiche," 185r, 189v, 202v.
- 49 *Zibaldone 1*, Archivio Barnabiti S. Alessandro Milano (=ABAM), 280-281; *Zibaldone 2*, ABAM, 1-7.
- 50 Demetrio Suppensio, *Semita Parnassi, seu Artis poeticae tyrocinium ...* (Mediolani: typis Iosephi Pandulfi Malatestae, 1698).
- 51 Giuseppe Parini, "Per un'accademia delle Belle Arti in Milano (1767)," in *Prose II. Lettere e scritti vari*, ed. Gennaro Barbarisi, Paola Bartesaghi, vol. 2 (Milano: LED, 2005), 277-283.
- 52 Danilo Zardin, "Carlo Maria Maggi e la tradizione culturale milanese tra sei e settecento," *Annali di Storia moderna e contemporanea* 3 (1997): 9-50.
- 53 Accademia degli Animosi, *Academiae Animosorum plausus in laurea philosophica Ioannis Mariae Sicci ...* (Mediolani: ex typographia Philippi Ghisulphij, s.d.), 60-61.

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*Una omnes: le accademie letterarie a Milano tra XVI e XVII secolo nella banca dati "milanoassociazioni"*

# Shifting urban atmospheres; Saint Petersburg's literary context\*

Angeliki Sioli

In his recent study *Attunement, Architectural Meaning After the Crisis of Modern Science* (2016) architectural theoretician Alberto Pérez-Gómez argues that for architecture “literary narratives can contribute greatly to the design of programs for future living woven from significant actions, and to the configuration of properly attuned atmospheres.”<sup>1</sup> At a time when the issue of atmosphere in relation to buildings and urban environments is increasingly discussed, his observations bear special importance. They direct architects’ attention to literature as a means capable to map specific but elusive qualities of a place or an urban environment, as I wish to argue, qualities that analytical and scientific tools of representation cannot record: a place’s atmosphere, mood, and inherent mythologies.

The value of literature – novels, short stories and poems – for architecture has indeed been argued by many contemporary architects and architectural theoreticians.<sup>2</sup> Literary authors with a unique sensitivity in observing and recording the world around them, have offered us outstanding representations of buildings and urban environments (novels are the urban genre *par-excellence*), sensing and depicting details and impressions that usually escape our attention. As Octavio Paz eloquently puts it, they allow language to express the inexpressible.<sup>3</sup> Thus they present us with a valuable panorama of life, but they also manage to foreground the emotional impact of architecture and the city on the feelings of the inhabitants. This fact has a particularly important effect on our understanding of place because, as Nick Crossley argues in his study *The Social Body, Habit, Identity and Desire* (2001), emotions are not subjective entities sensed individually by each one of us; instead they are “out there in the world” and we are able to partake of them because we share a common language.<sup>4</sup>

It is with this theoretical background in mind that I propose a map of Saint Petersburg based on selected literary stories; stories that depict the city and capture its changes over time. Saint Petersburg is chosen for it is a remarkable accomplishment of urban planning. It is created on land claimed from swamps and it is the result of a human will that defied the harsh climatological and topological conditions of the area. It came to life because of Tsar Peter the Great, the first Russian Tsar to ever visit Europe. It was because of his trips that the Tsar wished to build the new city on European ideals and principles, with impressive public spaces and buildings arranged orderly along linear long avenues. Solomon Volkov, the author of Saint Petersburg’s cultural history, has pointed out that Tsar Peter the Great – with the help of the French architect Jean-Baptiste Alexandre Le Blond – plotted Petersburg with ruler in hand designing broad, straight *perspektivy*, a word deriving from the Latin *pro-specto*, which means to look into the distance.<sup>5</sup> The intention behind such a design choice was that

the streets could offer clear unobstructed views into the distance and the city would present a clear geometrical pattern.<sup>6</sup>

Beneath the carefully planned long prospects though the city's renowned authors – defying historical accounts and official historiography – detected elements and urban atmospheres that reveal the experiential context of the place. It is through these descriptions that I wish to map specific changes of Saint Petersburg, changes of urban atmosphere and space appropriation. To attain this end, I draw from five different literary writings. These are Alexander Pushkin's poem "The Bronze Horseman: A Petersburg Tale" (1833), Andrei Bely's novel *Petersburg* (1922), Fiodor Dostoevsky's *Crime and Punishment* (1866), Nikolai Gogol's short story "Nevsky Prospect" (1835), and Vladimir Nabokov's autobiographical narrative *Speak, Memory* (1951). The pieces are chosen because, despite their fictional plots, they rely strictly on the topographic reality of the city. Its urban and architectural elements, dominant in each plot, are not fantasies made up by the authors. Moreover, the stories touch on the historical and sociopolitical facts of the respective time period they depict, and the characters are described walking in the city, perceiving the space through an embodied interaction, fully immersed in the place itself. It is due to these characteristics that these literary pieces can reveal for architects how urban place is far more than a mathematically determined or geometrically precise entity; but rather how it actually influences the course of our actions and has an impact on our consciousness.

### Building the map

As my interest dwells on mapping the changes of space appropriation and the prevailing atmospheres of the city – as felt by the characters in the narratives during the respective times – my examination of the material does not take place in a chronological order. I instead look at the narratives in relation to the underlying themes that emerge from their lines. The "Bronze Horseman" sheds a light on the political oppression prevailing in the city in the middle of the 19th Century while Bely's *Petersburg* depicts how the political situation shifts and the citizens are preparing a revolution against the ruling class. It reveals how the search for freedom and a shared political consciousness transforms the urban space depicting the way the citizens feel about their city. Dostoevsky's *Crime and Punishment* brings to light aspects of a parallel urban life; one that depicts infamous areas of Saint Petersburg and catches the misery and struggles of the working class. It is an atmosphere that contradicts the common assumption for the city; one that understands it as an impressively beautiful, breathtaking environment. Gogol's "Nevski prospect" ignores the external impressions and establishes sociopolitical norms disclosing a dark erotic dimension

of the city; the way streets are charged emotionally by passionate, albeit deceiving, glances between men and daring women. Spellbound by the power of eros, Nabokov in *Speak Memory* rescues for us an atmosphere of the city, that despite the menacing WWI, maintains its mythical even magical dimension and mesmerizes its young inhabitants.

As Elaine Blair explains in her meticulous study *Literary Petersburg, A Guide to the City and its Writers* (2006) the city enters literature for the very first time through Pushkin's narrative poem, "The Bronze Horseman".<sup>7</sup> The Bronze Horseman is a statue of Tsar Peter the Great who founded the city. The Tsar is sculptured sited on a horse and although the statue dominated Saint Petersburg's Senate Square for more than a century and a half before Pushkin's poem, it acquired the nickname Bronze Horseman because of the poem's title. Pushkin narrates the foundation of the city in 1703 and talks of the Tsar who stood by the shore of the Baltic Sea and imagined the birth of his Petersburg. Rapidly though he focuses on one of the most devastating floods in the history of the city, the inundation of November, 1824. He discreetly implies that the Tsar's overweening decision to defy nature caused numerous deaths and damages countless buildings during this flood.<sup>8</sup> The poem describes squares and streets as lakes with stagnant water and the impressive Winter Palace as a steep rock facing the edge of the sea:

Into the squares to lakes dilated,  
Debouched, like riverbeds inflated,  
What had been streets. The palace stood  
Like a lone cliff the waters riding.<sup>9</sup>

Despite the tremendous disaster and devastating losses that the citizens suffered though, the poem narrates how the day after the flood, the city returns to its normal everyday life, as if nothing has happened:

...Dawn's ray  
From pallid banks of weary gray  
Gleamed down upon the silent city  
And found of yesterday's alarm  
No trace. ...  
And all returned to former calm.  
Down streets re-won for old endeavor  
Men walk as callously as ever,  
The morning's civil service troops,  
Emerged from their nocturnal coops,

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political  
vibrations**



Are off to work. Cool tradesmen labor  
 To open cellar, vault, and store,  
 Robbed by Nevá the night before.<sup>10</sup>

No-one dares to complain or express sorrow for anything that Neva has robbed. The harsh political oppression and censorship imposed on the citizens by the ruling class does not allow for this freedom. And this stoic silence is actually an attitude expected from the citizens of Saint Petersburg. Pushkin hints at the fact that individual will and personal desire have always been perceived in Petersburg's history as subaltern to the common good and social progress.<sup>11</sup>

Indeed the main character of the story loses his beloved one because of the flood but he has no right to mourn. As he stands below the statue of the Tsar, almost delusional because of his sorrow, and berates him, the statue is portrayed to come to life. The Tsar on his horse is described by Pushkin to chase the audacious man, an image showing clearly the mentality of the ruling class. The city appears as a menace in "The Bronze Horseman". It is a city built by the water and designed in a way that keeps destroying its citizens. Pushkin's lyrics are influenced by the stories and rumors of the time; rumors that the city is haunted by the thousands of workers that died while building it obeying without complaint the authoritarian demands of the Tsar and his engineers.<sup>12</sup>

In the early years of the twentieth century, though, the political conditions and people's attitude towards their own city start to shift. An admiration for Saint Petersburg and its European character is sensed.<sup>13</sup> Until then the city's European design seemed foreign to its Russian citizens (and a reason to blame for all the difficulties they had to suffer) but around the turn of the century people's mentality began to change.<sup>14</sup> Andrei Bely's novel is one of the first literary pieces of the time that notes this change. The narrative focuses on multiple occasions on the city's streets, its long linear prospects which offer the citizens with the space to meet, discuss, exchange ideas, and eventually revolt. It is not a coincidence that Bely chose to describe Saint Petersburg just a few months before the first revolution in December of 1905.<sup>15</sup> Massive demonstrations were taking place on the streets, gatherings in front of the city's important institutions like the University were organized and a newly emerging hope that everyone was eligible to a better future was shaking the city's centre. In his narrative, in which Bely even includes information from the newspapers of the days, the streets are depicted to belong to the crowds and their European character to signal a path towards change. Bely expresses all the above in a somewhat hesitant way:

Nevsky Prospect possesses a striking attribute: it consists of a place for the circulation of the public. ... Nevsky Prospect, like any prospect, is a public prospect, that is: a prospect for the circulation of the public (not of air, for instance). ...

Nevsky Prospect is rectilinear (just between us), because it is a European prospect; and any European prospect is not merely a prospect, but (as I have already said) a prospect that is European, because...yes...

For this reason, Nevsky Prospect is a rectilinear prospect.

Nevsky Prospect is a prospect of no small importance in this un-Russian – but nonetheless – capital city. Other Russian cities are a wooden heap of hovels.<sup>16</sup>

Nevsky prospect instead of being a lake of stagnant water, filled with the dirt of the river, parts of the damaged edifices and even corpses, is appreciated for its capacity to let the crowd gather and circulate. Instead of a long linear avenue of callous beauty that allows for easy military surveillance due to the clear unobstructed view it offers, it is valued as a public place. Instead of a foreign element of un-Russian characteristics, it is appropriated exactly because it is European and because this suggests a path towards political and social changes. Indeed, Bely's novel, unlike Pushkin's poem is filled with the political vibrations of the revolution as the city's streets are filled with a strongly liberating atmosphere.

Before the revolution though and with the oppressive sociopolitical conditions still at play, the city's everyday atmosphere is gloomy and dark despite the shiny gold that embellishes its architecture. Dostoyevsky offers a unique glance into this everyday misery. His renowned *Crime and Punishment* unfolds in more infamous parts of the city and describes neighbourhoods with public houses and prostitutes, bars frequented by drunks and criminals. His main focus is actually areas where poor people, usually immigrants from the provinces, dwell. The following description captures the misery prevailing in Haymarket Square and the surrounding area in July of 1865:

The heat in the streets was stifling. The stuffiness, the jostling crowds, the bricks and mortar, scaffolding and dust everywhere, and that peculiar summer stench so familiar to everyone who cannot get away from St. Petersburg into the country, all combined to aggravate the disturbance of the young man's nerves. The intolerable reek from the public houses, so numerous in that

### Mapping struggling realities

part of the city, and the sight of the drunken men encountered at every turn, even though this was not a holiday, completed the mournfully repellent picture.<sup>17</sup>

As the narrative unfolds though, what strikes the reader as particularly interesting is that this sad and grey image is not characteristic only of the infamous parts of the city. Even Saint Petersburg's grandiose centre emits a gloomy impression. Dostoyevsky's famous hero, Raskolnikov, does recognize the magnitude of the architecture, the beauty of the panoramic view from the river, but still cannot feel at ease in his own city. The social injustices over the lower class, that obviously trouble him, obscure his perception. The city's most spectacular view, as if it is completely foreign to the lower class's struggles, dilemmas and daily ordeals, puzzles him:

He was on the Nikolaevsky Bridge ... walked a few steps, and turned his face towards the Neva, looking towards the Palace. There was not a cloud in the sky and the water, unusually for the Neva, looked almost blue. The dome of the cathedral, which is seen at its best from this point, not more than twenty paces towards the chapel from the center of the bridge, shone through the clear air, and every detail of its ornament was distinct. ... He stood for a long time gazing steadily into the distance; this spot was particularly familiar to him. A hundred times, while he was at the university, had he stopped at this very place, usually on his way home, to fix his eyes on the truly magnificent view and wonder each time at the confused and indescribable sensation it woke in him. An inexplicable chill always breathed on him from the superb panorama, for him a deaf and voiceless spirit filled the splendid picture... Each time he marveled at his gloomy and mysterious impression, and then, mistrustful of himself, deferred consideration of the riddle to some future time.<sup>18</sup>

The city seems unable to listen and talk to a big part of its citizens. Dostoyevsky describes a deaf and voiceless spirit filling Saint Petersburg's impressive centre. And his hero, detached and incapable to attune himself to the panorama in front of him, continues his underground life, along with many other less privileged citizens.

### Mapping intimate emotions

Underground lives are also connected with erotic atmospheres of the city; an elusive dimension of Saint Petersburg captured once again by literature. Two diametrically different manifestations of this eroticism are offered to us by Gogol and Nabokov. Gogol's short story "Nevsky Prospect" depicts

the city shortly after the 1825 Decembrist uprising, during which protesters gathered on Senate Square to demand a constitution from Nicholas I, the ruling Tsar at the time. As Elaine Blair explains the people killed were over one thousand, and several dozens of the organizers were sentenced to exile, hard labour, or death. After these events, aristocratic social life became — at least in the surface — more orderly.<sup>19</sup> “Nevsky Prospect” focuses precisely on the discrepancy between the city’s appearance on the surface and what is taking place in the background. Gogol chooses to do so through what it seems as a short erotic story. He sets off capturing the atmosphere of Nevsky Prospect, the city’s longest and most important thoroughfare,<sup>20</sup> in the year 1836, and poetically expresses its many changes over the course of a day. Smells, colours, activities, characters and figures that populate the street fill the story’s first pages. Gogol describes the serenity and stillness that dominate in the late afternoon, as well as the festivity that emerges later in the evening. Slowly, though, he undermines these very descriptions and narrates the nocturnal adventure of two friends. While walking on Nevsky they catch sight of two women, whose beauty is described as divine, their charm and elegance are unparalleled. Encouraged discreetly by the women, the men follow and court them. They though soon get disappointed as they realize that the one is married to an austere husband and the other is a prostitute trying just to lure a potential client. Neither of the two heroes’ romantic desire is fulfilled and Gogol describes one of the two men to return back to Nevsky Prospect upset. This time the emerging mood of the street feels drastically different:

But, along with the street lamp, everything breathes deceit. It lies all the time, this Nevsky Prospect, but most of all at the time when night heaves its dense mass upon it and sets off the white and pale yellow walls of the houses, when the whole city turns into a rumbling and brilliance, myriads of carriages tumble from the bridges, ... and the devil himself lights the lamps only so as to show everything not as it really looks.<sup>21</sup>

To this deceiving erotic dimension, Nabokov adds a strong hue of romanticism. In his autobiographical *Speak, Memory*, he describes how as a young man at the age of seventeen he walks the streets of the city next to his beloved Tamara. A distant war was taking place, as he refers to WWI, showing how indifferent he was at the time to that political reality. It is maybe because of that, that he manages to reveal an erotic and particularly human face of Saint Petersburg. He maps meticulously the different museums of the city but his intention is hardly to chart the city’s cultural sites. He rather wishes to create a map of secret places where they could

meet, because “hotels disreputable enough to admit them stood beyond the limits of their daring”.<sup>22</sup>

The Hermitage ... offered nice nooks, especially in a certain hall on the ground floor, among cabinets with scarabs, behind the sarcophagus of Nana. ... In the Russian Museum of Emperor Alexander III, two halls (Nos. 30 and 31, in its northeastern corner), harboring repellently academic paintings by Shishkin ... offered a bit of privacy because of some tall stands with drawings.<sup>23</sup>

When any in-door public space is impossible to access, the night and the city provide the necessary shelter. Under the eyes of two young people in love, the city emerges as a magical creature, one that is there to take care of them. City elements and grandiose public buildings are more of benevolent magic creatures in popular fairy-tales and nothing from their symbolic or political dimension is perceived in the darkness:

Solitary street lamps were metamorphosed into sea creatures with prismatic spines by the icy moisture of our eyelashes. As we crossed the vast squares, various architectural phantoms arose with silent suddenness right before us. We felt a cold thrill, generally associated not with height but with depth – with an abyss opening at one’s feet – when great, monolithic pillars of polished granite ... zoomed above us to support the mysterious dome of St. Isaac’s cathedral. We stopped on the brink, as it were, of these perilous massifs of stone and metal, and with linked hands, in Lilliputian awe, craned our heads to watch new colossal visions rise in our way – the ten glossy-gray atlantes of a palace portico, or a giant vase of porphyry near the iron gate of a garden, or that enormous column with a black angel on its summit that obsessed, rather than adorned, the moon-flooded Palace Square.<sup>24</sup>

## Conclusion

The nocturnal city is flooded by the light of the moon which erases the memory of the devastating water floods, the political losses over the years and even the War. From the political vibrations captured by Pushkin and Bely to the social reality depicted by Dostoyevsky and the erotic underground waves that transform the streets, this paper turns to literature to study shuttle urban changes, atmospheres and moods. Below the lines and letters of a conventional map, one that depicts public spaces, streets, important buildings, central and less important areas, the authors offer us lines that reveal the city’s actual physiognomy, the way it feels to be there

and walk the streets. Read together and in comparison with each other, the literary sources also allow us to map changes over the time, changes that foreground the experiential context of the urban environment as well as the emotional impact of the city and its architecture on the inner lives of the inhabitants. Despite literature's fictional character, the works under consideration reveal truths: dimensions of the city that are imagined but not just made up, always related to its historical, social and political reality at any given time.<sup>25</sup> Studying these works, the transformation of Petersburg's past world, necessary as a context for any architectural project, becomes alive and relevant to design in ways that elude objectifying methodologies and scientific maps, informing architects of lived experiences and allowing them to imagine actual situations of life.<sup>26</sup>

Notes

- \* The issues discussed in this article have already been discussed and published in my article "The 'Uncharted tides'; a literary map of Saint Petersburg over time," in *Confabulations; Storytelling in Architecture*, ed. Paul Emmons et al., 31-37 (New York: Routledge, 2017). Nonetheless here they are presented under a different structure and approach, trying to highlight some aspects of the city's atmospheres that my previous article was not touching upon.
- 1 Alberto Pérez-Gómez, *Attunement, Architectural Meaning after the Crisis of Modern Science* (Cambridge, Mass.: MIT Press, 2016), 197.
- 2 Klaske Havik, Rumiko Handa, Mari Lending, David Letherbarrow and Juhani Pallasmaa are only some of the most well-known architectural theoreticians that have proposed interesting connections between architecture and literature.
- 3 Octavio Paz, *The Bow and the Lyre: the poem, the poetic revolution, poetry and history*, translated by Ruth L.C. Simms (Austin: University of Texas Press, 1973), 96.
- 4 Nick Crossley discussing on Gilbert Ryle's *The Concept of Mind* (1949) and its contribution to a non-dualistic sociology. Nick Crossley, *The Social Body, Habit, Identity and Desire* (London; Thousand Oaks, CA: SAGE, 2001), 43.
- 5 Solomon Volkov, *St. Petersburg: A Cultural History*, trans. Antonina W. Bouis (New York, N.Y.: Free Press, 1995), 10-11.
- 6 Volkov, *St. Petersburg*, 10-11.
- 7 Elaine Blair, *Literary Petersburg, A Guide to the City and its Writers* (New York: The Little Bookroom, 2006), 12.
- 8 The Neva River — around which the city unfolds — has flooded more than three hundred times since Petersburg's founding, causing untold damages.
- 9 Alexander Pushkin, "The Bronze Horseman," in *Collected Narrative and Lyrical Poetry*, translated by Walter Arndt (Ann Arbor: Ardis Publishers, 1984), 431.
- 10 Pushkin, "The Bronze Horseman," 434-435.
- 11 Blair, *Literary Petersburg*, 12.
- 12 Blair, *Literary Petersburg*, 10.
- 13 Blair, *Literary Petersburg*, 12.
- 14 Blair, *Literary Petersburg*, 12.
- 15 The political tension of those days forced

Shifting urban atmospheres;  
Saint Petersburg's literary context

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- the Tsar in power, Nicholas II, to grant the country a constitution, and led to the first revolution of St. Petersburg in December 1905. Blair, *Literary Petersburg*, 71.
- 16 Andrei Bely, *Petersburg*, trans. Robert A. Maguire, John E. Malmstad (Bloomington: Indiana University Press, 1978), 2.
- 17 Feodor Dostoevsky, *Crime and Punishment*, The Coulson Translation, ed. George Gibian (New York; London: W.W. Norton & Company, 1975), 2.
- 18 Dostoevsky, *Crime and Punishment*, 95-96.
- 19 Blair, *Literary Petersburg*, 29.
- 20 Nevsky Prospect was and still is the city's most famous and fashionable thoroughfare: a street 115 feet wide and almost 3 miles long, running in a straight line from the Admiralty to Znamenskaya Square, one of Petersburg's important public spaces. Robert A. Maguire and John E. Malmstad, "Notes," in Andrei Bely, *Petersburg* (Bloomington: Indiana University Press, 1978), 297.
- 21 Maguire and Malmstad, "Notes," 271-272.
- 22 Vladimir Nabokov, *Speak, Memory: An Autobiography Revisited* (New York: G.P. Putnam's sons, 1966), 234.
- 23 Nabokov, *Speak, Memory*, 235-236.
- 24 Nabokov, *Speak, Memory*, 237.
- 25 Angeliki Sioli, "The 'Uncharted tides'; a literary map of Saint Petersburg over time," in *Confabulations; Storytelling in Architecture*, edited by Paul Emmons, Marcia F. Feuerstein and Carolina Dayer (New York: Routledge, 2017), 36.
- 26 Sioli, "The 'Uncharted tides,'" 36.

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# Urban form in archival sources

Knežev dvor  
u odlukama  
dubrovačkih vijeća od  
1400. do 1450. godine  
*Nada Grujić*

Locating  
and analysing  
the appearance  
of private houses  
in the 15th century  
Dubrovnik:  
The case of Georgio  
de Gozze house  
*Renata Novak Klemenčić*

Monastic enclosure  
as urban feature:  
Mapping conventual  
complexes vs. public space  
in early modern Dubrovnik  
*Ana Marinković*  
*Zehra Laznibat*

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# Knežev dvor u odlukama dubrovačkih vijeća od 1400. do 1450. godine\*

Nada Grujić

Knežev dvor u Dubrovniku spomenik je duge građevinske povijesti i velikih transformacija. Utvrda koja je branila luku i katedralni sklop, postupno se preoblikovala u palaču. Nalazi slojevitih građevinskih struktura dokazali su da je na njegovom mjestu postojalo utvrđeno upravno sjedište od najranijih stoljeća formiranja naselja. O ranim fazama Kneževa dvora svjedoče dubrovački kroničari i historiografi, a brojni objavljeni arhivski podatci govore o njegovu građevinskom razvoju. Srednjovjekovne pregradnje i umnožavanje funkcija upravnog središta pratili su rast grada i povećavanje njegova teritorija. Sve izraženija reprezentativnost najistaknutijeg simbola svjetovne vlasti, najprije komune i potom republike, dosegla je vrhunac u 15. stoljeću.

Odluke Malog i Velikog vijeća te Vijeća umoljenih iz prve polovice 15. stoljeća brojem i sadržajem odraz su zbivanja Kneževa dvora u tom vremenu.<sup>1</sup> Naime, stotina dokumenata iz perioda od 1402. do 1435. godine odnose se uglavnom na popravke koje je bilo potrebno izvesti na otprije postojećoj građevini, dok preko dvije stotine dokumenata prati obnovu koja je nakon požara 1435. zadesila dubrovački Knežev dvor, najveću u njegovoj povijesti.<sup>2</sup> Spomenute okolnosti uvjetovale su i način na koji se u ovom tekstu navode dokumenti: oni iz prvog perioda prema vrsti intervencija na građevinskim dijelovima koji su u međuvremenu nestali, dok će oni iz drugog perioda (1435. –1450.) kronološkim redom pratiti izgradnju Kneževa dvora, kakvog uz neznatne izmjene zatičemo. Te je dvije jasno razgraničene faze Kneževa dvora zabilježio 1440. godine i Filip de Diversis u *Opisu slavnoga grada Dubrovnika* napisavši: „vatra je progutala dubrovačku palaču, široku i prostranu, s nekoliko kula, koja je nekada bila utvrda“ te da je potom „dubrovačka vlada odlučila ponovno izgraditi ovu palaču, još veličanstvenije građe, ne štedeći troška, a da se najveći dio stare utvrde koji ognjeni plamen nije uništio sravni sa zemljom“.<sup>3</sup>

Knežev dvor koji se navodi u dokumentima do 1435. godine bio je podignut u prethodnom, 14. stoljeću.<sup>4</sup> U tu su građevinu bili uključeni i neki stariji dijelovi što su potvrdili i pisani izvori, ali i arheološki nalazi.<sup>5</sup> Najranijem sloju pripadaju kule koje su tijekom stoljeća izgubile izvornu visinu. Uz njih se vežu i fragmenti najranijih gradskih zidova, koji su zbog zaštite luke ojačani novim pojasom u drugoj polovici 15. stoljeća, a poslije i bastionom. Tijekom srednjega vijeka između kula se formiraju krila, južno, zapadno i istočno, dok se sa sjeverne strane prostor Kneževa dvora na prvom katu proširuje nad fontik dvoranom Velikog vijeća. Uzimajući u obzir da su izgrađena krila u 14. stoljeću bila ako ne šira a ono znatno viša, postaje jasnije značenje mnogih odluka koje se odnose na pojedine građevinske dijelove i njihove prostorije. Da je palača bila „široka i prostrana“ dokazuju i dokumenti s početka 15.

Dokumenti  
od 1400. do  
1435. godine

stoljeća. Onaj u kojem 1402. godine Vijeće umoljenih raspravlja o prijemu u istoj palači kneza Stjepana gospodara Raške<sup>6</sup> i onaj iz 1403. godine kojim Veliko vijeće određuje raspored prema kojem će u dvorani tog vijeća sjediti članovi Malog vijeća i Vijeća umoljenih.<sup>7</sup>

U odlukama triju vijeća iz prve polovice 15. stoljeća samo se iznimno preciziraju mjesta na kojima se pojedini dijelovi Dvora nalaze. Za razliku od ugovora s majstorima koji obiluju raznim pojedinostima, odluke vijeća toga su lišene jer i vijećnici i oficijali koji dobivaju upute i naloge, poznaju građevinu. Primjerice, 1407. godine oficijalima općinskih radova naređeno je da opekama dadu pokriti kulu Maloga vijeća, a zatim je odlučeno da se uokolo te kule izrade konzole kruništa.<sup>8</sup> Pritom se ničim ne upućuje na njezino mjesto i tek će kasniji dokumenti pokazati da je posrijedi sjeverozapadna kula Dvora. Jednako je nejasno na koju se terasu Dvora odnosi odluka iz 1409. godine da se ona popravi kako ne bi prokišnjavala i da se poploča mjesto gdje se obično sastaje Malo vijeće.<sup>9</sup> Rijetki su slučajevi da se precizira položaj neke prostorije kao što je to u dokumentu iz 1410. godine kada je Malo vijeće odlučilo da se nad žitnicom fontika, sa strane mora, uz dvoranu za potrebe Velikog vijeća sagradi još jedna soba.<sup>10</sup> Tako je i s kapelom sv. Marka na čije mjesto, na jugozapadnom uglu dvora, ukazuje odluka iz 1416. godine da se zazida njezin prozor okrenut na Plateu i učini drugi prozor na fasadi okrenutoj prema kući u vlasništvu rizničara. Prema dokumentu iz 1427. godine Sv. Marko je tada već služio kao zatvor.<sup>11</sup>

Međutim, i naoko manje važni dokumenti, poput onih o izradi zvona, govore nešto i o pojedinim arhitektonskim dijelovima Dvora. Od 1412. do 1414. godine donose se odluke o izradi i postavu zvona: naručeno novo zvono treba biti jednako kao tzv. „treće zvono“ i ono Velikog vijeća, a oficijalima zaduženim za novo zvono uređuje se jedna prostorija. Ložu gdje se nalaze zvona trebalo je ograditi drvenom rešetkom, a u kući gdje stanuje čuvar tamnica učiniti prolaz i vrata kako bi do zvona mogao doći općinski urar majstor Venturin i svi općinski službenici koji zvonima najavljuju sjednice pojedinih vijeća, te sakristan i svi oni koji se brinu o zvonima. Vrata uz Kneževu sobu, kroz koja su svi oni dosad prolazili, trebalo je zazidati.<sup>12</sup> Spomenuti radovi dakle lociraju knežev stan u jugoistočni dio Dvora, do Kule od zvona (tzv. Kneževe kule), a dijelom i u nju. Knezu je 1416. godine odobreno da dā urediti neku sobu i u njoj izraditi stube, vrata, prozor i postelju, te zazidati stara vrata.<sup>13</sup> Potom mu je dopušteno da potroši najviše pet perpera za kazaljke ure s vanjske strane kule kako bi uvijek mogao vidjeti koliko je sati.<sup>14</sup> Jedine odluke iz 1417. godine sadrže upute o korištenju novoga velikog zvona kojim se poziva Veliko ili Malo vijeće, te zaključak da se i veliko i malo zvono, koja su napukla, pošalju u Veneciju.<sup>15</sup> Godine 1428. oficijali općinskih radova zaduženi su da se popravi i pokrov palače

gdje stanuje knez, a 1431. da se poprave stube kojima se silazi iz dvorane u sobu gospodina kneza.<sup>16</sup>

Smještaj oružarnice i čuvanja oružja pokazat će se problemom od izuzetne važnosti. Radovi na oružarnici do 1435. odnose se na zgradu iz 14. stoljeća, odnosno onu koja je trebala biti dovršena 1348. godine.<sup>17</sup> Ovdje će, dakle, biti riječi samo o njezinim popravcima. Godine 1424. oficijali općinskih radova trebali su oficijalima oružarnice predati daske koje će položiti na konstrukciju izrađenu za taj pod. Iste godine popravlja se i krov: odlučeno je da se ponovno izradi i popravi pokrov oružarnice, a Malo vijeće izabralo je oficijale oružarnice koji će to nadzirati. Oficijali općinskih radova dat će im vapno, kamen ili opeku i sve ostalo što bude potrebno. Oficijalima za bombe dopušteno je da učine rešetku s unutrašnje strane vrata (tj. romaničkih vrata od Ponte); na to mjesto i u spremište pokraj zatvora pohranit će općinske bombe.<sup>18</sup> Municija za bombe čuvala se u Kuli od zvona, pa je 1432. godine odlučeno popraviti je kako ne bi propuštala vodu, a 1433. u njoj se radi boljeg čuvanja baruta i salitre gradi svod.<sup>19</sup>

Najveći broj dokumenata odnosi se na zatvore. Nakon 1403. kada je oficijalima radova naređeno da dadu popraviti i učvrstiti zatvore izvan Kneževa dvora (možda onih u Kaznenoj kuli), o popravku onih unutar Dvora odlučivat će se tek od 1411. godine.<sup>20</sup> Godine 1415. gradi se zid između zatvora i prostorije gdje će spavati stražari, a 1419. uređuje se zatvor ispod kuhinje.<sup>21</sup> Popravak zatvora spominje se 1422. godine, a 1426. dopušta se knezu da dade popraviti i učvrstiti rešetke iza kojih su okrivljenici.<sup>22</sup> Slijedi niz odredbi koje se odnose na zatvorske prostorije u raznim dijelovima Dvora: 1428. godine spominju se zatvori ispod stubišta, uređuju se zatvori u magazinu koji je ispod dvorane, a njihovi će se zidovi ožbukati i pod popločati onako kako odrede knez i Malo vijeće. U tome novom zatvoru ispod dvorane oficijali će dati ispod luka učiniti vrata s vratašcima u sredini, kakva imaju i drugi zatvori, te se određuju mjere za prozor, a svi otvori trebaju imati željezne reške. Zadaju se mjere za vrata novog zatvora ispod dvorane; raspravlja se o premještaju jednog zatvorenika iz zatvora u kojem se nalazi u novi zatvor; oficijalima je naređeno da drvom opreme postojeći zatvor ispod stubišta.<sup>23</sup> Godine 1429. oficijali trebaju dati za tri pedlja povisiti prozor novih zatvora; ponovno se razmatra molba istog zatvorenika za premještaj u velike nove zatvore.<sup>24</sup> Za stan čuvara zatvora Benedikta i za općinske zatvore 1431. godine odobrava se oficijalima potrošiti trideset perpera; potom se iznos za uređenje Benediktova stana povisuje na četrdeset perpera.<sup>25</sup> Iste se godine oficijalima naređuje da dadu popločati opekama ženski zatvor; a iduće godine se u stanu čuvara zatvora Benedikta mora učiniti jedan prozor na južnoj ili zapadnoj strani.<sup>26</sup> Godine 1433. odlučeno je da se Benediktu za uređenje ženskog zatvora

dade drvena građa i još od općinske građe sve što treba za popravak zatvora gdje su žene. Godinu dana poslije oficijali oružarnice trebali su dati Benediktu građu za uređenje općinskih zatvora.<sup>27</sup> Oficijali su 1434. godine trebali urediti zatvor za svećenika kao što im je naložio nadbiskup, i dati izraditi tri para okova za noge zatvorenika.<sup>28</sup>

Osim neophodnih popravaka uređuju se te opremaju i druge prostorije. Godine 1415. odlučeno je da se na istovjetan način presvode mjesta gdje se nalaze knjige bilježništva i knjige kancelarije. Za uređenje prostorije bilježništva notari su mogli potrošiti najviše 20 perpera, a 1424. u kancelariji se obnavlja sav namještaj potreban kancelarima za rad i za čuvanje knjiga.<sup>29</sup>

U spremištu gdje su opeke 1415. postavljaju se kreveti gdje će spavati sluge, a 1417. godine se u toj prostoriji izrađuje i polica.<sup>30</sup> Godine 1419. odlučeno je da se izrade dvije klupe koje će biti ispred palače, kao što su one ispod kuća pred vratima od Pila.<sup>31</sup> Godine 1431. oficijali općinskih radova trebaju dati željeznim rešetkama zatvoriti prozore koji su okrenuti prema fontiku, a pripadaju sobi gdje konzuli sude u građanskim parnicama.<sup>32</sup> Iste godine odlučeno je da oficijali dadu popraviti i učvrstiti strop dvorane Velikog vijeća da bude siguran i da ne može pasti.<sup>33</sup> Međutim, 1435. nekoliko dana prije požara, oficijalima općinskih radova ponovno je naloženo da trebaju popraviti i učvrstiti strop dvorane Velikog vijeća.<sup>34</sup>

Godine 1433. odlučeno je da se za oslikavanje dvorane Maloga vijeća onako kako je odlučeno posljednjeg dana siječnja 1430. godine smije potrošiti 80 dukata. A za boje, zlato i ostalo što je potrebno za oslik može se potrošiti još 60 dukata.<sup>35</sup> Odlučeno je da za izradu slika u dvorani Maloga vijeća oficijali dadu napraviti potrebne čvrste skele onoliko koliko ih bude potrebno.<sup>36</sup> Odlučeno je da isti oficijali koji su zaduženi za oslik u dvorani Maloga vijeća mogu za nju naručiti i popraviti postojeće ostakljene prozore kako bi se lako mogli otvarati i zatvarati.<sup>37</sup> Petar Sorgo i Stjepan Zamagno izabrani su da kao oficijali nadziru slikanje i radove koji se izvode na mjestu gdje se sastaje Malo vijeće.<sup>38</sup>

Loža koja je prije 1435. postojala ispred zapadnog pročelja Dvora, potvrđena je i nalazom ležišta njezinih stupova na udaljenosti oko 140 cm od trijema sadašnjeg pročelja. No valja uzeti u obzir da se na približno istom mjestu loža spominje od 1283. godine, da postoji kontinuitet vezan uz njezinu funkciju bez obzira na građevinsku formu.<sup>39</sup> Godine 1420. odlučeno je da se na natkrivenom mjestu gdje sjedi gospodin knez sruši sadašnji zid i na tom mjestu postave dva svoda sa četiri stupa i terasom odozgo. U tu su svrhu izabrani i oficijali.<sup>40</sup> Dana 4. veljače 1434. oficijalima općinskih radova naloženo je da dadu obnoviti ložu koja se jučer srušila, kao što je nekada bila, kao i podnožje lože koja je ispred kancelarije.<sup>41</sup> Iz 1435. bilježe se četiri odluke: da oficijali prema savjetu drvodjelca majstora Marka trebaju

dati poduprijeti i učvrstiti ložu koja se nalazi ispred kancelarije da se ne bi srušila; isti oficijali trebaju nabaviti drvenu i ostalu građu potrebnu da se iznova učini terasa i pod terase kojom je natkrivena loža ispred kancelarije. Nakon što sve navedeno pripreme, trebaju o tome obavijestiti Malo vijeće. Također, budući da je terasa pukla i urušila se u kancelariju, u prostoriju gdje borave sluge, oficijali je moraju dati popraviti i urediti tako da bude čvrsta i da je ta ista pukotina više ne može oštetiti. Nadalje, kako je mala loža u Kneževoj palači istodobno i pod oslikane sobe koji se nagnuo i gotovo urušio, oficijali ga trebaju učvrstiti. A dimnjak koji je u toj loži kako ispod tako i iznad pokrova, moraju u potpunosti ukloniti i srušiti, izuzev nape koja je drvena.<sup>42</sup> Odlučeno je da oficijali radova zaduženi za oružje ili galije trebaju dati oficijalima radova gredu od ariša koja je u arsenalu za terasu koja se uređuje ispred kancelarije.<sup>43</sup>

U veljači 1435. godine Junije Gradi, Stjepan Zamagno i Jakov Georgio izabrani su za oficijale koji će brinuti, istražiti i napismeno navesti sve pojedine radove koji se na palači moraju poduzeti i na njoj izgraditi ili popraviti tako da palača bude dobra i lijepa kako bi se u njoj na dostojan i zdrav način moglo stanovati.<sup>44</sup>

Dana 11. kolovoza 1435. godine Vijeće umoljenih utvrđuje da je prethodne noći ogroman požar zahvatio dvor, da je izgorjela cijela oružarnica te donosi niz odluka o sredstvima potrebnim za njihovu obnovu i odabire pet oficijala gradnje koji će tu dužnost obavljati iduće tri godine.<sup>45</sup> Oficijali zaduženi za naoružanje trebaju dati ukloniti one zidove koji su ruševni i prijete da se uruše.<sup>46</sup> Istoga mjeseca Vijeće umoljenih ovlašćuje kneza i Malo vijeće da pregovaraju s kaptolom Svete Marije o prepuštanju komuni obližnje kuće kanonika Dominika de Ribiza.<sup>47</sup> Do kraja 1435. godine podižu se svodovi na preostalim zidovima oružarnice i dvora. O radovima koji se prve dvije godine svode uglavnom na popravke, odlučuje knez, a vode ih oficijali.<sup>48</sup> Početkom 1436. godine prikuplja se kamen; obojat će se i dvorana Maloga vijeća (znači: neoštećena) i preostalom zlatnom bojom pozlatiti okvire sjedala, odnosno klupa i vrata.<sup>49</sup> U ožujku se drvetom popravljaju šetnica (*ambulatorium*) „u palači gdje boravi i stanuje gospodin knez“.<sup>50</sup> Knez je, dakle, ostao u Dvoru, ali u travnju, upravo zbog izvođenja radova, sva tri Vijeća raspravljaju o njegovu preseljenju iz dvora i počinju pregovori o njegovu smještaju u kući Milutina Čučića Priboevića.<sup>51</sup> U vezi preseljenja kneza Vijeće umoljenih određuje niz pojedinosti koje ukazuju na stanje Kneževa dvora; ondje će ostati i spavati čuvar zatvora i općinski stražari koji će čuvati „palaču“, zatvore i zatvorenike kako je uobičajeno, a moći će izlaziti samo uz dopuštenje jednoga od triju „noćnih zapovjednika“. Na vratima kancelarije moraju cijelu noć ostati tri stražara, a unutar palače

**Dokumenti  
od 1435. do  
1450. godine**

*Radovi  
od 1435. do  
1437. godine*



dvije osobe, jedna ispod kuhinje, druga pod svodom. Iz tog dokumenta doznaje se također da se uza zatvor za žene, koji se nalazio ispod obližnje crkve sv. Spasitelja, može urediti prostor pod još jednim svodom. Oprema se prostorija za zapovjednika noćnih straža koji će spavati u Dvoru.<sup>52</sup> U jesen 1436. godine popravljaju se slomljena vrata zatvora i natkriva u dvorištu jedan dio gdje će boraviti stražari.<sup>53</sup> Iste, ali i iduće godine spominje se zatvor iznad Svetog Marka (u jugozapadnoj kuli) gdje su boravili zatvorenici veoma slabog zdravlja (prvo Luka de Bona, a potom i Marin de Crieva).<sup>54</sup> Na samom početku 1437. godine odlučeno je da oficijali trebaju dati ukloniti zid koji prijete urušavanjem u onom dijelu gdje stanuje čuvar zatvora Benedikt, i da moraju, kako su im to savjetovali majstori, dati popraviti dvije fasade kule za zvona, ali tako da se ona ne sruši.<sup>55</sup> U dotadašnjim odlukama Vijeća nema slučaja da bi oficijali morali raditi po uputama nekog majstora. Može se pretpostaviti da su to bili Onofrio di Giordano iz Cave i Apuljanin Andreuccio de Bulbito iz Tramontea. Naime, u svibnju 1436. godine Vijeće umoljenih je ovlastilo kneza i Malo vijeće da razgovaraju s majstorima koji su stigli iz Apulije o izgradnji jednog svoda u arsenalu, o čišćenju luke, dovođenju vode i drugim radovima, a u kolovozu te godine dopušteno je da dva majstora zidara mogu otići raditi s majstorima koji rade na vodovodu prema ugovoru koji imaju s njima, izuzev majstora koji rade na dvoru.<sup>56</sup>

*Radovi  
od 1438. do  
1443. godine*

Oficijalima je naređeno da na račun općine dadu urediti drvene stube kojima se ide do zvona i popraviti zvono Velikog vijeća koje je na tom zvoniku. Trebali su također obnoviti pokrov lože na Platei, gdje to bude potrebno. A velike bombe koje su ostale na otvorenom trebalo je pospremiti u arsenal tako da ne zauzmu mjesta galijama. Ako to ne bude moguće, potrebno ih je pokriti daskama kako ih kiša ne bi oštetila.<sup>57</sup> Oficijalima se određuje kazna od po 25 perpera ako tijekom istog tjedna ne prirede sve potrebno za gradnju. Dogovor s Onofrijem dotada je zacijelo već postignut. Naime, iz dodatka odluci Maloga vijeća od 10. lipnja proizlazi da su zidari dovršili neke radove koji se ne mogu nastaviti prije Onofrijeva povratka s Korčule.<sup>58</sup> Ujedno je to i prvi spomen imena „Anofrio“ u vezi s obnovom Kneževa dvora.

Znači da 1438. godine započinje obnova Kneževa dvora prema projektu Onofrija della Cave. Prva odluka koju donosi Vijeće umoljenih od velike je važnosti. Naime, usprkos prijedlogu da se Kula od zvona koja je pokraj Dvora poruši i sagradi iznova, Vijeće umoljenih odlučuje da se ona popravi i obnovi.<sup>59</sup> Oficijali gradnje Dvora moraju najkasnije istoga mjeseca početi s izradom i gradnjom svodova oružarnice.<sup>60</sup> Radi se na organizaciji gradilišta: uz crkvu sv. Vlaha odabire se mjesto za kolibu u koju će se pohraniti kamena građa koja se izrađuje za dvor; nabavlja se prvo dvije tisuće komada velike

opeke, a potom još četiri tisuće.<sup>61</sup> Dana 9. siječnja 1439. Vijeće umoljenih nalaže oficijalima da na gradnji Dvora „moraju raditi prema drvenom modelu predloženom Vijeću, a ako im se učini da nešto treba promijeniti o tome trebaju izvijestiti Vijeće“; vezano za nacrt lođe i terasa koji su pokazali Vijeću dopušteno im je da učine kako budu smatrali da je najbolje.<sup>62</sup>

Drveni model koji prikazuje cjelinu Dvora, pa i neki zasebni model ili nacrt za pojedine dijelove, na koje će se pozivati mnogi ugovori, pokazuju da je postojao arhitektonski projekt kojim je Onofrio predložio obnovu cijelog sklopa. Usporedno s građevinskim radovima ubrzano se počinju izrađivati brojni arhitektonski elementi: u narudžbama se precizno navode mjere i oblici, a poziva se na prihvaćen model ili nacrt. Dok iz ugovora za izradbu, primjerice prozora, proizlazi da oficijali 1436. odabiru predloške prema već izgrađenim kućama, nakon 1439. godine klesani okviri otvora naručuju se prema projektu Onofrija i nacrtima Petra Martinova iz Milana.

Vijeće umoljenih donosi odluku o preseljenju kancelarije i notarije; knezu i Malom vijeću odobrava se da iznajme kuću Johannesa Richija; u kući se prethodno izvode potrebni radovi; slijedi preseljenje notara, zajedno s knjigama i notarskim spisima.<sup>63</sup> Oficijalima se odobrava da mogu poslati klesare Ratka Ivančića i Radina (Pribilovića) na Korčulu.<sup>64</sup> Nakon što je Vijeće umoljenih odluku o korištenju fontika za ured oficijala gradnje odgodilo dok knez i Malo vijeće ne obidu taj prostor, odobreno je da za potrebe gradilišta mogu prihvatiti prvi magazin fontika sa žitnicom iznad, znači u njegovoj punoj visini sve do poda dvorane Velikog vijeća.<sup>65</sup> Na taj se način 1439. godine prostor dvora proširuje sa sjeverne strane, kako u zoni prizemlja, tako i polukata: pripojeno mu je zapadno skladište fontika, ali i odgovarajući dio prolaza između fontika i Dvora. Nakon rasprave o visini terase ispred vrata dvorane Velikog vijeća oficijalima je dopušteno da je naprave kako im se čini najbolje.<sup>66</sup>

U siječnju 1439. godine započinje i gradnja pročelja. U prizemnoj zoni Onofrio je zadržao tipološki obrazac trijema između dviju kula. Razlog da se tradicija toga stupovima rastvorenog i krovom ili svodom natkrivenog mjesta održi stoljećima, temelji se i u njegovim funkcijama. U trijemu se sudilo, zbivali su se važni događaji u sklopu državnog ceremonijala: od instalacije članova Maloga vijeća, ispraćaja poklisara, do slavljenja državnih i crkvenih blagdana. Trijem je bio gledalište pokladnih događaja i vojnih mimohoda, ali i pozornica s koje se izricala smrtna kazna.<sup>67</sup> Za trijem klesari izrađuju pojedine dijelove onako kako će im pokazati majstori Onofrio ili Ratko Ivančić od kojega je naručena izrada šest lukova toliko velikih da ispune prostor od kule zvona do kule svetoga Marka. Stupovi su naručeni kod Martola Brajkovića i Marka Tvrdeljevića, a radovi na svodovlju trijema ugovoreni s Ratkom Ivančićem i Radonjom Grubačevićem.<sup>68</sup> Gornji dio



SLIKA 1

Tlocrt prizemlja Kneževa dvora (Institut za povijest umjetnosti, Zagreb). Crvenom bojom označeni su svi građevinski slojevi, zidovi i popločenja, bez obzira na vrijeme nastanka, otkriveni ispod podova zatečenih 1981. tijekom sanacijskih radova. Tamnosivom bojom označeni su dijelovi srednjovjekovnoga gradskog zida koji je povezivao Kulu od zvona (tzv. Kneževu kulu) i Kaznenu kulu. U tom zidu bila su romanička vrata od Ponte (vrata unutrašnjeg mora ili *porta sub Castello*) zazidana kad su do njih u istom zidu 1464. otvorena unutrašnja vrata od Ponte

(Juraj Dalmatinac). Sivom bojom označen je Knežev dvor Onofrijeva doba, proširen sa sjeverne strane na prvi magazin Fontika (1439.), a na istočnom kraju južnog krila lođom koja je po projektu iz 1439. izvedena 1441. godine. Prema nalazima vidi se da su u tu obnovu bili uključeni i neki srednjovjekovni dijelovi. Svjetlosivom bojom označen je gradski zid iz 1475. – 1477. s vanjskim vratima od Ponte iz 1476. godine (Paskoje Miličević i Olivier Francigena). Perimetralni zidovi bastiona Palača iz 17. stoljeća su ocrtani.



## SLIKA 2

Tlocrt prizemlja Kneževa dvora na kojem su prikazani dijelovi koji su nakon požara 1435. godine izgrađeni prema projektu Onofrija di Giordana della Cave. Onofrio je 1439. godine izradio drveni model i posebne nacрте za terase i lođu uz vrata od Ponte. Označavajući plavom bojom višekratne građevinske volumene, a rasterom natkrivene vanjske prostore – trijem pročelja, trijemove atrija i lođu – ovaj tlocrt ostaje trajnim obilježjem Onofrijeve arhitektonske koncepcije bez obzira na sve kasnije obnove.

pročelja rastvoren kvadriforom između monofora, omeđen istaknutim kulama, isticao se simetrijom. Petar Martinov 1440. godine ugovara izradbu dvaju „saracenskih“ prozora širine više od 2 m i ukupne visine blizu 8 m, prema predloženom nacrtu na koji se pozivaju oficijali.<sup>69</sup> Dobrilo Radovinić izradit će dijelove za kvadriforu, a za triforu na kuli zvona, jednake visine kao što je kvadrifora, a predložak mu je dao Petar Martinov koji će završiti kvadriforu. Iznad sredine okvira izradit će kip Hektora.<sup>70</sup> Sve to provjerava Onofrio. Kvadrifora i dvije monofore, čija visina doseže 8 m, upućuju na to da je dvorana bila visoka između 9 i 10 m. Iste visine bila je i prostorija u kuli zvona, kojoj je bila namijenjena trifora. Time se potvrđuje da je Knežev dvor nekada bio viši.

U rujnu 1440. godine Malo vijeće donosi tri odluke: oficijalima prijeti novčanim kaznama ako idućeg mjeseca ne počnu radovi na popravku kule na pročelju koju su dali srušiti i nalaže im da nastave raditi sve dok ne bude popravljena. Na novim zatvorima Dvora ne smiju učiniti nijedan prozor sa strane mora, a novi prozor koji je ondje već učinjen moraju zazidati. Također, moraju pratiti radove na Kuli od zvona ne umanjujući joj debljinu. Kaže se da na nacrtu oko kule nije bilo nikakvih prozora, pa prema tome ni sada ne mogu na nacrtu biti dva prozora. Radove treba nastaviti tako da se ne ugrozi ni zvonik te kule ni zvona.<sup>71</sup> Ova je odluka pročitana i oficijalima i Onofriju. Krajem godine odlučena je izgradnja luka i svoda između zgrade kanoničkog magazina i gradskog zida kod gradskih vrata.<sup>72</sup> Posrijedi su romanička Vrata od Ponte, zvana i Vrata pod Kaštelom.

Južno krilo bilo je sastavljeno od građevina različitih i po namjeni i po visini. Osim kule sv. Marka na zapadnom kraju i oružarnice u sredini, istočni kraj promijenio se gradnjom lođe uz romanička vrata u gradskom zidu. Oružarnica dovršena 1443. godine, zapremala je prizemlje i polukat, povezane kamenim stubištem (koje se 1448. popravljaju). Za njezin donji magazin Radonja Grubačević i Živko Utišenović izrađuju vrata s lukom i ugaonim menzolama, kao što su vrata na ulazu u Malo vijeće,<sup>73</sup> a u veljači 1445. Radoje Pribilović i Radoslav Radomanić ugovaraju izradu dijelova za vrata oružarnice na njezinom južnom pročelju.<sup>74</sup> Polukat oružarnice bio je nadsveden, a nad jednim njezinim dijelom bila je terasa. Po dovršenju oružarnice javni prostor (*campus*) uz vrata pod Dvorom bio je 1441. godine natkriven križnim svodom u visini polukata.<sup>75</sup> Tako nastala lođa (*lobieta*), koju je projektirao Onofrio i za koju je 1439. izradio zasebni nacrt, otvarala se na trg polukružnim lukom: dva nosača bila su ukrašena lisnatim kapitelima, koji se povezuju s kapitelima pročelnog trijema iz 1439. godine.<sup>76</sup> Lođa se uza stara romanička gradska vrata spominje još i 1445. godine, a nakon 1464., kada se otvaraju tzv. Unutrašnja vrata od Ponte, izgubila je svoju prvobitnu funkciju prolaza.

U siječnju 1441. donosi se odluka da se u kanalu dvora učini jedan prozor zatvoren rešetkom kako bi kanal bio osvijetljen i jedan otvor s rešetkom kako bi u kanal moglo ulaziti more.<sup>77</sup> U veljači je odlučeno da se u atriju iznad postojećih lukova oružarnice podignu drugi lukovi i ograda između stupova.<sup>78</sup> To znači da se podiže trijem u polukatu iznad tada još postojećeg, a poslije zazidanog trijema u prizemlju. Oficijali naručuju župskim kuparima kupe i crijep potrebne za radove na dvoru.<sup>79</sup> Oprema se Kula od zvona kako bi se u nju pospremile i zaštitile općinske bombarde i salitra.<sup>80</sup> U srpnju je Vijeće umoljenih odlučilo da se u velikoj dvorani umjesto sobe s terasom učini soba s lijepom ograđenom balkonom. Određeno je također da oficijali odsada moraju raditi i dovršiti samo palaču kneza i oružarnicu.<sup>81</sup> Na dijelu palače gdje je knežev stan treba načiniti pokrov prema sada postavljenim krovnim konzolama i zid ne treba povisiti. A na fasadi okrenutoj na zapad moraju zid postaviti s unutrašnje ili vanjske strane, onako kako se magistru Onofriju učini boljim.<sup>82</sup>

Sve dok u prizemlju atrija nije bio podignut trijem i nad njim galerije kata, pristup prostorijama u pojedinim krilima i dvorani Velikog vijeća bio je moguć samo unutrašnjim stubištima. U tom pogledu preuređenje atrija prema Onofrijevu projektu može se držati najvažnijom inovacijom Kneževa dvora u 15. stoljeću. Istodobnost radova na krilima i u atriju pokazuje Onofrijevu sposobnost u vođenju gradilišta. Najvažniji podatak za arhitektonsko oblikovanje atrija proizlazi iz ugovora koji 1440. godine sklapaju braća Radoje i Radin Pribilović za izradu pet lukova te četiri udvojena stupa. Posrijedi je galerija na prvom katu istočnog krila atrija. Pet mjeseci poslije ugovorena je s Radonjom Grubačevićem i Živkom Utišenovićem izrada dijelova za galeriju zapadnog krila, koja treba imati jedan luk manje i pola stupca umjesto cijeloga.<sup>83</sup> Pavao Marković preuzima 1442. godine izradu stupova s bazama i kapitelima, te stupaca za dva krila nedovršenih galerija na katu. Slijed izgradnje galerija na katu otkriva kojim su redom krila bila dovršena. Oficijali su, po Onofrijevu savjetu, izvijestili Vijeće umoljenih da se mogu učiniti dvije fasade stupova iznad dvorišta da bi svodovi oružarnice i palače imali oslonac. Kaže se također da treba učiniti i jedan svod nad onim koji je učinjen kod vrata (pod Kaštelom) da bi oslonac dobila oružarnica koja je do zvonika. Na taj način moći će se unijeti oružje u oružarnicu najkasnije do kraja listopada. Iz ovog se izvještaja, kojeg je autor zacijelo Onofrio, jasno vidi i pravi razlog izgradnje trijema i galerija u atriju. Osim bitno olakšane komunikacije između pojedinih krila, galerije su zapravo imale ulogu kontrafora. Izrijekom je u izvješću rečeno da će galerije poslužiti kao oslonac pojedinim dijelovima – zacijelo najviše potreban zapadnom krilu, koje se izdizalo zbog visine glavne dvorane. Doznajemo također da se ispod zvona, tj. u Kneževoj kuli, nalazila kuhinja kneževa stana, garderoba

i sobe.<sup>84</sup> Iz dokumenta se vidi da je Onofrio namjeravao dovršiti oružarnicu Dvora najkasnije u listopadu 1442. godine. Do toga očigledno nije došlo jer je Malo vijeće 12. srpnja 1443. opet zatražilo da se oružarnica mora dovršiti do sredine kolovoza, no rok je produžen do kraja rujna.<sup>85</sup> U lipnju 1442. odlučeno je da se u vezi gotovih svodova u palači i oružarnici, knez i Malo vijeće sastanu s Onofrijem i njegovo mišljenje iznesu pred Vijeće umoljenih.<sup>86</sup> Vijeće umoljenih je dopustilo da knez i Malo vijeće mogu isplatiti magistra Onofrija della Cavu i Andriuzija de Bulbito.<sup>87</sup> U srpnju 1442. godine naredeno je oficijalima da se dovrši pokrivanje dvora, oružarnice i kule vapnom te da se popravi sat kako bi proradio najkasnije do sredine kolovoza; tada je rok produžen do sredine rujna. Od oficijala se zahtijeva da dadu obložiti i željezom udvostručiti vrata i prozore bilježništva i kancelarije.<sup>88</sup> U kolovozu oficijali dogovaraju s Onofrijom premještanje zvona.<sup>89</sup> Krajem 1442. počinju rasprave o kuhinji kneževa stana koju je trebalo učiniti u istom kutu gdje je postojala od starine i ne drugdje; kamin kuhinje se morao učiniti u postojećem sjevernom zidu. Što se tiče započetog mjesta za taj kamin u kuhinji trebalo ga je učiniti u donjem dijelu ormara, a gornji dio zazidati; početkom iduće godine oficijali radova traže za taj kamin dvije konzole koje su bile namijenjene za kule.<sup>90</sup>

U veljači 1443. Veliko vijeće nalaže oficijalima da slijede novi zid u ulazu palače gdje stanuje knez i da ne rade nikakve stube u oružani.<sup>91</sup> Oficijalima je naredeno da se općinska oružarnica dovrši do sredine kolovoza kako bi se oružje i municija mogli u nju pospremiti; taj je rok više puta produžen, konačno sve do kraja prosinca.<sup>92</sup> Odlučeno je da oficijali, nakon što se savjetuju s inženjerima i drugim učenim osobama, moraju narediti da se popravi i kanal koji se nalazi u dvorištu.<sup>93</sup> Potkraj 1443. godine odlučeno je da oficijali moraju učiniti neophodni trošak da bi se u živom kamenu isklesao i napisao epigram napisan od Cirijaka iz Ankone.<sup>94</sup>

Najintenzivnije razdoblje gradnje Kneževa dvora podudara se s boravkom Onofrija della Cave u Dubrovniku od 1436. do 1443. godine. Određeni su tlocrt i osnovna dispozicija građevinskih elemenata: četiri krila dvorišta, trijem i galerije atrija, trijem pročelja između ugaonih kula. Takvoj koncepciji odgovarao je i naglašeniji vertikalitet, drukčiji ritam prozora barem na pročelju, središnjim dijelom rastvorenijim od bočnih dijelova. Onofrijevi projekt odlikuje se jasnim prostornim rješenjem i raspodjelom funkcija. Uredske i reprezentativne prostorije bile su u zapadnom krilu i kulama pročelja, oružarnice u južnom krilu, stan kneza zauzimao je jugoistočni ugao Dvora i istočno krilo, a sjeverno krilo nalazilo se zapravo izvan starog perimetra Dvora, na prostoru općinskog fontika. Imajući u vidu takvu shemu, mora se, nažalost, ustanoviti da se ona zadržala tek dvadesetak godina. Svako iduće oštećenje Dvora dovelo je do nekih promjena.

Nakon Onofrijeva odlaska iz Dubrovnika radovi se, sudeći po ugovorima, nastavljaju po već prethodno zacrtanom planu. U siječnju 1444. godine odlučeno je da oficijali moraju dati popraviti pokrov terase oružarnice, tako da ne propušta vodu.<sup>95</sup> U ožujku je zaključeno da treba dovršiti i dio Dvora koji je okrenut prema moru te da treba postaviti rešetke na donje prozore; uređuje se granarij koji je u tom dijelu.<sup>96</sup> Knez bi u svibnju trebao ući u novu palaču.<sup>97</sup> Odlučeno je da oficijali moraju dati izraditi vrata, drveno stubište i prozore za onaj dio palače koji je okrenut prema moru te popraviti krovne kanale kako kiša ne bi prodirala u prostoriju Malog vijeća.<sup>98</sup> Odlučeno je da se zbog veće prikladnosti sudišta konzula za građanske parnice i svih parničara promijeni dvorana u kojoj će se suditi; umjesto dvorane Velikog vijeća gdje su dosada sjedili, odsada moraju sjediti u donjoj sobi koju uređuje općina. Pod prijetnjom kazne oficijali moraju tijekom mjeseca veljače popraviti i urediti mjesto na kojem će sjediti suci.<sup>99</sup>

Godine 1445. Vijeće umoljenih naređuje oficijalima da moraju dovršiti dio palače koji je okrenut na istok, uključujući i svod, popločati dvorište i zgotoviti cisternu, ograde velikog stubišta i kneževa sjedala s naslonima. Osim toga, ništa drugo na Dvoru ne smiju raditi.<sup>100</sup> Zbog prijestupa Ilije de Bona Malo vijeće ga je osudilo da mora ostati zatvoren i zaključan u sobi kule koja je nanovo učinjena za zatvore u trajanju od osam neprekidnih dana. U nastavku se nabrajaju ostali uvjeti boravka.<sup>101</sup> Čuvaru zatvora Benediktu naređeno je da se useli u stan koji mu je dodijeljen u Dvoru; potom je odlučeno da se prozori u katu njegova stana, koji su okrenuti ka moru, snize kako bi lakše mogao uz njih stajati; precizirano je da se dva postojeća prozora u stanu čuvara zatvora moraju sniziti za dva do tri lakta. Oficijalima je naloženo da u kuhinji Benediktova stana poprave kamin.<sup>102</sup> Za vrijeme radova na Dvoru čuvar zatvora Benedikt stanovao je u nekom iznajmljenom prostoru nad gradskim zidinama.<sup>103</sup> Veliko vijeće odobrilo je knezu i njegovom Malom vijeću da novu dvoranu, koja je okrenuta prema luci, mogu dati urediti za Veliko vijeće.<sup>104</sup> Posljednji navedeni dokumenti važni su jer donekle objašnjavaju namjenu najslabije očuvanog dijela Dvora – istočnog krila i produžetka sjevernog krila do kaznene kule. Dana 24. ožujka 1446. godine Malo vijeće donosi odluku da se iznad prozora bilježništva postavi ploča s natpisom Cirijaka iz Ankone.<sup>105</sup> Početkom 1447. oficijalima je određen rok da dovrše sve što se ima dovršiti.<sup>106</sup> U siječnju popravlja se krov starog dvora sa strane kule Malog vijeća gdje kiša prodire tako da je cijeli pokrov poplavljen.<sup>107</sup> Odlučeno je da oficijali moraju dati popraviti prozor sobe u kojoj su sluge i dati učiniti jedan drugi prozor koji gleda u dvorište. Dat će zazidati i jedna vrata, a druga opremiti bravama i svime što je potrebno.<sup>108</sup> Majstor Petar iz Milana poziva da Nikola Gondola,

*Radovi  
od 1444. do  
1450. godine*



Vlaho Zamagno i Trifun Bonda kao i oni koji su bili oficijali gradnje dvora budu prisutni u subotu nakon objeda u Malom vijeću.<sup>109</sup> Godine 1448. spomenuta su trojica izabrana da opekom popločaju mjesto ispred vrata Malog vijeća te ono ispred Dvora, ispod svodova i da učine naslone i sjedala od drva gdje sjedi knez. Potrebno je također učiniti drvenu gredu sa svim potrebnim u sudnici za krivična djela. Iznad vrata da dadu izraditi kip sv. Vlaha i da ga postave gdje im se učini najbolje. Također da dadu dovršiti sobu koja se nalazi na vrh velike dvorane, a iznad koje je bio sat.<sup>110</sup> U dvorani gdje svoju službu vrši pet nadzornika računa Miho Zamagno i drugi oficijali trebaju učiniti drvenu pregradu, široku pet lakata i dugačku koliko je dugačka dvorana. Također u toj pregradi treba predvidjeti mjesto za spremanje knjiga iz te sobe kako se oficijalima najbolje učini.<sup>111</sup> Miho Zamagno i drugi oficijali trebaju dati očistiti cisternu u gornjem dijelu Dvora tako da voda koja u nju kaplje bude dobra. Također trebaju dati pozlatiti kip sv. Vlaha koji je iznad vrata bez vratnica. S unutrašnje strane tih vrata trebaju dati izraditi kip svete Marije. Osim toga, iznad vrata bilježništva treba učiniti veliki kip kakav se njima za ta vrata učini najboljim.<sup>112</sup> Odlučeno je da se oficijali pobrinu i za popravak i kamenog stubišta u oružarnici.<sup>113</sup> Oficijali kojima je Malo vijeće povjerilo da dadu učiniti stupac za staro zvono, slobodni su učiniti luk stupaca kako starog zvona tako i zvona Velikog vijeća onako kako im se učini najboljim.<sup>114</sup> Odlučeno je da oficijali moraju pregledati i ispitati sobu gdje borave sluge i ako im se učini da se to mjesto može utvrditi, neka postojeće prozore dijelom zatvore ili dadu učiniti neki novi te neka postave popločenje poviše zatvora.<sup>115</sup> Vijeće umoljenih donosi odluku da se Vukčić (dvorjanin vojvode Stjepana) iz zatvora gdje se nalazi, premjesti u kulu iznad zatvora.<sup>116</sup> Odlučeno je da oficijali dadu popraviti pokrov stare dvorane u postojećem Dvoru i da poprave vrata, klupe i prozore stare dvorane Velikog vijeća, a jednako tako i pod te dvorane gdje je to potrebno.<sup>117</sup> Odlučeno je da oficijali oružarnice dadu u oružarnici popločati pod na kojem je veliko jedro i konopi te da ih pritom ne oštete. Isti oficijali moraju novu salitru pohraniti u kulu gdje su zvona. Također moraju dati obnoviti pokrov oružarnice onako kakav je bio.<sup>118</sup> Marin Gondola izabran na mjesto Nikole Gondola, oficijal zadužen da se voda dovede u dvorište Dvora i da se učini kanal i sve ono što je potrebno za fontanu koja se izrađuje u Dvoru kao i ono za što su dobili dopuštenje Miho Zamagno, Trifun Bonda i rečeni Nikola Gondola. Oficijali koji moraju dovesti vodu u fontanu Dvora mogu potrošiti od dvije stotine perpera.<sup>119</sup> Odlučeno je da oficijali moraju dati da se podigne i popravi pokrov nad sobom koja se nalazi uza zvona tako da ne prokišnjava i da popločaju pod te sobe gdje je to potrebno, a sve to da učine tijekom prosinca pod prijetnjom kazne od dvadeset pet perpera. U

margini je dodano da pri tom ne smiju oštetiti zvonik niti solarij zvona koji treba ostati kakav jest i koji trebaju dati pokriti.<sup>120</sup> 175

Već je u početku ovog članka bilo istaknuto da se odluke Vijeća od 1400. do 1435. godine odnose na Knežev dvor koji je bio izgrađen u prethodnom, 14. stoljeću i kojem su u 15. stoljeću bili potrebni tek manji popravci i preuređenja. Naprotiv, odluke koje se donose između 1435. i 1450. godine prate vrijeme najintenzivnije gradnje, odnosno najveće obnove Kneževa dvora u njegovoj višestoljetnoj povijesti. Očekivalo bi se stoga da će bitne razlike u vrsti građevinskih intervencija pratiti i sadržaj odluka, a ne samo nerazmjernost u broju dokumenata. Međutim, odluke Vijeća ma koliko bile brojne, pokazale su se nedostatnima za restituciju izgleda Kneževa dvora podignutog između 1435. i 1450. godine. Primjera radi, doista je neobično da o jednoj od najvećih promjena u arhitekturi Kneževa dvora – izgradnji njegova pročelja 1439. godine – nema u odlukama nekog Vijeća ni spomena. Iznimkom u tom pogledu može se smatrati samo izvještaj što ga 1443. godine Vijeću umoljenih podnose oficijali o gradnji svodova galerije u atriju. Probleme koji se tom prilikom iznose i argumentaciju za podizanje svodova mogao je poznavati jedino sâm projektant – Onofrio della Cava.

Ukratko, preko dvije stotine dokumenata iz posljednjih petnaest godina perioda koji se ovdje obrađuje sadrži mnoge podatke koje je međusobno teško povezati ako se ne poznaje i širi kontekst gradnje (kako vremenski tako i prostorni). Stoga se pokazalo potrebnim da se u tekstu članka koji je temeljen samo na odlukama Malog i Velikog vijeća te Vijeća umoljenih (kojih se signature navode u bilješkama) dodaju i kraći odlomci u kojima se objašnjavaju usporedne okolnosti i događaji. Njih potvrđuju ugovori s pojedinim majstorima, a okupljeni su u *Diversa notariae* i *Diversa cancellariae*, no u bilješkama tih odlomaka navodi se samo objavljena literatura.

## Umjesto zaključka

- \* Ovaj rad u potpunosti je financirala Hrvatska zaklada za znanost projektom *Dubrovnik: Civitas et Acta Consiliorum. Visualizing Development of the Late Medieval Urban Fabric* DUCAC-UIP-11-2013-9492.
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*Consilii* (nadalje: *CMin*), vol. 1–12, *Acta Consilii Rogatorum* (nadalje: *CRog*), vol. 1–11.

- 2 Neki od dokumenata koji se donose u ovom tekstu, spominju se i u ranijim radovima raznih autora (vidi: popis literature), ali samo je mali broj dosad objavljen.
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Locating and analysing  
the appearance  
of private houses in  
15th century Dubrovnik:  
The case of  
Georgio de Gozze house

Renata Novak Klemenčič

After Dubrovnik formally recognised Hungarian hegemony following the end of the Venetian rule in 1358, thereby establishing almost complete independence, the swift political and economic ascent of the Republic of Ragusa (Dubrovnik) ensued. While many negotiations and territorial infighting continued in the second half of the 14th century, the situation calmed down in the first half of the 15th century. In the relatively peaceful political environment, the economy flourished, based on intermediary trade between the hinterlands and Mediterranean countries and on silver mining, which was joined by textile production in the middle of the first half of the 15th century, when trade also began to be export-oriented.<sup>1</sup> The economic power and wealth of the state and private investors in the second quarter of the 15th century also resulted in intensive construction. In addition to utilitarian structures, such as walls, warehouses and arsenals, the state also constructed a water distribution system with two splendid fountains<sup>2</sup> and developed the main city square in front of the Rector's Palace. Orlando's Column<sup>3</sup> was erected here at the beginning of Stradun between 1417 and 1419, and in the 1420s, the city decorated the church dedicated to its patron saint, St Blaise, whose building was already finished at the end of the 14th century.<sup>4</sup> At about the same time, the palace of the Bosnian Duke Sandalj Hranić was constructed behind the apses of the cathedral.<sup>5</sup> Moreover, the house of the Abbot of Lokrum was most probably built at the same time: while there are no specific contracts testifying to this available, its masonry elements are often mentioned as models for other buildings in the second half of the 1420s and early thirties.<sup>6</sup> The archbishop's palace was built on the southern side of the cathedral beginning in the mid-twenties: on 14 February 1425, officials concluded a contract with the builder Božičko Bogdanović to demolish the old palace and build a new one in its place,<sup>7</sup> and on 15 May 1425 a contract was concluded with Dobrašin and Nikola Radinović for windows and doors.<sup>8</sup> The biggest construction site was the Rector's Palace, which needed an overhaul after a fire in 1435, and the city authorities decided to redevelop it completely in 1439.<sup>9</sup> The last additions to the area – the city's clock tower, Small Fountain and richly decorated façade of the sacristy – were made at about the same time as the renovation of the Rector's Palace, finished in the 1440s.<sup>10</sup> While commissions of the Republic of Ragusa have been examined at least with regard to major monuments, only a few studies have focused on the private buildings, although they were no less prominent in terms of the quality and, above all, quantity.<sup>11</sup> Considering the number of contracts, active craftsmen and prestigious commissions, which can be measured by the number of polifora (multi-light windows) that were ordered, it can be said that the heyday of private commissions occurred a few years before the most intensive



redevelopment of the main square.<sup>12</sup> In this period, noble families with capital either rebuilt their existing dwellings or built new *domos magnas*. With regard to masonry, the most influential buildings were the house of the brothers Vito and Clement de Resti from the 1410s,<sup>13</sup> and somewhat later, the houses of Martolo and Steffano de Zamagno,<sup>14</sup> as well as that of Zupano de Bona, which boasted many window openings.<sup>15</sup> A few individuals had two houses built in a relatively short period, for example. Drago de Sorgo, who commissioned two three-storey buildings, one in the *contrada* of St Dominic in 1439,<sup>16</sup> and the other in Pustjerna *apreso la chasa de ser Marin Mi. de Bona et de ser Zugno de Bona* in 1446.<sup>17</sup> In the first half of the 15th century, houses in the countryside were also becoming increasingly representative and were no longer used only for occasional visits of their owners, as entire families found refuge there during plague epidemics.<sup>18</sup> One of the major commissioners was Georgius Dragoe de Gozze. Unfortunately, little is known about his life. He was a son of Dragoe or Clemens de Gozze and Nicoleta, a daughter of Georgio de Georgio. He married twice: in 1410 he married Gaiussa, the daughter of Nicolai Martoli de Georgio, and then after her death, Marija, whose background has not been clearly determined. He had thirteen children.<sup>19</sup> According to information from the *Debita notariae*, he did a lot of business at least at the end of the 1420s, most probably focused on trade. In 1429 and 1430, he is listed as the creditor at least fourteen times, and another three times in 1418, once in 1440 and twice in 1450.<sup>20</sup> Unfortunately, the series was only reviewed for the selected years, so no information is available for the years in between. He was responsible for supervising and coordinating the most important building projects of the republic for a long time. Between 11 August 1435 and March 1437, when work was suspended due to outbreaks of plague, he led the first group of officials responsible for repairing and constructing the Rector's Palace and armoury.<sup>21</sup> In the meantime, on 8 January 1437, he was elected the official responsible for the water supply network.<sup>22</sup> During his time in office, contracts for both fountains were signed with Onofrio della Cava, i.e. on 7 February 1438 and on 9 October 1440 for the Large Fountain and Small Fountain,<sup>23</sup> respectively. In November 1443 and August 1444, he was mentioned again as occupying a leadership position among officials supervising the construction of the Rector's Palace and the clock tower.<sup>24</sup> He held the position of a magistrate<sup>25</sup> and judge<sup>26</sup> several times, which testifies to his significant status in the community. Before he was selected to supervise and monitor public commissions, Georgio de Gozze acquired experience from having his own houses built. He was among those individuals who developed or built two structures in a short period. The first was a three-storey extension to his old house,

for which a contract with Ragusa builder Radan Klapčić was concluded on 11 April 1424.<sup>27</sup> The contract defines the position of the house with reference to the neighbouring buildings owned by Martholo de Zrieva, Anthonio de Goliebo and Nicolo Pe. de Poza. The extension was located above the arch over a street leading to the house of Nicolo de Poza. The house of Johannes de Saracha is also mentioned. Considering the type of construction, above an arch, the building was probably located in Pustjerna, most likely at today's Restićeva ulica 4. There is now an older house with quadrifora bearing the coat-of-arms of the Gozze family on the second floor, which was categorised as a Venetian type of polifora from the 12th century by Edoardo Arslan and dated to the 14th century.<sup>28</sup> The location of the extension above the arch remains to be determined. Radan Klapčić received the final payment instalment on 3 July 1425. During the time of the construction, the house was mentioned two more times: on 8 August 1424 Georgio de Gozze allowed Anthonio de Goliebo to build a chimney over his house, while on 9 October of the same year Georgio complained that water from the gutter of Martholo de Zrieva was running onto his new wall and arch.<sup>29</sup> In the new extension, Georgio added a room for his brother: he ordered the furnishing from the carpenter Pribisan Bogdanović on 28 March 1425, and had the room painted in gold and azurro on 18 February 1428.<sup>30</sup> When the house was finished, he began building a large and magnificent palace, whose precise location is often cited in resources, most probably in order to distinguish it from the new extension. It is mentioned several times as the house by the Church of St Mary<sup>31</sup> or *sancta Maria maioris*,<sup>32</sup> once as the house *prope ecclesiam sancti Johannis*<sup>33</sup> or even as *apud ecclesiam sancti Johannis prope sanctam Mariam*.<sup>34</sup> St Mary's definitely refers to the old cathedral, which stood on the site of the present one, but was somewhat smaller and oriented towards the east. The baptistery, dedicated to St John the Baptist, stood in front of the entrance to the old cathedral, i.e. on today's Bunićeva poljana square. It was constructed following the decision of the Minor Council of 1325 to replace several wooden houses. Shortly before it was demolished in the 1830s, the octagonal building was illustrated and described by Lorenzo Vitelleschi.<sup>35</sup> In older resources, it is mentioned several times as St John's: in 1395, Ragusa authorities decided to award 1,000 perpers to the procurators of St Mary's to finish the bell tower above St John's,<sup>36</sup> while the Minor Council decided on 24 May 1442 that it should *salizare plateam et campum sancti Johannis existentes ante ecclesiam chatedralem sancte marie*.<sup>37</sup> Therefore, the house of Georgio de Gozze definitely stood along today's Bunićeva poljana. On the web sites of the DUCAC project, it is located on the south side of the cathedral, most probably because documents in *Acta consilii minoris* mention the dispute



FIGURE 1

Polifora of Gozze house at Restićeva ulica 4 in Dubrovnik (photograph by Krešimir Tadić, Institut za povijest umjetnosti, Zagreb, 2N-9083).

between Georgio and Aloisio de Gozze and the canons of St Mary's with regard to the payment for a plot in front of the Church of St Mary.<sup>38</sup> Some information about the more likely location of *domus magna* of Gozze family is available in the records from later periods. According to the cadastre from the 19th century, both houses on the north side of Bunićeva poljana (nos. 5 and 6) were owned by Gozze family. Both were part of *fideicommissum* created by Vladislav de Gozze (c. 1616–1674) in his will. While one of both houses was bought by Vladislav in 1659 from Marko de Sorgo, it is not clear from the documents which one or which part of one that was.<sup>39</sup> Perhaps the contract for the wooden parts of the old Gozze house might help resolve the dilemma, as it mentions a room in the new house oriented towards the west.<sup>40</sup> Arguably, this means that the house stood on the corner open towards the west. This could then be the house at Bunićeva poljana 5. Another proof that buildings owned by Gozze stood on the corner at the time just before Georgio's dispute with the canons can be found in *Acta consilii minoris* and *Diversa cancellariae*. On 31 May 1427, the officials concluded a contract with the sculptor Ratko Ivančić to make two coats-of-arms for the palace of Radoslav Pavlović, which states that one should be installed above the window on the eastern side of the palace, which is oriented towards the house of the late Clemens de Gozze.<sup>41</sup> Accepting that the palace of Radoslav Pavlović stood in the row of houses behind the house located at Bunićeva poljana 5 resolves the location of the Gozze house.

According to an entry in *Acta consilii minoris* of 31 March 1430, Georgius was building a house opposite the Cathedral of St Mary and the house of Simeon de Bona.<sup>42</sup> Unfortunately, it was not possible to determine the location of the house of Simeon de Bona, as it is not mentioned in the reviewed contracts in *Diversa notariae* and *Diversa cancellariae*. Notes of the councils from the first half of the 15th century that have been published on the websites of the DUCAC project also reveal nothing. Therefore, it may be argued that the house may be older, perhaps even significantly older, as even its masonry elements are not mentioned as models anywhere in the first half of the 15th century. Yet there are mentions of the houses owned by Bona family on the southern side of the present-day Bunićeva poljana.<sup>43</sup> The same document of 31 March 1430 shows that *domus magna* of Georgio de Gozze was built on the site of an older or even several older buildings, as their foundations seem to have been used in building the new house. Records of Minor Council are consistent with the course of works reconstructed from the contracts available in *Diversa notariae* and *Diversa cancellariae*.

The construction of the palace can be followed from 15 October 1428, when Georgius Dragoe de Gozze ordered carved equipment from Brajko Bogosalić and Dobrašin Radinović for the house he was planning to build

next to the Church of St Mary: *pro cantino* doors bearing the coat-of-arms, magazine doors and three windows above them.<sup>44</sup> In July 1429, the dispute surrounding the plot to build the house must have been resolved, and in August Georgio concluded a contract on making a cistern with Radan Klapčić,<sup>45</sup> and bought lime from him at the same time.<sup>46</sup> Over two months later, on 29 October, Dobrašin Radinović and Andruško Brajković committed themselves to deliver to the Port of Ragusa a frieze modelled upon the frieze on the new house of Antonio de Butcho owned by Georgio de Gozze. In addition, they were also commissioned to deliver thirty cornerstones, four frames and two brackets for magazine doors modelled upon the frames of the doors of Antonio de Butcho and four narrow windows. The craftsmen were to deliver a third of these masonry elements by 15 November, while the rest was due at Christmas.<sup>47</sup>

At the end of the 1420s the ordered masonry elements must have sufficed for the construction of the ground floor, and most likely the first floor of the palace. Only the information about the construction and provision of ashlar is missing. While the first contract with Dobrašin Radinović and Brajko Bogosalić does mention that masonry elements are intended for a house that Georgio was planning to build next to St Mary's, the other masonry contract does not state the house for which the masonry elements were ordered and if it was already being built. Considering that in the August of 1429 Radan Klapčić intended to finish the ordered cistern in one year, Georgio could have ordered the masonry elements in advance, while the contract with the builder, perhaps Radan Klapčić, who was already making the cistern, or Božidar Bogdanović, who was building prestigious buildings in Ragusa at the time and could be connected to Božidar mentioned in *Acta consilii minoris* with regard to Gozze's buildings, could be concluded after the cistern was finished.<sup>48</sup>

In the first half of the 1430s, the houses of Georgio de Gozze are mentioned in other contracts as models for the masonry elements for other patrons. In December 1431, Brajko Bogosalić and Ratko Brajković promised Marino de Mislien to make him a sink modelled upon the sink in the house of Georgio de Gozze,<sup>49</sup> while on 1 March 1433 Ratko Ivančić was commissioned to make an arch above the doors bearing a coat-of-arms modelled upon the arch made for Georgio de Gozze by the Church of St John in Dubrovnik.<sup>50</sup> It is not clear which of the two houses of Georgio de Gozze the documents refers to, but most probably it is the older house in Pustjerna, which was finished and at least partially furnished at the time. The second document undoubtedly refers to the house next to the cathedral, but the contract between Georgio de Gozze and Ratko Ivančić is not available. It may not have existed and the portal bearing the coat-of-arms may be the one commissioned from Brajko

Bogosalić and Dobrašin Radinović on 15 October 1428, as from 1427 Ratko Ivančić regularly worked with Dobrašin's brother Nikola Radinović,<sup>51</sup> and he is also mentioned twice in the contracts with Alegretto Bogavčić and Dobrašin Radinović in September 1428.<sup>52</sup>

The works on the house of Gozze by the cathedral must have stalled for a while at the end the 1420s, as the next contracts for masonry elements and construction works are only dated in 1435. On 22 October, the contract with brothers Radoje and Radin Pribilović was signed: they were to make four big monoforas (single-light windows), the so-called *finestre serachine*, modelled upon the ones on the first floor of the house and two monoforas in the great hall modelled upon the ones in the new de Butcho house by the next Feast of St George. On 18 February 1436, they signed an annexe to the contract to make big balconates, also modelled upon the ones in the house of Antonio de Butcho.<sup>53</sup> The price and the selection of craftsmen who performed the job lead us to believe that it refers to the popular balconates with double balusters, which appeared in Ragusa in the twenties and thirties.<sup>54</sup> The order was completed on 12 July 1436.

In 1436, the construction of upper floors continued. On 2 April 1436, Nikola Radinović was commissioned to make a frieze *de duobus schachis* modelled upon the frieze on the first floor and gutters.<sup>55</sup> In 1437, on 2 March, Georgio de Gozze ordered Đuka Utišeniović to make seven *balchonzellos* (two-light windows) and a frieze modelled upon the frieze on the first floor.<sup>56</sup> On 21 January 1439 Radiša Bogetić promised that he will make all the required arches *in domo nova ipsius ser Georgij sita prope ecclesiam Sancte Marie maioris*, and received payment instalments until March 1440.<sup>57</sup> The two contracts with carpenters for partition walls, stairs and wooden furnishings were concluded on 10 February and 30 June 1439, respectively.<sup>58</sup> Georgius received bricks from the officials of the Rector's Palace on 28 February 1439, and sand on 26 March 1439.<sup>59</sup>

In all these years, the equipment of Gozze house often served as a model: the dates on the reference contracts help us follow the construction of the building. On 14 April 1436, Marino de Georgio ordered five *fenestre serachine* from Dobrašin Radinović, which were to be modelled upon the windows in *domus nove ser Georgii et eius fratris de Gozze ad sanctam mariam maiorem*.<sup>60</sup> On 5 November 1438, Nikola Tvrtkoglavić ordered consoles modelled upon *existentis et positi in fabrica sale domus nove ser Georgii de Gozze* from Dobrilo Radovinović.<sup>61</sup> On 30 April 1439, Pribilović brothers were making *fenestre serachine* modelled upon the big monofora on the new house of Georgio de Gozze for the same patron.<sup>62</sup> On 5 October 1441, Sigismondo de Georgio concluded a contract with Ratko Brajković for a sink modelled upon the sink of Georgio de Gozze or Andrea de Volzo.<sup>63</sup>



FIGURE 2  
Cityscape of Dubrovnik, mid-17th century and  
Gozze house by the cathedral (photograph by  
Paolo Mofardin, Institut za povijest umjetnosti,  
Zagreb, IPU-F-27924\_PM).

Detail of figure 2. The unknown painter was not very precise in depicting details like forms and distribution of windows.



Locating and analysing the appearance  
of private houses in 15th century Dubrovnik:  
The Case of Georgio de Gozze house



Documents on masonry, carpentry and building works allow us to roughly reconstruct the image of *domus magna* of Georgio de Gozze. It was a three-storey building, and the main facade, most probably facing the square in front of the cathedral, was adorned by polifora and two monoforas. Behind them was a large hall with a *ballatoio* and all the required luxurious carpentry equipment. Probably, the four monoforas had to be installed on the side façade overlooking a narrow street that ran toward Stradun past the palace of Radoslav Pavlović. There were biforas on the upper floor, as they were, for example, on the palace of Sandalj Hranić and on many other houses of this period.<sup>64</sup> *Domus magna* of Georgio de Gozze was a significant contribution to the image of the city square, which received a complete overhaul at the time. By locating other private buildings and analysing documents about their construction, it would be possible to largely reconstruct the approximate image of the city in different periods. The publication of the DUCAC project documents is a significant step in this direction, as it offers an excellent starting point to locate at least several key structures. When documents about the construction of individual private buildings can be linked to a specific site, it will become clear which parts of the city developed the fastest in a particular period and how individual families, considering their social standing, divided the sites in the city. Information available on Gozze houses leads us to believe that the core of the family moved from Pustjerna to the new representative centre of the city, and lavishly spent money on both the interior and the exterior of the house. During the construction of his home, Georgio de Gozze engaged prominent craftsmen, who received prestigious commissions across Dubrovnik. The craftsmen must have excelled themselves, as Georgio, in his capacity as the leading official responsible for the renovation of the Rector's Palace, concluded contracts for window openings and other masonry work with the same masters.<sup>65</sup>

## Notes

- 1 Cf. e. g. Mirjana Popović Radenković, "Le relazioni commerciali fra Dubrovnik e la Puglia nel periodo angioino (1266–1442)," *Archivio Storico per le Province Napoletane* n. s. XXXVIII (1958): 73–104; Mirjana Popović, "La penetrazione dei mercanti pratesi a Dubrovnik nella prima metà del XV secolo," *Archivio storico italiano* CXVII (1959): 503–521; Ignacij Voje, *Kreditna trgovina u srednjovjekovnom Dubrovniku* (Sarajevo: ANUBiH, 1976); Bariša Krekić, "I mercanti e produttori toscani di panni di lana a Dubrovnik (Ragusa) nella prima metà del Quattrocento," in *Produzione, commercio e consumo dei panni di lana. XII–XVIII secolo*, ed. Marco Spallanzani (Firenze: Olschki, 1976), 707–714; Ignacij Voje. *Poslovna uspešnost trgovcev v*

- srednjeveškem Dubrovniku* (Ljubljana: Znanstveni inštitut Filozofske fakultete, 2003); Francesco Bettarini, *La comunità pratese di Ragusa (1414–1434). Crisi economica e migrazioni collettive nel Tardo Medioevo* (Firenze: Casa Editrice Leo S. Olschki, 2012).
- 2 Lukša Beritić, *Utvrdjenja grada Dubrovnika* (Zagreb: JAZU, 1955), 35-70; Renata Novak Klemenčič, “Dubrovniška Velika fontana,” *Zbornik za umetnostno zgodovino* n. s. XXXIX (2003): 57-91; Relja Seferović and Mara Stojan, “The Miracle of Water: Prolegomena to the Early Renaissance Aqueduct of Dubrovnik,” *Dubrovnik Annals* 11 (2007): 49-84.
  - 3 Ilija Mitić, “Orlandov stup u Dubrovniku,” *Anali historijskog instituta u Dubrovniku* 10–11 (1962–1963): 233-254.
  - 4 Cvito Fisković, *Prvi poznati dubrovački graditelji* (Dubrovnik: JAZU, 1955), 30; Renata Novak Klemenčič, “Cerkev sv. Vlaha v Dubrovniku v dvajsetih letih 15. stoletja in Bonino di Jacopo da Milano,” *Zbornik za umetnostno zgodovino* n. s. XLVII (2011): 60-74.
  - 5 Nada Grujić and Danko Zelić, “Palača vojvode Sandalja Hranića u Dubrovniku,” *Annali Zavoda za povijesne znanosti HAZU* 48 (2010): 47-132; Nada Grujić, *Kuća u gradu. Studije o dubrovačkoj stambenoj arhitekturi 15. i 16. stoljeća* (Dubrovnik: Matica hrvatska, Ogranak 2013), 91-131.
  - 6 E. g. Državni arhiv u Dubrovniku / State Archives in Dubrovnik (hereafter: DaD), *Diversa cancellariae* (hereafter: *Div. canc.*) 43, f. 137v; DaD, *Div. canc.* 44, f. 4v; DaD, *Div. canc.* 45, ff. 57v-58r; DaD, *Div. canc.* 46, ff. 78r, 247r; DaD, *Div. canc.* 47, f. 40r.
  - 7 DaD, *Div. canc.* 43, f. 88r-88v; cf. Cvito Fisković, *Naši graditelji i kipari XV. i XVI. stoljeća u Dubrovniku* (Zagreb: Matica Hrvatska 1947), 115.
  - 8 DaD, *Div. canc.* 43, f. 137v.
  - 9 Nada Grujić, “Onofrio di Giordano della Cava i Knežev dvor u Dubrovniku,” in *Renesansa i renesanse u umjetnosti Hrvatske*, ed. Predrag Marković and Jasenka Gudelj (Zagreb: Institut za povijest umjetnosti, Odsjek za povijest umjetnosti Filozofskog fakulteta Sveučilišta u Zagrebu, 2008), 9-50; Renata Novak Klemenčič, “Rekonstrukcija fasade Kneževoga dvora v Dubrovniku v času prenove Onofria di Giordano della Cava,” *Annales. Series Historia et Sociologia* 24/2 (2014): 253-260.
  - 10 Novak Klemenčič, “Dubrovniška Velika fontana,” 77-79; Cvito Fisković, “Petar Martinov iz Milana i pojava renesanse u Dubrovniku,” *Prilozi povijesti umjetnosti u Dalmaciji* 27 (1988): 124, n. 50.
  - 11 Several documents on private buildings from 15th century were published by Fisković, *Naši graditelji i kipari*, passim; for the building history of some of the buildings see Grujić, *Kuća u gradu*, passim.
  - 12 Renata Novak Klemenčič, “Načrti in risbe v kamnoseški dejavnosti v prvi polovici 15. stoletja v Dubrovniku,” *Annales. Series Historia et Sociologia* (2016): in print.
  - 13 DaD, *Div. canc.* 41, ff. 195r (28. 11. 1417), 207v-208r (3. 1. 1418), 236v (3. 3. 1418), 268v (18. 7. 1418). Cf. Fisković, *Naši graditelji i kipari*, 61. This Resti house is probably the one mentioned in a contract of 17 April 1425 for carpentry works in *casa nostra mazor oltra la Piaça*, see: Grujić, *Kuća u gradu*, 370-371, doc. 3, and is probably identical to the *domo magna nova ser Vite et ser Clementis de Resti* mentioned on 1 December 1425, DaD, *Div. canc.* 43, f. 239v.
  - 14 Grujić, *Kuća u gradu*, 321, n. 41; Renata Novak Klemenčič, “Nekoliko zapažanja o drvenoj opremi dubrovačkih kuća u 15. stoljeću,” *Zbornik dubrovačkih muzeja* III (2015): 89-90.
  - 15 DaD, *Div. canc.* 44, ff. 136v-137r, 216r, 223v. DaD, *Div. canc.* 45, ff. 109v-110r. DaD, *Diversa notariae* (hereafter: *Div. not.*) 16, ff. 283v-284r. For the windows modelled upon those on the palace of Sandalj Hranić cf. Grujić, *Kuća u gradu*, 123. Most probably, Zupan de Bona built another lavishly decorated house between 1435 and 1442, DaD, *Div. canc.* 48, f. 344v. A polifora for

- Zupan de Bona is mentioned in December 1435 as *ante canzelariam*, DaD, *Div. canc.* 49, f. 184bisv. It remains difficult to establish if the Bona house was built close to the Rector's Palace or, perhaps, that the polifora was only made there.
- 16 DaD, *Div. not.* 23, ff. 67r-68r, 70v-71r, 146v, DaD, *Div. not.* 25, f. 123v, DaD, *Div. not.* 26, ff. 19r, 107v. Cf. Fisković, *Naši graditelji i kipari*, 50.
- 17 DaD, *Div. not.* 29, ff. 190v-191r. Cf. Fisković, *Naši graditelji i kipari*, 116.
- 18 The use of countryside houses at the time of the plague is testified by a decision of the Minor Council on 27 November 1445: during the reconstruction works on the Rector's Palace in Slano: the Rector was supposed to move into the house of Junius de Gradi; in case of the plague outbreak he had to leave the house in eight days, DaD, *Acta Consilii Minoris* (hereafter: *CMin*) 10, f. 182v. Cf. Nada Grujić, *Ladanjska arhitektura dubrovačkog područja* (Zagreb: Institut za povijest umjetnosti, Nakladni zavod Matice hrvatske, 1991), 38-50; Novak Klemenčič, "Nekoliko zapažanja o drvenoj opremi dubrovačkih kuća," 88.
- 19 Irmgard Mahnken, *Dubrovački patricijat u XIV veku. Genealoške table* (Beograd: SANU, 1960), XXXIV/3.
- 20 DaD, *Debita notarie*, passim. I would like to thank Prof. Ignacij Voje for sharing this information with me.
- 21 For the plague cf. Risto Jeremić and Jorjo Tadić, *Prilozi za istoriju zdravstvene kulture starog Dubrovnika I* (Beograd: Centralni higijenski zavod, 1938), 75-78.
- 22 DaD, *Acta Consilii Rogatorum* 6, f. 104v.
- 23 For the contracts cf. Hans Folnesics, "Studien zur Entwicklungsgeschichte der Architektur und Plastik des XV. Jahrhunderts in Dalmatien," *Jahrbuch des Kunsthistorischen Institutes der k.k. Zentralkommission für Denkmalpflege VIII* (1914): 187-189; Risto Jeremić and Jorjo Tadić, *Prilozi za istoriju zdravstvene kulture starog Dubrovnika III* (Beograd: Centralni higijenski zavod, 1940), 15-20; Novak Klemenčič, "Dubrovniška Velika fontana," 83-86; DaD, *Div. not.* 24, f. 147v.
- 24 Fisković, "Petar Martinov iz Milana i pojava renesanse u Dubrovniku," 120, n. 144; DaD, *Div. not.* 27, f. 173v-174r, cf. Fisković, *Naši graditelji i kipari*, 107.
- 25 DaD, *Div. not.* 20, ff. 176v-177r; DaD, *Div. not.* 25, f. 38v.
- 26 DaD, *Div. not.* 23, f. 146v.
- 27 DaD, *Div. canc.* 42, f. 261v.
- 28 Edoardo Arslan, *Venezia gotica. L'architettura civile* (Milano: Electa, 19962), 32; Nada Grujić has noted that the remains of an outdoor staircase can be seen on the house. It was probably removed following one of the decisions of Dubrovnik government in 1329, 1332, and 1377, Grujić, *Kuća u gradu*, 36. Patricija Veramenta Paviša mentions another Gozze house in Ulica Braće Andrijića, Patricija Veramenta Paviša, "Palača Gozze-Gučetić u Ulici Svetog Josipa u Dubrovniku (dosad nazivana Martinušić)," *Analiz Zavoda za povijesne znanosti HAZU u Dubrovniku* 41 (2003): 219.
- 29 DaD, *Div. canc.* 43, ff. 10v, 36.
- 30 Novak Klemenčič, "Nekoliko zapažanja o drvenoj opremi dubrovačkih kuća," 90, n. 30; Karl Kovač, "Nikolaus Ragusinus und seine Zeit," *Jahrbuch des Kunstgeschichtlichen Institutes der k. k. Zentral-Kommission für Erforschung und Erhaltung der kunst- und historischen Denkmale XI* (1917): 34; Jorjo Tadić, *Grada o slikarskoj školi u Dubrovniku XIII-XVI, I* (Beograd: SANU, 1952), 73-74, doc. 178.
- 31 DaD, *Div. canc.* 45, ff. 85v, 275r (15. 10. 1428 and 7. 8. 1429).
- 32 DaD, *Div. canc.* 49, f. 266v (14. 4. 1436); DaD, *Div. not.* 22, f. 158r (21. 1. 1439).
- 33 DaD, *Div. canc.* 47, f. 70v (1. 3. 1433).
- 34 DaD, *Div. canc.* 49, f. 164r.
- 35 Beritić, Lukša, "Ubikacija nestalih gradjevinskih spomenika u Dubrovniku," *Prilozi povijesti umjetnosti u Dalmaciji* 10 (1956): 71-72; Lorenzo Vitelleschi, *Povijesne i statističke bilješke o*

- dubrovačkom okrugu = Notizie storiche e statistiche del circolo di Ragusa*, ed. Vincencije B. Lupis (Dubrovnik: Matica hrvatska, Državni arhiv u Dubrovniku, 2002), Tav. VIII.
- 36 Beritić, “Ubikacija nestalih gradjevinskih spomenika u Dubrovniku,” 72.
- 37 DaD, *CMin* 9, f. 88r.
- 38 <https://ducac.ipu.hr/project/mapping/>, accessed April, 2017.
- 39 Ivana Lazarević, *Vlasteoske kuće u gradu Dubrovniku 1817. godine* (Zagreb – Dubrovnik: Zavod za povijesne znanosti HAZU, 2014), 192-197; Cf. Katarina Horvat-Levaj, *Barokne palače u Dubrovniku* (Zagreb – Dubrovnik: Institut za povijest umjetnosti, Zavod za povijesne znanosti HAZU, 2001), 238-240, 256.
- 40 Novak Klemenčič, “Nekoliko zapažanja o drvenoj opremi dubrovačkih kuća,” 96-97, doc. 3.
- 41 DaD, *CMin* 4, f. 92v; DaD, *Div. canc.* 44, f. 147r.
- 42 <https://ducac.ipu.hr/project/mapping/e4-segment/e4-iuxta-cath-goze/>, accessed April 2017.
- 43 Lazarević, *Vlasteoske kuće u gradu Dubrovniku 1817. godine*, 186-189.
- 44 DaD, *Div. canc.* 45, f. 85v.
- 45 DaD, *Div. canc.* 45, f. 275r.
- 46 DaD, *Div. canc.* 45, f. 275r.
- 47 DaD, *Div. canc.* 46, f. 62r.
- 48 <https://ducac.ipu.hr/project/mapping/e4-segment/e4-iuxta-cath-goze/>, accessed April 2017.
- 49 DaD, *Div. not.* 17, f. 173r.
- 50 DaD, *Div. canc.* 47, f. 70v.
- 51 DaD, *Div. canc.* 44, ff. 212r-212v, 213v, 161r, 161v; DaD, *Div. not.* 15, ff. 265v, 266. Cf. Nada Grujić, “Balatorij u dubrovačkoj stambenoj arhitekturi XV. stoljeća,” *Prilozi povijesti umjetnosti u Dalmaciji* 37 (1997–1998): 142, 152-153. DaD, *Div. canc.* 46, f. 149r.
- 52 DaD, *Div. canc.* 45, ff. 60r, 61r.
- 53 DaD, *Div. canc.* 49, f. 159v.
- 54 Cf. Renata Novak Klemenčič, “Kamnoseška podjetja v Dubrovniku v prvi polovici 15. stoletja,” in *Vojetov zbornik*, ed. Sašo Jerše (Ljubljana: Založba ZRC, ZRC SAZU, 2006), 469-470.
- 55 DaD, *Div. canc.* 49, f. 260r.
- 56 DaD, *Div. canc.* 50, f. 158r.
- 57 DaD, *Div. not.* 22, f. 158r.
- 58 Novak Klemenčič, “Nekoliko zapažanja o drvenoj opremi dubrovačkih kuća,” 90-96.
- 59 DaD, *CMin* 8, ff. 33v, 41v.
- 60 DaD, *Div. canc.* 49, f. 266v.
- 61 DaD, *Div. not.* 22, f. 121v.
- 62 DaD, *Div. not.* 23, f. 47v.
- 63 DaD, *Div. canc.* 55, f. 194r.
- 64 Grujić, *Kuća u gradu*, 181-183.
- 65 Grujić, “Onofrio di Giordano della Cava i Knežev dvor u Dubrovniku,” *passim*.

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# Monastic enclosure as urban feature: Mapping conventual complexes vs. public space in early modern Dubrovnik\*

Ana Marinković  
Zehra Laznibat

This paper is focusing on the interaction of the closed, high-walled conventual complexes with the public space, both in terms of the mutual impact on their respective physical structuring/appearance in the urban layout, as well as with regard to the (in)accessibility of these large areas nominally closed to the public, and their impact on the directions of urban spatial communication in the Late Middle Ages and the early modern period.<sup>1</sup> These *insulae* are not very perceivable in today's city of Dubrovnik, largely due to the extinction of all of the female communities within the historical urban core, but also due to significant relaxation of cloistered life in general. However, certain stretches of the oldest part of the city still preserve the castle-like appearance of the ex-convents' perimetral walls. Various types of sources, both visual and written, attest to the radically different spatial experience of the cloistered communities, and allow its recognition, through mapping of the perimeters of *clausura* as contrasted to the public space. Various factors which influenced the way in which the convents were shaped, notably the impact of the public space to their appearance, as well as the reverse phenomenon – consequences of the complexes' expansions on the public space, are further questions the paper aims at exploring. Finally, the temporality of those changes offer additional insights on the dynamic of the urban tissue, and an attempt at its visualisation is offered on the example of the monastery of St Bartholomew/Mark.

The paper is treating only female cloistered communities in Dubrovnik since male Benedictine monasteries were located outside of the urban zone, while the Mendicant friaries were not so tightly interwoven with the urban tissue, but rather added to its fringes. That is not to say that those communities, in terms of their merging with the urban space, as well as their simultaneous further spatial separation from its public areas, are not relevant to the topic; however, their nature tackles somewhat different problems of spatial and urban disposition, and falls outside of the scope of this paper. Thus, the present paper focuses on six (out of eight) Ragusan nunneries, all of them located in the southern part of the city, that is, in its oldest nucleus.<sup>2</sup> Among the eight nunneries, five belonged to the Benedictine order, whereas the remaining three were Mendicant – two Clarissan and one Dominican. One should bear in mind that what we know of the spatial organisation of the preserved former convents is largely affected by the consequences of the devastating earthquake which struck Dubrovnik in the year 1667. After the earthquake most of the convents were extinct (St Andrew, St Mark, St Simeon, St Thomas, St Mary of the Angels), but some were restored (St Clare, St Mary *de Castello*) or new communities founded in the restructured complexes (the Holy Apostles turned into St Catherine of Siena).<sup>3</sup>





FIGURE 1  
Female convents in medieval Dubrovnik  
(photograph by Google Earth Pro, drawing by A. Plosnić Škarić).



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- 1** St Clare,
- 2** St Mark,
- 3** St Andrew,
- 4** St Mary *de Castello*,
- 5** St Simeon
- 6** The Holy Apostles,
- 7** St Mary of the Angels,
- 8** St Thomas .





FIGURE 2  
Cityscape of Dubrovnik,  
mid-17th century  
(photograph by Paolo Mofardin,  
Institut za povijest umjetnosti, Zagreb,  
IPU-F-27924\_PM).

FIGURE 3  
St Clare's Convent. Cityscape of  
Dubrovnik mid-17th century (detail)  
(photograph by Paolo Mofardin,  
Institut za povijest umjetnosti, Zagreb,  
IPU-F-27924\_PM).

FIGURE 4  
St Andrew's Convent. Cityscape of  
Dubrovnik mid-17th century (detail)  
(photograph by Paolo Mofardin,  
Institut za povijest umjetnosti, Zagreb,  
IPU-F-27924\_PM).

FIGURE 5  
St Mary de Castello's and The Holy  
Apostles' Convents. Cityscape of  
Dubrovnik mid-17th century (detail)  
(photograph by Paolo Mofardin,  
Institut za povijest umjetnosti, Zagreb,  
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Two convents — the Benedictine St Thomas and Dominican St Mary of the Angels — were not included in this analysis since their exact location has not been identified; both were demolished in the earthquake, and while the area of Pustijerna where the former convent was located remained abandoned (and underresearched), the position of the latter was in an area (close to the Jesuit steps) whose urban layout was radically altered after the quake by a new urban space layout.<sup>4</sup>

The oldest among the convents were attested in the written sources already in the twelfth (St Simeon, St Mary *de Castello*) and thirteenth century (St Andrew, St Bartholomew, St Thomas), while for some of them there are indirect archaeological findings which suggest existence of churches as early as the early medieval period (St Andrew, St Bartholomew; however, the existence of a church does not prove existence of the monastic community, and one should not expect their presence earlier than the eleventh century), whereas for the later convents the exact data on the foundation are preserved (St Clare, the Holy Apostles).<sup>5</sup>

The sources used in this research are heterogeneous — they range from written sources, mostly city councils' decisions but also other genres, to visual representations of the city, such as cityscapes, and cartographic sources. The written sources used in this analysis are mostly gathered within the scope of the project *Dubrovnik: Civitas et Acta Consiliorum: Visualizing Development of the Late Medieval Urban Fabric*, and cover all the deliberations of the three city councils in the first half of the fifteenth century.<sup>6</sup> Written sources for the spatial development of the convents of St Andrew and St Bartholomew/Mark were gathered for the documentation of the archaeological excavations of the respective convents conducted in several campaigns from 1963 to 2012/2013.<sup>7</sup> Visual sources include two pre-1667 cityscapes: one is dated to the mid-seventeenth century and kept in the Association of the Ragusan Antiquities' Friends (DPDS), and the other is a detail of an altarpiece kept in the Dominican friary in Dubrovnik, attributed to painter Antonio de Bellis and dated to approximately the same period.<sup>8</sup> Both paintings bring strikingly clear representations of some of the cloistered communities, with the accentuated line of the walls encircling them. Finally, the historical maps of Dubrovnik — the map kept in the State Archives in Torino, dated to the beginning of the seventeenth century,<sup>9</sup> and two Austrian cadastral maps from the early nineteenth century — provide important data both on remains of the old street routes as well as certain retained arrangements of the public space, namely, the precinct wall of the Clarissan convent.

The data gathered from the written sources, contemporary cityscapes, and the historical maps were compared with the actual situation *in situ*

and the existing detailed urban maps and orto-photographs, and finally, paying special attention to the geomorphology of the terrain, applied on the working versions of the georeferenced map. It was proven useful to overlap certain maps, e.g. the 1837 cadastre with the contemporary one. The final positions of the historical borders of the convents, defined through comparison of all the gathered data, were mapped using AutoCAD on the georeferenced base-map.

The position, perimeter, and layout of the conventual complexes are defined by several natural and man-made factors, including geomorphology, pre-existing urban layout, development of architectural forms of the cloistered space, the access to and from the convent (involving various levels of semi-public access), as well as the related regulations passed by the city authorities.

1. **Geomorphology.** Since the oldest nucleus of the city is situated on the slope, most of the convents (except for St Clare and St Thomas) were built on multiple levels. For example, the sixteenth century wing of St Mark's convent opened to the church through windows positioned close to the church's ceiling. The convent of St Clare was built on the flat ground and therefore was able to assume more regular disposition. However, the arcaded wing in St Clare's, visible on the pre-1667 cityscape, dates from the later period (late 15th or 16th century), and such attempts at forming a regular arcaded cloister are visible also in the convent of the Holy Apostles at the turn of the sixteenth century, despite the steep terrain on which it was built.
2. **Pre-existing urban layout.** The complexes were incorporated in the network of public streets, and the origin of this arrangement is difficult to trace since the conventual nuclei probably coincided with the formation of the first public streets. It is important to stress that the streets stretching east to west represented main communications, and were plausibly conceived in the earliest period of urban formation, that is when the later city nucleus was still only a Byzantine fortress. On the other hand, the directions of the narrower streets stretching north-south more probably interacted with the development of cloistered communities. However, various public streets were affected by expansions of the conventual complexes, as attested by the city government's decisions regarding closing up of the streets, as well as by the contemporary visual representations of the city and the material remains. The cloistered complexes also interacted with another type of "public" space, namely, the city walls, as well as with public infrastructure, namely, the public fountain. These issues will be dealt with more thoroughly below.
3. **Development of architectural forms of clausura.** The general architectural development of cloistered complexes certainly affected Ragusan convents, and it is possible to distinguish between the earlier, medieval layout of

- irregularly grouped conventual buildings, and the later, Renaissance type of regular (frequently arcaded) cloister wings (Holy Apostles, St Clare, St Mark).
4. **Functional access.** This factor concerns both the limited (semi-)public access to certain areas of the convent as well as the access of the community members to the public infrastructure. The former includes public access to spaces such as the main conventual church or the parlatory, but also the access to the conventual and public storages, such as public granaries built within the monastic precincts, or monastic wine-cellar with double access. The latter regard primarily the nuns' access to the public water supply.
  5. **City government's decrees on cloistered spaces.** Not unlike the Italian cities, but certainly, in a rather emphasised form, the Ragusan city councils regularly passed the decisions regarding the spatial organisation of the convents. This mostly concerned the interaction of the clausura with the public space in terms of visual protection of the exclusive nuns' areas (however, the walling up of the openings regarded both the surrounding buildings, as well as the conventual buildings themselves), but also the organisation of the public space around the convents, which is related to the point II.

#### Spatial relation of cloistered complexes to public space

As indicated above, the relation of the conventual complexes to the public, "communal" streets include both the cases of adjustment of the complexes to the existing network of public space and, more rarely, the impact of the development of the complexes in the public areas, mostly their reduction. The former process, the adjustment of the convents to the pre-established pattern of public spatial communication, is visible in several Ragusan cases. From the earlier period, one can detect the position of the monasteries of St Bartholomew to the north and St Andrew to the south of the public street directed east-west and continuing eastwards to the port. This street is visible on the map kept in Torino, and there are also written documents attesting its position between the two monasteries, certainly serving as their delimitation. The steep street positioned north-south and lining the eastern perimeter of the convent of St Andrew (a branch of *Od kaštela*) most probably represented one of the earliest accesses to the oldest part of the city from the west, and thus defined the eastern border of the conventual complex.

The monastery of *St Mary de Castello* follows the line of the earliest main street stretching east-west and possibly marking the northern limits of the earliest fortress (*Od kaštela*), whereas the convent of the Holy Apostles in a similar way adheres to the parallel public street placed on the lower level to the north and descending eastwards to the port (*Strossmayerova*). It is evident that the convent of the Holy Apostles, whose northern wing was

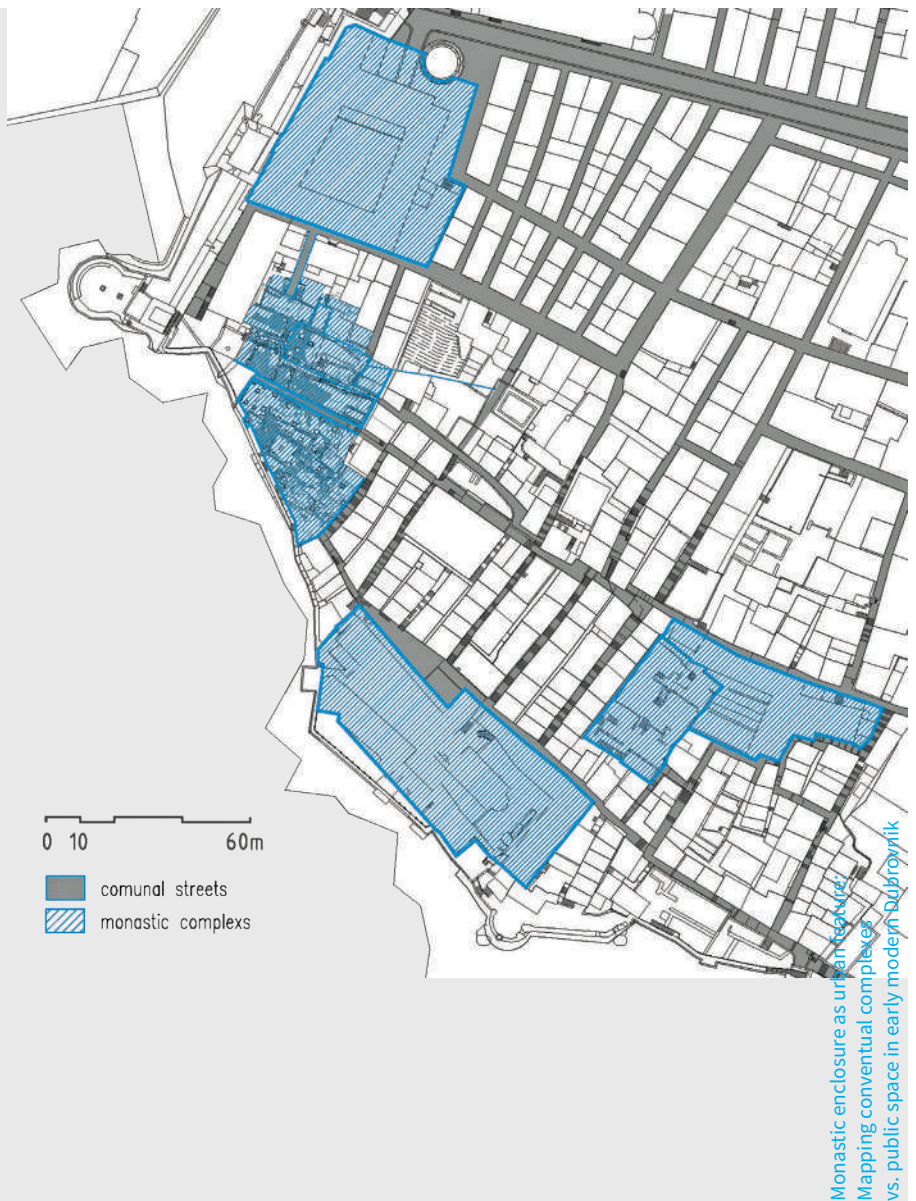


FIGURE 6  
Map of the south-western part of the historical city of Dubrovnik indicating the perimeters of the St Clare, St Mark, St Andrew, St Mary *de Castello*, St Simeon and The Holy Apostles convents and the public space (GIS base-map) (drawing by Zehra Laznibat).



built around the year 1500 after the new Clarissan community was founded next to the existing church of St Peter, purposely used the line of the street to formulate its northern perimeter. The documents attesting that, before the convent was built, the area was occupied by private houses indirectly confirm that the new convent respected the old street's direction.<sup>10</sup> As far as the southern side of the convent is concerned, its perimetral line follows the irregular layout of the narrow public streets. However, the disposition of the buildings in the southern part of the convent is still not clear, since the Baroque reconstruction affected its original Renaissance disposition.<sup>11</sup> The archaeological and conservation investigations detected certain wall structures pertaining to the original convent's buildings that would indicate the slightly different position of the perimetral wall,<sup>12</sup> but the analysis of the internal organisation of the convents has to remain a subject for another occasion. The same campaign has identified remains of the today closed, medieval street stretching between the convent of St Simeon and the area where later the convent of the Holy Apostles was built.<sup>13</sup>

The issue of the spatial disposition of the convent of St Simeon with regard to the public streets is complicated since it is the oldest firmly documented Ragusan female monastery, attested at the turn of the twelfth century. Therefore, it is disputable to which extent the convent was spatially defined by the existing streets, and how much for itself influenced the urban layout of the neighbouring area. Nevertheless, it is certain that the direction of the oldest two main streets orientated east-west was already established by the time of the foundation of this monastery. As the material remains (mostly the sixteenth-century perimetral wall) show, it was inserted between those two streets, but seemingly not bordering to either of them. However, two puzzling documents from 1433 mention a certain window in the city wall that St Simeon's abbess illicitly walled in.<sup>14</sup> This suggests that some stretches of the old city wall existed in the vicinity of St Simeon's complex, possibly on its northern side, later partly occupied by the extension of the northern wing of the Holy Apostles'. The construction of the perimetral wall encompassing the whole complex of St Simeon was ordered by the city authorities only in 1507<sup>15</sup> after the cloister of the Holy Apostles' was built, and due to this project today it represents the most regularly shaped conventual complex in the city. However, nothing is known of its internal disposition, since the whole area is turned into an open-air stage and the archaeological investigations are yet to be undertaken. Another decision from 1541, regarding the mentioned two convents, attests that even the visual communication between the two communities (possibly because of the different level of observing the clausura) was problematic. Namely, the Senate proposed that the dormitory of St Peter's (the Holy Apostles') is

granted to open windows overlooking the courtyard of St Simeon's convent, but the proposal was not accepted.<sup>16</sup>

For the convent of St Clare, there are also written documents preserved concerning the planning of its position with regard to the public streets. To begin with, the urban regulation inserted in the communal Statutes after the fire in 1296 mentions the preservation of the streets on the eastern and southern sides of the convent, which certainly defined its position, seen that the Clarissan community moved to this location only in 1290.<sup>17</sup> At the end of the latter street (today Za Rokom) in 1407, a small gate used for disposing of the garbage was opened in the city walls.<sup>18</sup> This street is still existing, partly closed in the courtyard of the retirement home (former medieval hospital *Domus Christi*) behind the ex-convent of St Clare, and in the city wall, situated at the end of the above-mentioned street, the small walled-in Gothic gate is visible. The preserved southern wing of the ex-convent, spatially defined by this street, is built after the earthquake, but the pre-1667 cityscape, as well as the painting by Antonio de Bellis, clearly show the earlier rectilinear southern perimetral wall of the convent. The fifteenth-century documents attest to the continuous care of the city authorities regarding the observation of clausura in the Clarissan convent; a number of decrees related to this convent in the first half of the fifteenth century is several times higher than that concerning the other Ragusan convents.<sup>19</sup> This is not surprising, seen that the convent was used as the college for young patrician daughters and the retirement home for the patrician widows. The councils mostly focused on violations of the clausura by entering (for example, through the ventilation openings, and especially through the wine-cellar which was open also to the public street during the grape harvest), but also by visual access (therefore several decisions of walling in of the windows of the neighbouring houses).

The other type of interaction of the cloistered complexes and the public space, that is, the impact on the streets and squares effectuated by extensions and reorganisations of the convents is traceable in several cases. The most indicative is the development of the monastery of St Bartholomew, later St Mark, that twice resulted in the cancellation of two public streets. The first occasion was the annulment of a diagonally positioned street leading to the old church of St Bartholomew, positioned near the western façade of the later church of St Mark. The street was cancelled with the construction of the new large church over its route in the early fifteenth century. Traces of the line of this street are preserved in details of the urban layout westwards of the convent and are visible in the contemporary city maps. Surprisingly, the whole street is drawn on the map of Dubrovnik kept in Torino, dated around 1600, but apparently compiled from various older



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FIGURE 7  
The northern facade of the eastern wing of the ex-convent of St Mary de Castello (street Od Kaštela) (photograph by the authors).

FIGURE 8  
The northern facade of the western wing of the ex-convent of St Mary de Castello with remnants of the boundary wall (photograph by the authors).



FIGURE 9  
The northern facade of the ex-convent of the Holy Apostles (street Strossmayerova)  
(photograph by the authors).



FIGURE 10  
The southern stretch of the ex-convent of the Holy Apostles (street Ivana Rabljanina)  
(photograph by the authors).

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FIGURE 11  
The remnants of the wall closing the western part of the church of St Peter with the parlatory (photograph by the authors).



FIGURE 12  
The southern facade of the ex-convent of St Clare (street Za Rokom) (photograph by the authors).

data. The second enlargement of the convent, now rededicated to St Mark, concerned the construction of the new wing, lining the southern side of the church, in the sixteenth century. This wing annulled the old public street stretching east-west, leading to the position of the old chapel dedicated to St Martin. The destroyed chapel was immediately rebuilt within the neighbouring convent of St Andrew. St Andrew's church was rebuilt in its turn in the late 1420s when it was extended to the east and thus bridged one of the narrow streets, which was immediately closed.<sup>20</sup>

The most significant impact a cloistered complex exerted on the public space in Dubrovnik was that of the Clarissan convent. Namely, the convents, as well as the city government, were trying to procure undisturbed access to water to the members of their communities. Although there were servants appointed to the duty of water supply, the convents built the cisterns, if possible, within their walls. When the public aqueduct was built in the 1430s, it was ending in two public fountains, one of which was placed in front of St Clare's where formerly the public wells were positioned.<sup>21</sup> The pre-1667 cityscapes show the boundary wall of the convent touching or extending towards the large polygonal public fountain in exactly the same way shown on the cadastral map from the year 1837. This suggests that the wall (demolished in 1904) encompassing the small courtyard north to the church of the Clarissan convent was not built by the Habsburg army after 1814, as suggested by the late nineteenth-century conservators eager to tear down the wall,<sup>22</sup> but that it stood there originally. The position of the remaining part of the stone pipe in the city wall above the gates, protruding towards the fountain, indicates the existence of a supporting wall stretching at the exact position of the documented convent's perimetral wall. Finally, the description of the Ragusan teacher, Humanist Philip de Diversis, who witnessed the construction of the public fountain, mentions that "there will be a concealed place where the women can privately take water".<sup>23</sup> De Diversis speaks of construction of the fountain "next to the convent of St Clare because there was the largest space",<sup>24</sup> but soon, as he announced, it mostly ceased to be publicly accessible. Thus, a large part of the public square in front of the internal gate of Pile, between the convent of St Clare and the Franciscan friary, was appropriated by the Clarissan convent in the mid-fifteenth century, for the reason of the nuns' access to water.

The most distinctive visual feature of the cloistered communities was tall and closed boundary walls encompassing the conventual buildings. Considerable stretches of these walls are preserved in their original height at the convent of the Holy Apostles. The part of the wall protecting the western part of the church where the parlatory was placed was later partly demolished, but is suggestively rendered in the pre-1667 cityscape. Similar

precinct, visible on the Austrian map from the 1820s, can be recognised in the low remnants of the wall in front of the western addition to St Mary *de Castello*. The boundary walls are also attested in the old photographs of the Clarissan convent and the council's decision regarding the wall encompassing St Simeon's. Where the convents' wings served as the boundary to the public space, the respective walls were built in the same way – tall and with no openings or openings only at the top floor. Such arrangements are still visible in the northern wing of the complexes of St Mary *de Castello* and the Holy Apostles, and the southern wing of St Clare's.

**Spatial relation  
of cloistered  
complexes  
to the city walls**

Most of the Ragusan nunneries were located next to the city walls, and while the fortifications were not treated as public space, the regulations regarding the adjacent areas were, expectedly, very strict. Such position of the female monasteries, that is, within the oldest nucleus of the city, is understandable since this was the best protected area. (On the contrary, the male monasteries were located outside of the city walls, most frequently on the small islands in the city's vicinity.) With the development and spatial expansion of the city to the burgus, and then further to the north, until the city walls finally encompassed the area of Prijeko, the nunneries remained in a marginal location, grouped dominantly in the south-western part of the city. Relation of those convents to the city-walls as space under the special regime of the city authorities, was largely defined by two factors: decisions regarding detachment of any building from the city walls, and decisions regarding clausura of the nuns, that is, the prohibition of opening windows towards the public space, including the city walls.

Adjustment of the conventual buildings to the line of the city walls is best documented by the city councils' decrees regarding the monastery of St Mary *de Castello*. Since this stretch of the city walls was being rebuilt in the 1420s, there are several decisions concerning its spatial relation to the convent. In 1425 the Senate ordered that the convent's refectory should not be torn down, but its wall and the city wall should be "doubled" (apparently meaning that the refectory should not lean to the city wall), and that between them a public street should not be created; the wall should be "as high as necessary" and there should not be windows or openings in the refectory facing the south (i.e. the city wall).<sup>25</sup> The position of the refectory adjacent to the city walls is confirmed by another related decision that the new stretch of the city walls should begin at the corner of the refectory of St Mary's.<sup>26</sup> In 1427 the Rector and his Minor Council ordered that the stairs leading to the city walls close to the convent of St Mary and its garden be removed, and placed somewhat further.<sup>27</sup> The council also ordered that the "spot where the stairs are presently located be adjusted so that nobody can



FIGURE 13

Historical photo of the northern perimetral wall between the ex-convent of St Clare and the public fountain.

enter the convent”, and that the abbess is allowed to extend the convent’s boundary wall to the east.<sup>28</sup> In 1449 the abbess was allowed to “bridge” the city walls from east and west so that the “persons passing in the street(!) cannot enter and cause scandal or disturb the nuns”, provided these walls should at any time be destroyed at the request of the rector.<sup>29</sup>

As the construction of the city walls proceeded westwards towards, new decisions regarding the convent of St Andrew confirm that also here monastic buildings adhered to the city walls. During the construction works, a part of the monastery was sequestered and torn down, but the commune was responsible for financing the necessary reparations.<sup>30</sup> Following the city walls further to the north, the Clarissan convent also placed its buildings next to the walls; the Senate’s decision regarding vaulting of the tower mentions that it is positioned above the convent’s kitchen.<sup>31</sup>



The permissive attitude of the city authorities regarding the conventual buildings leaning on the city walls (otherwise strictly forbidden), is evident in an early decision, passed in 1387, and repeated in 1417, regarding creation of a public street next to the city walls in the location between the convents of St Clare and St Andrew. This area *does not* include the areas of the two convents, but only that *between* them, that is, the stretch next to the public hospital and certain private houses placed south of it (bordering on the eastern side with the convent of St Bartholomew).<sup>32</sup> In 1418 the Senate repeated that this street should be created, this time referring to its location as “behind the communal hospital next to the city walls, and similarly behind the monastery of St Mark” (though it seems that the buildings of St Mark never stretched so far westwards as to reach the city walls).<sup>33</sup> This street, although today closed for public, is still existent next to the stretch of the city walls between the towers of Pile and Bokar, whereas St Clare’s and St Andrew’s areas remained adherent to the city walls.<sup>34</sup> This attitude towards the nunneries is somewhat puzzling, seen the otherwise strict regulations regarding the space around the city walls.

## Conclusion

The paper delineated several factors shaping the position and spatial limits of the cloistered complexes within the urban tissue of late medieval and early modern Dubrovnik: geomorphology, pre-existing urban layout, development of architectural forms of *clausura*, functional access (to and from the convent), and the control of the spatial aspect of *clausura* the city government exerted through its decrees. Special attention was paid to the relation of the conventual complexes to the public space, as attested in the city councils’ decisions, contemporary cityscapes, and historical maps, and confirmed by physical remains in today’s urban tissue. As a variant of communal, though non-public space, the city walls were treated separately, as their interaction with the convents is documented sufficiently in the contemporary written sources. Both public streets and city fortifications, as main threats to the immaculate observation of *clausura*, were frequently discussed by the city councils in relation to the position of the convents, whose discipline the government was eager to control. Study of the spatial distribution of conventual buildings within the precincts of cloistered complexes, with special attention to the question of liminal spaces with semi-public access, as well as inclusion of male communities with its gendered particularities, should be the next step in the research of interaction of the opposites – the public and the cloistered spaces in early modern Dubrovnik.

- \* This work was fully supported by the Croatian Science Foundation's funding of the project *Dubrovnik: Civitas et Acta Consiliorum. Visualising the Development of the Late Medieval Urban Fabric* DUCAC-UIP-11-2013-9492.
- 1 On clausura as a spatial phenomenon, see: Anabel Thomas, *Art and Piety in the Female Religious Communities of Renaissance Italy: Iconography, Space, and the Religious Woman's Perspective* (New York: Cambridge University Press, 2003), 35-44, and 75-99 (mostly on the internal organisation of clausura); Sharon Strocchia, *Nuns and Nunneries in Renaissance Florence* (Baltimore: The Johns Hopkins, University Press, 2009), 152-190.
  - 2 On the poleogenesis of Dubrovnik see: Lukša Beritić, *Urbanistički razvitak Dubrovnika* (Zagreb: Zavod za arhitekturu i urbanizam Instituta za likovne umjetnosti JAZU, 1958); Željko Peković, *Dubrovnik: nastanak i razvoj srednjovjekovnoga grada* (Split: Muzej hrvatskih arheoloških spomenika, 1998), with the cited bibliography.
  - 3 Beritić, *Urbanistički razvitak*, 28, 32-33.
  - 4 Lukša Beritić, "Ubikacija nestalih gradjevin-skih spomenika," *Prilozi povijesti umjetnosti u Dalmaciji* 10 (1956): 76-77 (St Mary of the Angels), 78-79 (St Thomas).
  - 5 Beritić, "Ubikacija," 59-61 (the Holy Apostles), 72-74 (St Andrew), 74-76 (St Bartholomew/Mark), 77-78 (St Simeon).
  - 6 All of the city councils' decisions from the period 1400-1450 referred to below are published at the website of the DUCAC project: <https://ducac.ipu.hr/project/mapping/>, accessed April 13, 2017.
  - 7 The most important campaigns were conducted by Ivica Žile (1989-1991) and Nela Kovačević Bokarica (2012-2013).
  - 8 Cf. Danko Zelić, "Grad u slici" and Denis Vokić, "Neke sličnosti slike *Dubrovnik prije trešnje* sa slikom Cavtata iz crkve Gospe Snježne i s De Bellisovom slikom iz Muzeja dominikanskog samostana," in: *Dubrovnik prije trešnje: konzervatorsko-restauratorski radovi i interpretacija slike*, ed. Ljubo Gamulin (Dubrovnik: Društvo prijatelja dubrovačke starine, 2016), 9-35, and 54-55.
  - 9 The map is published in: Ilario Principe, "Tri neobjavljene karte Dubrovnika iz XVI.-XVII. stoljeća," *Dubrovnik* n.s. 2/1 (1991): 191-202.
  - 10 (21 Feb 1497) *Prima pars est de acceptando et confirmando designum portatum per officiales ad id electos pro monasterio sanctorum Apostolorum fabricando ubi est ecclesia sancti Petri maioris prout fuit concessum per sedem apostolicam includendo domum domini Charini (?) de Bocignolo quam tenet prior sancti Andree. Et domum illorum de Caboga cum eorum casali, et casali Charti (?) barberii (...)*; CRog 28, f. 14r.
  - 11 For the results of the archaeological campaigns conducted in 1960-1972 and 1981, see: Željko Peković, *Crkva sv. Petra Velikoga – dubrovačka predromanička katedrala i njezina skulptura* (Dubrovnik – Split: Omega Engineering, Studia mediterranea, Filozofski fakultet, 2010.), 35 sqq.
  - 12 Peković, *Crkva Sv. Petra*, 50, fig. 27.
  - 13 This street is possibly referred to in two documents dated before the construction of the Holy Apostle's convent: (8 Feb 1428) *ser Nicola Stephani de Lucari possit levare et laborare casale suum prope ecclesiam Sancti Viti quod laborat dimmitendo ibi viam latam et amplam palmis novem de passu secundum formam statuti octavi libri ad caput LVII.*; CMin 4, f. 192v (the mentioned church of St Vitus was positioned roughly at the junction of St Simeon's and the Holy Apostle's convents); (29 Nov 1446) *Captum fuit quod Nicolaus Stella per totam diem octavam decembris proxime futuram debeat nettari et mundari fuisse in ruga subtus voltam Sancti Simeonis videlicet existente subtus domum heredum ipsius ser Nicolai*; CMin 11, f. 57r.
  - 14 (8 Jan 1433) *Captum fuit quia domina abbatissa monasterii Sancti Simeonis Ragusii fenestram quam noviter fecit obturare et murare in muro communis civitatis nostre, illam debeat facere aperire*

## Notes

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n.  
32-34

n.  
1-14

- et cum ferris aptare sicut prius erat per totum presentem mensem sub pena ypperperorum XXV. Die XIII february 1433. Captum fuit quod fenestra de qua supra fit mentio sit et stare possit obturata et murata prout stat quia ad ipsum locum dominus rector cum suo minori consilio adfuit et cognovit murari et obturari potuisse per dictam dominam abbatissam; CMin. 6, f. 15r.*
- 15 (22 Oct 1506) *Prima pars est de providendo pro monasterio sancti Symeonis claudendo ab illis partibus que sunt aperte et per quas possit ingredi in dictum monasterium; CRog 30, f. 181v; (24 Oct 1506) Prima pars est de dando libertatem domino Rectori et suo minori consilio expendendi usque ad ypperperos centum triginta in fabricando claudi de muris monasterium sancti Symeonis ab illis partibus que sunt aperte secundum partem captum quam expensam faciant per manus officialium eligendorum in minori consilio superinde prout ipsis domino Rectori et minori consilio melius videbitur; CRog 30, f. 182r.*
- 16 (13 Aug 1541) *Prima pars est de dando libertatem dominis officialibus deputatis super fabrica sancti Petri possint dormitorium monialium accommodari cum fenestris fabricandis in muro respicit in curiam monasterii santi Simeonis (cancell). Secunda pars est de non dando; CRog 45, f. 170r-170v.*
- 17 *Statut Grada Dubrovnika*, ed. Ante Šoljić et al. (Dubrovnik: Državni arhiv u Dubrovniku, 2002), 464: L. VIII, c. 57; cf. Beritić, *Urbanistički razvitak*, 17.
- 18 (18 Oct 1407) *Item quod reponetur maiori consilio de faciendo unam portam pro portando imundicias per viam hospitalis; Ref 33, f. 32v.*
- 19 See <https://ducac.ipu.hr/project/mapping/c1-segment/c1-punccele/>, accessed April 13, 2017.
- 20 (20 Apr 1428) *Captum fuit quod abbatissa Sancti Andree possit crescere corpus ecclesie Sancti Andree extendendo supra viam comunis et faciendo voltam super ipsam viam comunis versus levantem pro crescendo dictam ecclesiam (...); Captum fuit de portando ad maius consilium pro claudendo et serrando dictam viam supra quam debet fieri volta predicta et quod sit et stet murata et clausa a parte superiori et a parte inferiori reliquendo unam portam ad inferiorem partem; CMin 4, f. 155r.*
- 21 Beritić, *Urbanistički razvitak*, 19-20.
- 22 On the decisions of tearing down the wall, see: Krasanka Majer Jurišić and Edita Šurina, *Velika Onofrijeva fontana u Dubrovniku: povijesnoumjetnička i konzervatorska studija*. Mala biblioteka Godišnjaka zaštite spomenika kulture Hrvatske vol. 16 (Zagreb: Ministarstvo kulture, Uprava za zaštitu kulturne baštine, 2016), 32-35.
- 23 *ibi erit locus vellatus, ut mulieres clam aquam accipiant; Philippus de Diversis, Situs aedificiorum, politiae et laudabilium consuetudinum inclitae civitatis Ragusii = Opis slavnoga grada Dubrovnika 1440*, ed. and trans. by Zdenka Janeković Römer (Zagreb: Dom i svijet, 2004), 154.
- 24 *apud monasterium Sanctae Clarae (quia ibi amplius fuit spatium) situs, fundatus et perpulchre fabricatus est fons; de Diversis, Situs*, 153.
- 25 (30 Apr 1425) *Prima pars est de non tangendo in refectorio sancte Marie de Castello sed de duplando ibidem murum civitatis et refectorii et ibidem non sit via et erigendo ipsum murum altum quantum fuerit necesse et quod nulla fenestra seu balchio aut foramen sit in dicto refectorio a parte pellagi; CRog 3, f. 247r.*
- 26 (26 Jul 1425) *Captum et declaratum fuit quod per officiales laboreriorum comunis procedi debeat circa laborerium seu murum civitatis Sancte Marie de Castello in hunc modum videlicet quod incipiendo ab angulo refectorii monasterii predicti Sancte Marie ire debeat versus ponentem dmitendo extra murum arborem granatorum et castagnolam et sic eundo usque ad domunculam molendini; CMin 3, f. 242v.*
- 27 (5 Jun 1427) *Captum fuit de precipiendo officialibus laboreriorum comunis quod destruere debeant et inde amoveri scalam in muro comunis que est prope monasterium*

- seu prope ortum monasterii Sancte Marie de Castello a parte levantis dicti monasterii et de faciendo dictam scalam in muro comunis in hospitali ecclesie Sancti Petri ad Lavas prope cantonem domus dicti hospitalis et de aptando ibi ubi ad presens est scala predicta quod inde introire non possit monasterium Sancte Marie predictae et quod abbatissa monasterii predicti iree possit laborando et extendere murum quem incepit a parte ponentis monasterii predicti usque ad lapidem magnum pro domo ibidem fienda et de dando ipsi monasterio ultra lapidem magnum predictum illud terrenum et locum quod et qui ibi sunt usque et ubi fuit domus molendini antiquitus (...); CMin 4, f. 92av.
- 28 It seems that in 1432 the council allowed the conventual buildings to be extended to that same area: (29 Apr 1432) *Captum fuit quod domna monasterii Sancte Marie de Castello Ragusii super terreno communis vacuo quod a parte ponentis confinatur cantonata domus nove dicti monasterii et tendit usque ad murum novum civitatis super ipso terreno communis a cantonata ipsius domus noviter fabricate ut supra possit et valeat fieri facere unum murum suis omnibus expensis usque ad murum novum civitatis altum ad plus brachiis sex et minus quantum sibi placuerit ex quo territorio comunis ipsa domna uti possit pro viridario et alio modo prout sibi videbitur dum nil hedifficet in ipso terreno nec eum aliquo laborerio occupare possit cum hac conditione quod dominium nostrum post quandocumque sibi videbitur et placuerit possit et valeat dicto terreno libere uti et facere destruere sive ruinare murum quem fecisset sive fieri faciet dicta domna; CMin 5, f. 192r.*
- 29 (8 Jan 1449) *Captum fuit quod domna monasterii Sancte Marie de Castello cum suis procuratoribus possendi transversari facere cum tuffo muros civitatis nostre tam a parte ponentis quam a parte levantis ne persone frequentantes per viam possint intrare aliquod schandal neque disturbet ipsis monialibus cum hoc quod ipsi muri fiendi semper ad voluntatem et mandatum domini nostri ruynari et amoveri debeant; CMin 12, f. 44r.*
- 30 (21 Jun 1429) (...) *ellecti fuerunt officiales extimatores ad extimandum in eorum conscientiam illam partem domus monasterii Sancti (Marie de Castello cancell.) Andree que per comune nostrum venit accipienda et deicienda pro muro civitatis. Que eorum extimatio valida et firma sit et quod ibi ubi ruptum et vastum erit pro et occasione ipsius partis domus que ut supra accipienda venit si et prout opus fuerit murare et aptare facere debeant expensis comunis nostri; CMin 4, f. 249v; (23 Mar 1430) (...) dando libertatem presentibus oficialibus quod prosequendo cum muro prout inceperunt quicquid levaverint de angulo domus Sancti Andree in eorum bona conscientia extimare debeant et dictam extimationem portare ad presens consilium; CMin 5, f. 25r.*
- 31 (10 Jan 1450) *Prima pars est de dando libertatem domino rectori et suo minori consilio faciendi voltam et cohoptam ad turrim que est super coquinam monasterii poncellarum (...); CRog 11, f. 145r.*
- 32 Ref. 25, f. 47v; CRog 1, f. 105r. Cf. Beritić, *Urbanistički razvitak*, 20.
- 33 (18 Apr 1418) *Item post hospitale comunis iuxta murum civitatis, et similiter post monasterium sancti Marci, fieri debeat una via, secundum partem captam in libro viridi ad capitulum 97.; CRog 1, f. 105r.*
- 34 In 1426 the Senate expressly ordered that even the passage at the city walls should not be created next to St Andrew's: (31 mai 1426) (...) *Andando verso ponente fina alla chiesa de sancto Andrea continuare lo detto muro de la citta levandolo alto passi due fin ali archetti et faciando via al muro larga uno passo (...) E dala chiesa de sancto Andrea fin al muro de Calarugna continuar lo detto muro fazandolo alto due passi. Et per tutti questi muri far archetti per andito non fazando via per lo monaster de sancto Andrea; CRog 3, f. 301v. Cf. Lukša Beritić, *Utvrdnja grada Dubrovnika* (Zagreb: JAZU, 1955), 44.*

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Monastic enclosure as urban feature:  
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# Projecting archival data on maps

Digital mapping  
of noble estates in  
Dubrovnik's burgus  
(13th-century)  
*Irena Benyovsky Latin*  
*Ivana Haničar Buljan*

Digitalizing  
Renaissance Florence  
*Francesco Bettarini*

Medieval urban  
landscape of  
the northern part of  
the city of Dubrovnik  
*Danko Zelić*

Mapping housing  
market in late medieval  
Dubrovnik: The Saint  
Nicholas *sexterium*  
(ca. 1420–1450)  
*Matko Matija Marušić*



# Digital mapping of noble Estates in Dubrovnik's burgus (13th-century)\*

Irena Benyovsky Latin  
Ivana Haničar Buljan

There are a substantial number of studies on the urban development of medieval Dubrovnik, which analyse the process of its expansion beyond the old fortification and the formation of urban space in the 13th century.<sup>1</sup> Nevertheless, this subject is still a matter of debate among the historians, archaeologists, and art historians, since the scarcity of material and written sources, caused by the earthquakes and fires that struck Dubrovnik more than once over the centuries (the earthquake of 1667 being especially devastating), pose a particular research challenge.<sup>2</sup> Owing to the lack of material evidence from the period in question, the results of archaeological excavations<sup>3</sup> and spatial analyses,<sup>4</sup> as well as the extant visual and cartographic sources,<sup>5</sup> have proven particularly important.

Written sources are indispensable when investigating the urban development of Dubrovnik in the 13th century, the most significant among them being the books of notarial records, extant from the 1270s onwards.<sup>6</sup> They preserve abundant documentation on real estate in the city and the suburbs. Real estate is mostly mentioned when it comes to property transfer from one (legal) person or institution to another, which could be based on the sale, donation, exchange, or legal inheritance. However, records were also made for temporary relations – lease contracts, debentures, or promissory notes.<sup>7</sup> All relevant data have been fed into a database containing information on the owners, users, neighbours, legal transactions, and property descriptions.<sup>8</sup> Besides these notarial, private legal documents, one must take into account administrative and normative documents, such as the Book of Communal Leases (particularly the part referring to the 13th century)<sup>9</sup> and the Statute of Dubrovnik (especially the two regulations on streets from 1272 and 1296).<sup>10</sup> Besides these 13th-century documents, an important group of sources consists of documents from a later period (such as the notarial documents of the 14th and 15th centuries, largely unpublished),<sup>11</sup> Councils' Deliberations,<sup>12</sup> Books of Treasury Leases,<sup>13</sup> and so on, since they contain information on real estate relevant for the earlier periods. Data from late medieval and early modern narrative sources, albeit unreliable, can be used for comparative purposes. Besides information on urban planning, narrative sources preserve the tradition of noble families – their origins and immigration.<sup>14</sup>

In this study, we shall present the complexity of the digital mapping of real estate as related to the population in the area of medieval Dubrovnik, both its city and its suburbs. Even though all social groups and institutions played their part in the formation of the medieval city, elites are the key social group in the medieval community. In reconstructing the property of Dubrovnik's nobility in the burgus, we have used the results of genealogical and prosopographic<sup>15</sup> research, as well as of spatial analyses





- Old fortifications
- Streets before 1272
- Streets regulated by the Statute of 1272
- Streets regulated by the Statute of 1296
- Archaeology

▨ Irregular organization of space according to Planić Lončarić

▨ Dead-end access lanes

● 13<sup>th</sup> century churches:

- A - All Saints
- B - St Barbara
- C - Holy Saviour
- D - Cathedral

#### Present-day streets and squares:

- |                  |                        |
|------------------|------------------------|
| 1 Za Rokom       | 11 Pečarica            |
| 2 Od Domina      | 12 Tmušasta            |
| 3 Široka         | 13 Pracatova           |
| 4 Hliđina        | 14 Uska                |
| 5 Sv. Josipa     | 15 Cvijete Zuzorić     |
| 6 Prolazna       | 16 Kaboge              |
| 7 Božidarevićeva | 17 Ranjinina           |
| 8 Između polača  | 18 Lučarica            |
| 9 Od puča        | 19 Gundulićeva poljana |
| 10 Gučetićeva    | 20 Bunićeva poljana    |

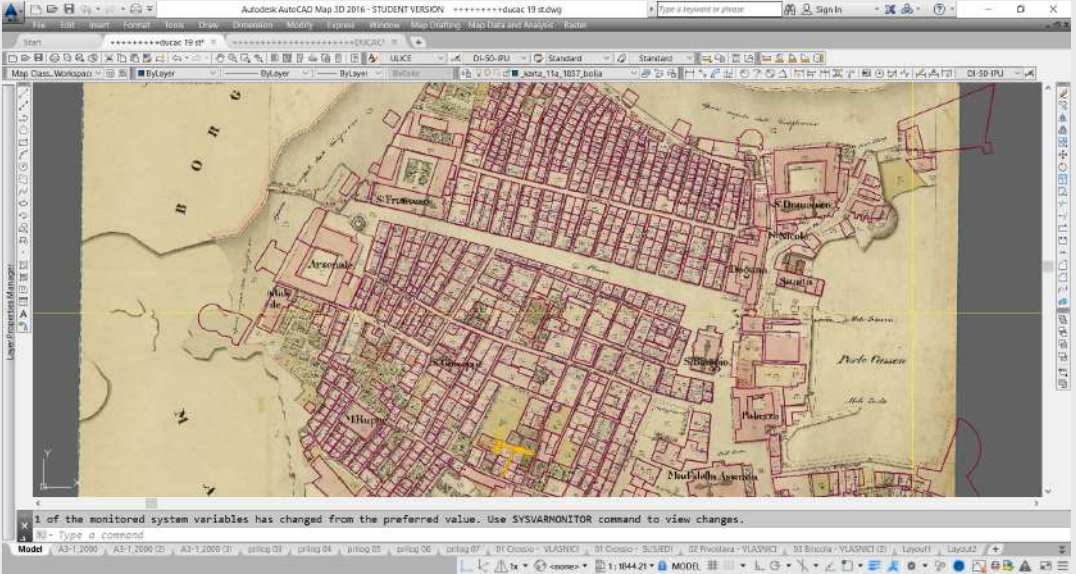


0 10 20m

FIGURE 1

Researched part of Dubrovnik's burgus with 13th-century streets (drawing by the authors).

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FIGURE 2  
Example of digital mapping on a 19th-century  
cadastre map of Dubrovnik  
(drawing by the authors).

and archaeological excavations. All the relevant data have been combined here with the results of our own research. In this study, we shall present the methodological procedures of social topography<sup>16</sup> on the example of selected estates of Dubrovnik's elite (nobility) in the 13th-century burgus. We shall, however, not locate the properties in the suburbs with precision, as this part of our research is still ongoing.<sup>17</sup>

The possibility of linking data from historical documents and urban space on the level of land plots or households may offer excellent possibilities to those researchers who focus on urban development, real estate market, specific social groups, and so on. Our intention is to show the reconstructed sequences in space in their various changes – chronological, spatial, and social. The strategy of presenting the dynamics of these changes depends, among other things, on the availability of sources concerning specific topics/periods/segments related to the suburbs, as well as on the given research questions.

In order to connect all the available data on the given topic into a whole and eventually apply them to a digital map, one needs an interdisciplinary approach, as it pays justice to the various types of sources and research methodologies. Each discipline has its own specificities and approaches (e.g. archival sources may describe individuals and their relation to places in terms of possession, use, and status; archaeology may offer material evidence on living in a particular area; and spatial analyses may offer clues as to the division of space, communication lines, and the logic of urban expansion).<sup>18</sup>

Based on the available material as well as the present results of various disciplines, we have created a digital map of Dubrovnik's burgus (FIG. 1). It is based on today's digital cadastre map of Dubrovnik in the vector format as our geo-referential framework.<sup>19</sup> The analysis of spatial sequences has been based on the imaging of the present state of Dubrovnik's ground level, produced at the Institute of Art History in 1972, which has confirmed, among other things, that the statutory regulations on streets were indeed implemented.<sup>20</sup> Historical maps of the city have also been interpolated within the aforementioned digital map as a comparative source of data for spatial analyses (FIG. 2). The digital map<sup>21</sup> also includes data obtained from the spatial analyses that are part of the relevant art historical, conservationist, and archaeological research.<sup>22</sup> The topographic situation of the area is a crucial reference, which is why the map also contains data on the height of the terrain. The area of Dubrovnik is very specific in this respect – the old town, positioned on a cliff, descended south of the fortifications (along with the line of present-day Strossmayerova Street) and then less steeply to the line of today's Pečarica/Hliđina Street. In the area of Prijeko,

the ground sloped up again towards the mountain of Srđ. Our digital map serves not only to present the results of our research, but also as a basis for interpreting the role of elites in urban space and, vice versa, the impact of urban space on the formation of elites.

**The Area, Period,  
and Focus of  
Research**

Research on social groups in urban space demands complex approaches that take into account various factors. Our methodological approach will be presented here with a focus on a series of elements, the transformations of which have been observed over the given period and in the given segment of the burgus. These include legal transactions, owners and users of real estate, as well as their neighbours, and the type, size, and position of properties. Notarial records make it possible to follow a considerable number of elite families owning real estate in Dubrovnik's burgus. Some of them enlarged their estates over time, while others reduced them, and in some of them, we could establish residential mobility. During the period in question, most real estate in the burgus was used for lease, but that situation changed over time.

*Burgus* is a generic term used in the notarial records for the suburban areas, that is, for those beyond the old town walls.<sup>23</sup> In this study, we have focused on a selected part of the burgus, namely the area circumscribed by the present-day streets of Strossmayerova, Lučarica, Široka, Između polača, and Placa).

For the period before the Statute of 1272 and the introduction of notarial records in the late 1270s, we have relied on sporadically written documents<sup>24</sup> as well as the available results of spatial analyses and archaeological research. The rarely written sources from the mid-13th century mention the real estate owned by the elite families in the burgus, but their position is not accurately described and data on their size or use is entirely missing. They are defined merely by their general situation (*in burgo*) and occasionally with regard to some well-known building or the town walls.<sup>25</sup>

First suburbs on the slopes north of the old fortifications emerged as structured settlements as early as the pre-communal period.<sup>26</sup> Those were the oldest formations outside the city before the planned interventions of the 13th century, yet they are barely discernible in today's grid.<sup>27</sup> They are characterised by an irregular and introverted organisation of space, with dead-end access lanes and fortified structures on the edges. Suburbs with one side defined by the walls of the old town functioned as an antemural belt at the city gate and were connected to the old town and the district by means of access lanes.<sup>28</sup> According to the present results of spatial analyses, these areas can be identified within the burgus in some sections between the old town (Strossmayerova Street) and the continuation of today's Hlidina

Street (FIG. 1).<sup>29</sup> Thus, in the southern part of the housing block south of Gučetićevo, M. Planić Lončarić has identified an older type of spatial organization with an inner “shared courtyard”, communicating with the outside area by means of three access lanes leading eastwards to the present-day Pracatova Street, southwards to the present-day Strossmayerova Street, and northwards to the projected continuation of Hlidina Street. A similar suburb occupied most of today’s Bunićevo poljana, east of the present-day cathedral, likewise with access lanes leading to the cathedral and the old town (FIG. 1). The area north of the projected Hlidina line is, however, flatter and more suitable for a regular organisation of space.<sup>30</sup>

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In the 13th century, the burgus area underwent significant transformation, evident in the statutory regulations of 1272 and 1296. But even before a network of streets was created in the burgus, the area north of the first suburbs functioned as a rural-urban fringe – this was where the *terrena prope civitatem* (mentioned in the Statute)<sup>31</sup> were located, which were, according to the preserved sources, owned by Dubrovnik’s elite and the monasteries. The former gardens and vineyards were gradually transformed into housing plots,<sup>32</sup> but not much is known about the organisation of this area before the regulations.<sup>33</sup> Sporadic data show that the plots in the burgus were defined by means of boundaries and milestones,<sup>34</sup> a few of which have been discovered during archaeological excavations.<sup>35</sup> (The Statute decreed that the old boundaries and milestones were to be observed.)<sup>36</sup>

It is known that some communication lines running through the burgus or leading to it (the *stratae et viae* mentioned in the Statute) existed before the new street network.<sup>37</sup> The streets mentioned as already existing in the Statute approached the new burgus from the south, from gates that (mostly) bore the names of the owners of nearby estates or houses (*porta de Menči, porta de Celenga, porta subtus domum Bogdani de Pissino, porta Leonis*). Before the regulations, there were also streets running along the east-west axis in the burgus. Same as the aforementioned streets, they mostly connected the city with the estates in the burgus. To the west, it was the present-day Hlidina Street, which was already in existence south of the church of All Saints, defined by the houses of Miho de Binčola and Marin de Villano. To the east, there was a street in front of the *castrum* gate that ran between the houses owned by the Gleda family (*via que est ante portam castris et vadit inter domum Sergii et Vitalem Glede*) – after the regulations, it was prolonged to the west (Od puča Street). To the north, there was a street named after the furnace of the Dujmo family (*via que est a furno Doymi*), which was likewise prolonged after the regulations (today’s Cvijete Zuzorić Street). These streets indicate that there was an early suburbium with houses next to the castrum.<sup>38</sup>



It is highly probable that there was a communication line along the east-west axis which ran through the abovementioned *territoria*. M. Planić Lončarić has identified this communication line, which ran from the present-day Rokova, Prolazna, and Gučetićeve streets along the southern edge of today's Gundulićeve poljana to the cathedral (according to her it was irregular and only partially preserved in today's grid).<sup>39</sup> Urban texture reveals traces of at least two communication lines: one that may have linked the church of All Saints with that of Holy Saviour *de paludo* (present-day Gučetićeve)<sup>40</sup> and another that ran from Hlidina to the southern edge of today's Gundulićeve poljana towards the cathedral. Those communication lines, if they existed, lost their importance later on, due to the property relations and the creation of new, Od puča Street.

The famous regulation *De viis* in the Statute of Dubrovnik (1272)<sup>41</sup> mentions that "another, new town has been annexed to the city of Dubrovnik, one that used to be called a suburb". The regulation also describes the introduction of a new network of streets to the texture of burgus, and explains that its promulgation will prevent further doubts *super stratis et viis burgi*. The existing communication lines from the direction of the old town were continued northwards (present-day Široka, Sv. Josipa, Pracatova, and Lučarica streets). The street leading from the Celenga Gate (today's Sv. Josipa) was prolonged towards the street leading to the castrum (today's Od Puča) and the remaining streets were continued to the so-called *campus* (the line of which was more southern than the one defined by the regulation of 1296, the present-day Između polača Street). The Statute of 1272 also describes streets running along the east-west axis: today's Hlidina was confirmed and today's Gučetićeve/ Prolazna newly created (perhaps as a part of some older communication line).<sup>42</sup> This street was leading from today's Sv. Josipa (which started at the Celenga Gate, next to the church of All Saints) towards the east, to the street below the estate of Matijaš de Menče (today's Gučetićeve likewise extends to Pracatova, which is defined in the south by the Menče Gate).<sup>43</sup>

New streets running along the east-west axis passed by land plots, not houses, which fact speaks of the level of urbanity in this area. Od Puča Street was a new street defined by the regulation as connecting the burgus along the east-west axis. In the west, it passed by the garden of All Saints and the water well of the Čereva family and ended at today's Široka. With the regulation, Od Puča Street became the main communication line, which role that Placa would take over only in the early 14th century.<sup>44</sup> The northernmost new street running along the east-west axis was today's Cvijete Zuzorić Street, which was traced to the west only to Pracatova.<sup>45</sup> The area west of Pracatova and north of Od Puča Street was not regulated: perhaps it was treated differently because of property relations.

Extending old streets and building new ones through the burgus certainly had an impact on the organisation of private estates, raising their value and encouraging a more profitable use, especially of those parts that were situated next to the new communication lines. The regulation of 1272 was a result of demographic increase and accelerated economic growth of the city, which required new infrastructure and a reassessment of the existing territories. However, there is no accurate data on the size and use of private property in the burgus before the introduction of notarial records.<sup>46</sup> According to the narrative sources, in 1275 during the attack of Serbian ruler Uroš on the city, part of the suburb was destroyed. Chroniclers relate the year of 1277 to the large influx of newcomers from the hinterland and the transformation of suburban gardens into housing plots. This was also the time when the first official notary, Tomazino de Savere, came to the city and started a systematic series of archival records.

With the introduction of notarial records, several cases (one of which we have analysed here in detail) describe larger land plots, a remnant of the former land division in the burgus,<sup>47</sup> which can also be discerned in the city area. New streets running over private land resulted in the creation of smaller plots, which defined the areas for future constructions.<sup>48</sup> This spatial organization (rows divided into land plots for rent) was specific for Dubrovnik's suburbs and emerged in the 13th century, during the period of Venetian rule. It may have been modelled on similarly organized settlements of the Italian Peninsula. Data on leases of private land plots are found systematically from 1282 onwards, with only a few examples from 1280 and 1281.<sup>49</sup> The notarial records, preserved in continuity for the period from 1278-1285 (and then again from 1295) contain a significant amount of details on land plots in the burgus.<sup>50</sup> Real estate transactions and the corresponding everyday legal practice were structured so as to operate without a clear-cut legal system and therefore real estate transfers were documented in the notarial books. Based on these documents, it is possible to infer that Dubrovnik's nobility owned the majority of land plots in the burgus.

From 1278, communal land (*territorium comunis*) is mentioned north of some private plots in the burgus; perhaps it was the *campus* mentioned in the Statute.<sup>51</sup> Communal land is mentioned as given in lease only from late 1281 and it may have been divided into smaller plots first. The list of the communal real estate from 1282 was inserted into the newly introduced Book of Communal Real Estate (*Liber de introitibus stacionum et territoriorum comunis*) from 1286. Under the title *Incipit burgus*, it lists around 170 names of those who held land plots owned by the commune.

The period for which there are no preserved notarial documents in continuity is described in the narrative sources as the time of misfortunes.<sup>52</sup>

Chroniclers also speak of a great fire in 1296, which destroyed the entire suburb below the church of *St Mary de Castello*, as well as a part of the old town. They also mention the loss of many archival documents in the fire, among them sale contracts that would have confirmed the boundaries of various estates and houses. (This, allegedly led to a number of litigation cases and the implementation of new regulations about the legal description of property boundaries.)<sup>53</sup>

The fire of 1296, which destroyed a major part of the burgus, made it possible to plan the future urban development in the most modern way.<sup>54</sup> The statutory regulation of 1296<sup>55</sup> defined the street lines according to the new system of double house rows (around three fathoms wide) with a canal (three palms wide) between them. The streets between the double rows were to be around nine spans in width. The new regulation concerned primarily the northern, communal burgus (Prijeko) and the area west of today's Široka and north of Rokova (the Archbishopric's territory), but that goes beyond the scope of this study. After the fire of 1296, the boundary between the southern (private) and northern (communal) burgus was finally defined by creating a communal street (today's *Između polača*).<sup>56</sup> Later on, this boundary shifted towards *Placa*, which was in the early 14th century defined as the borderline between the southern, "private" burgus and the northern, "communal" one.<sup>57</sup>

Wherever possible, the new spatial organisation was applied to private land in the southern burgus, where three new streets were created along the north-south axis (*Božidarevićeva*, *Uska*, and *Kabogina*) (FIG. 1). Unlike the communal area north of *Placa*, here the regulation had to be adjusted to the existing property relations (and spatial organisation), as well as the existing streets.<sup>58</sup>

Spatial analyses have led to the conclusion that the regulation was applied to the housing blocks south of *Od puča* Street, which were eventually organised on new principles (e.g. *Ranjina* Street). Thus, the large housing block between *Široka* and *Pracatova*, untouched by the previous regulation on streets (1272), was cut in half by creating a new street in 1296 (today's *Božidarevićeva* Street). In the northern part of the block (along with a newly created street, today's *Između polača*), a number of new houses were to be built according to the new regulation. Nevertheless, additional access lanes along the north-south axis were not created (such as *Kaboga* or *Uska*). Spatial analysis of the housing block between *Božidarevićeva* and *Pracatova* has shown that a dead-end access lane in the northern part made communication within the block possible.<sup>59</sup> Thus, the new regulation was applied in the southern burgus with regard to the existing organisation of space and housing blocks, property relations, and the level of urbanity

after the fire. In the block south of Gučetićevo, archaeological research and spatial analysis (FIG. 1) have revealed a similar organisation of space with house rows, canals, and access lanes.<sup>60</sup>

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All these spatial transformations present a framework within which it is possible to make conclusions about the situation of real estate owned by the noble families in the burgus. By the 13th century, the suburb had become an attractive area for some of the wealthiest families of Dubrovnik owing to its new economic and housing potential following the shift of the economic and administrative centre northwards.

The positioning of elite groups in urban space and their strategies of real estate acquisition can be correctly interpreted only if one takes into account the genealogical ties of different families and their demographic status, as well as the legal framework. Motives behind the elites' investment in the urban land were various and should be analysed not only in the context of spatial transformation but also in that of social structure and family relations.<sup>61</sup>

**Case Study:  
Announcement  
of Sale  
Concerning the  
Crossio Estate**

Digital mapping of noble Estates  
in Dubrovnik's burgus (13th-century)

*Die XXI decembris 1278*

*Pouerescus preconçavut, quod Radasclaua, uxor quondam Petri (Crossio) Spauldi, vendidit Jacobo et Vite de Crossio territoria sua cum omnibus suis pertinentiis pro yperperis septigentis. Que territoria sunt in tribus peciis. Una pecia, que est longa passus de braçollaro sex minus uno palmo, et ampla passus quinque minus uno palmo, posita supra viam comunis que vadit ad portam dompni Petri de Mençe, et confiniat a parte orientis cum territorio Benedicti filiorum Valii de Gondula et a parte occidentis confiniat cum dicta via comunis et a parte pelagi cum territorio uxoris Lampredii de Mençe et a parte montis confiniat cum territoriis sancti Andree de Castello et Sauini Gataldi. Secunda pecia est super dicta via comunis (et est longa passus XXI ½ et ampla passus VI) et confiniat cum territoriis Petri de Poça et Pasqua Volcassii et cum una alia pecia dicte Radasclaua, et a parte montis confiniat cum territorio comunis et a parte pelagi confiniat cum territorio Marci de Zimuto. Tertia pecia est longa passus VI et ampla passus V et confiniat a parte orientis cum dicta secunda pecia territorii et a parte occidentis cum territorio sancti Salvatoris et a parte montis confiniat cum territoriis Petri de Poça et Gauçoli de Bodacia et a parte pelagi cum territorio filiorum Volcassii Johannis...*<sup>62</sup>

The quoted document (announcement of a real estate sale) tells us that brothers Vido (b. around 1235) and Jakov (b. around 1230), sons of Pasko (son of Teodor) de Crossio, were to buy a large land plot in Dubrovnik's

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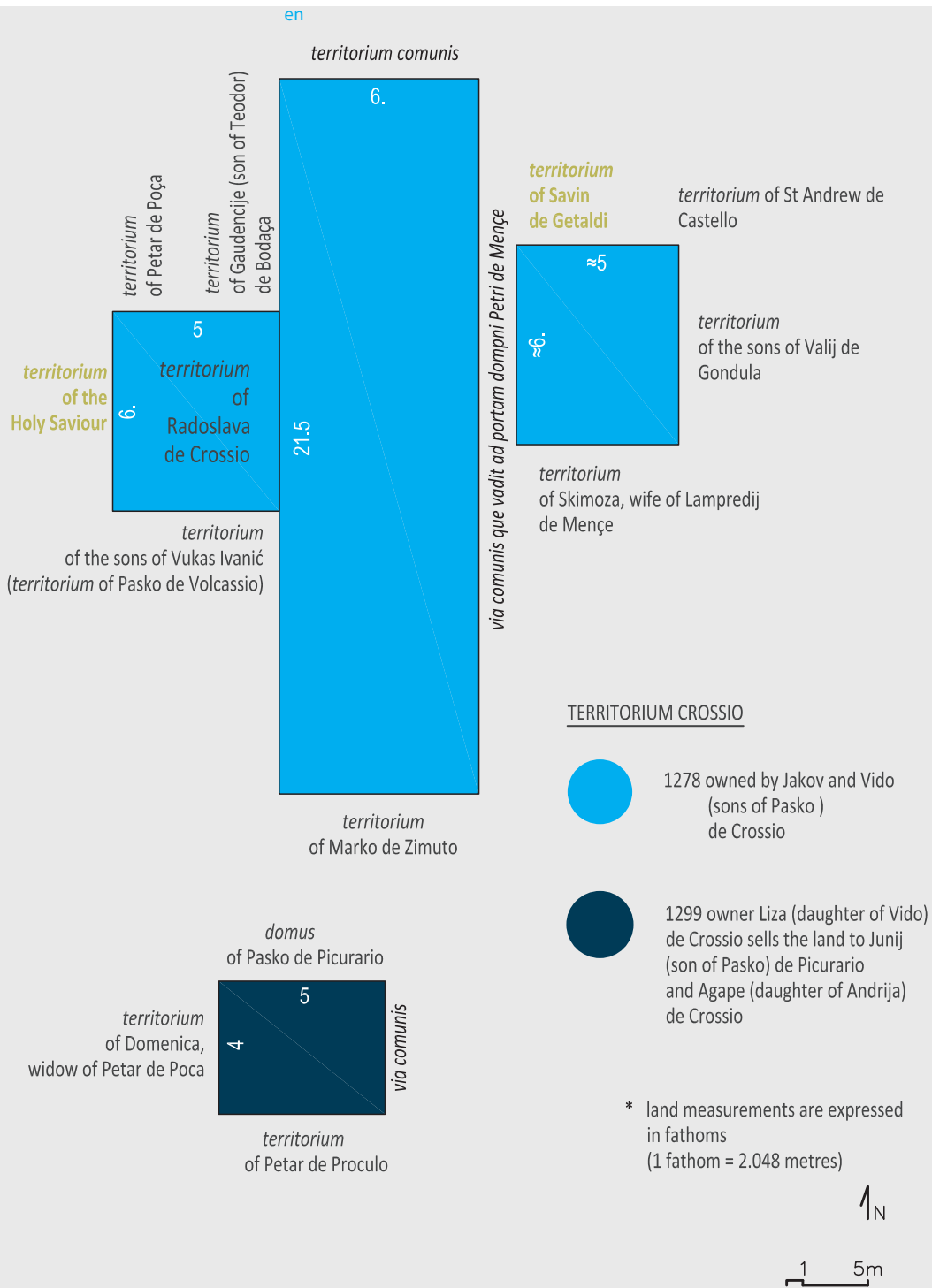


FIGURE 3  
Crossio estate  
(drawing by the authors).

burgus (more precisely, three connected land plots) from their aunt Radoslava, widow of Petar (son of Teodor) de Crossio (the Spavaldo branch) (FIG. 3). The Crossio family was one of the most prominent elite families of Dubrovnik in the mid-13th century.<sup>63</sup> Teodor de Crossio (grandfather of Vido and Jakov) was ruling the city during 1234/1245 (together with Petar de Ballislava) and was one of the founders of the church of the Holy Saviour in Dubrovnik.<sup>64</sup>

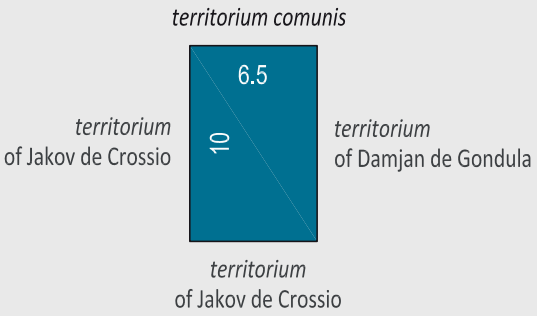
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The transfer of real estate to Vido and Jakov de Crossio has been documented in the form of an announcement on the land sale. The most common basis for property transfer was a sale,<sup>65</sup> but the 13th century saw the gradual introduction of the public announcement as a legal procedure preceding the act, which was meant to prevent misunderstanding and litigation, as well as protect the future owner.<sup>66</sup> The property in question was first to be measured by the communal surveyors, and there was a set deadline up to which any potential claimants could place an objection. In some cases, family members who believed they had claims on the property in question objected to the sale. This was also the case with the Crossio estate and the announcement of its sale is followed by a list of unsettled debts made by Radoslava and her husband Petar (son of Teodor) de Crossio. Thus, Savin de Gataldi (one of the neighbours to the Crossio estate) submitted a document that proved Radoslava owing him money, while her late husband Petar remained in debt to his nephew Jakov de Crossio. The announcement of sale was also practiced to ensure the right of pre-emption, which was needed because of the increasingly active and liberal real estate market.<sup>67</sup> There is a preserved document on precisely such a litigation case, related to none other than the Crossio family – when in 1286, Jakov and his relatives inherited a palace in the city and some estates outside the city from their relative (Ungara, daughter of Teodor de Crossio, widow of Kalenda de Cerneca) without announcement.<sup>68</sup>

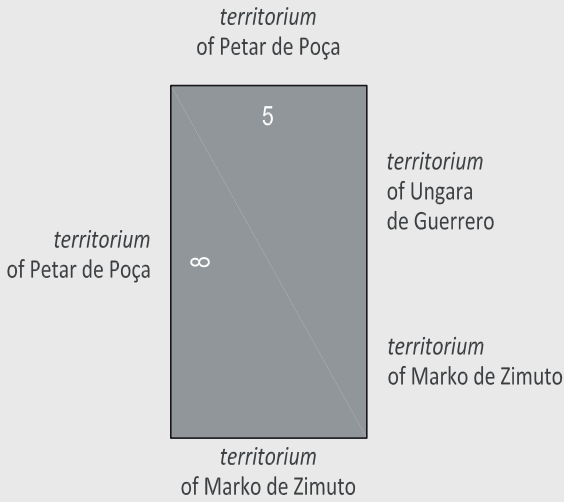
The fact that two brothers bought a land plot together was not unusual in this period. Real estate was often part of the family property, e.g. a community consisting of the father and his sons, or of two or more brothers (*fraterna*). Nevertheless, in the late 13th and particularly in the 14th century, the tendency to transform the family property into individual property was becoming more manifest.<sup>69</sup>

Vido did not have any male heirs, but he had three daughters: Liza,<sup>70</sup> Rate, and *Daussi*. It is known that, in 1299, Liza sold a land plot to Junio, son of Pasko de Pecurario and husband of her aunt Agape, née Crossio (sister to Jakov and Vido). In 1299, Liza's house is mentioned as standing next to that of St Theodore in Pustijerna, in the vicinity of houses owned by other family members. (A part of the family must have resided in the old town, using



1279 - Savin de Getaldi sells the *territorium* to Dabrica, wife of Lovro (son of Marin) de Mençe

\* land measurements expressed in *braccolaria* (1 *braccolarium* = 1.024 metres)



1281 - Dobroslava, wife of Kalenda de Bodača, sells the *territorium* to Margarito (son of Petar) de Poča

\* land measurements are expressed in fathoms (1 fathom = 2.048 metres)



FIGURE 4  
Neighbours of the Crossio estate  
(dimensions known)  
(drawing by the authors).

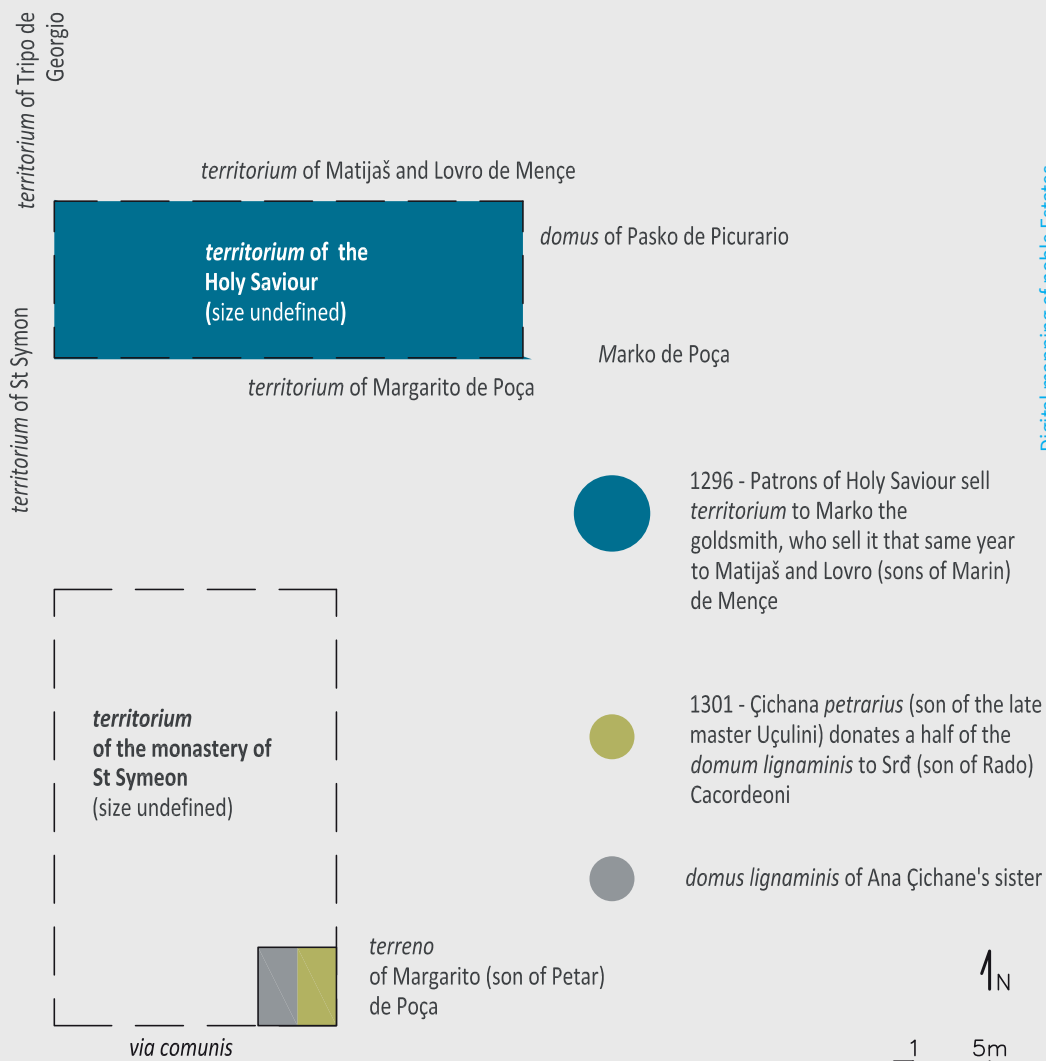
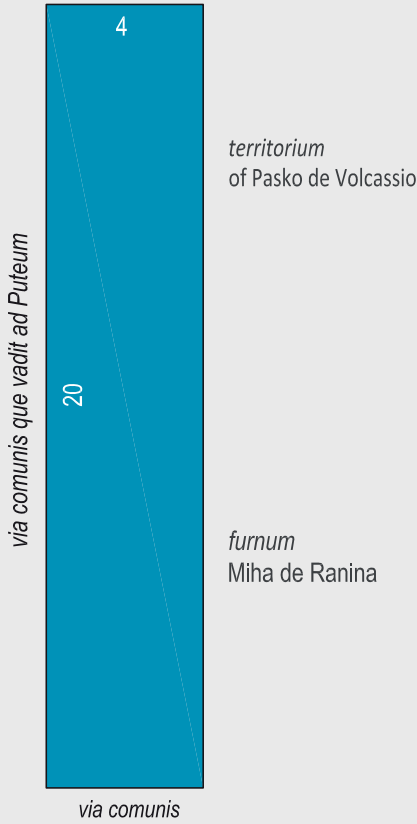


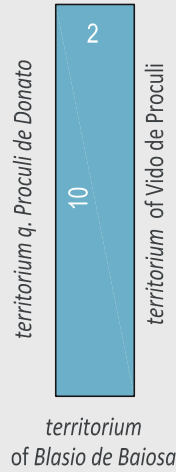
FIGURE 5  
Neighbours of the Crossio estate  
(dimensions unknown)  
(drawing by the authors).



territoria of All Saints and St Nicholas



via comunis



1279 - Dause, widow of Palma de Gangulo, sells the *territorium* to Prvoslava (daughter of Pasko son of Savin de Poča), wife of Matijaš (son of Marin) de Menče

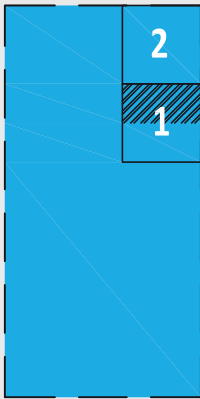


1282 - Lovro (son of Teodor) de Bodača sells the *territorium* to Lucaro Fusco

\* land measurements are expressed in fathoms (1 fathom = 2.048 metres)



FIGURE 6 Land plots in the *burgus* (before 1296) (drawing by the authors).



**1)** 1283 - Prvoslava, widow of Filip de Picinego, sells the northern half of the *capanna* to Dabrica de Orlando

**2)** *capanna* of Poliuba



**3)** 1283 - Poveresko de Talaua sublets the *capanna* to Orsat de Čereva



**4)** 1283 - Jakov (son of Poveresko de Talaua) sells a *domum de lignamine* to Lovro (son of Marin) de Mençe *extra domum* of Marko the goldsmith (son of Grupša)

**5)** 1282 - Prvonja the goldsmith (son of Petar Culio) owns *capanna* on communal land, between the sons of Poveresko de Talaua and Leonardo de Cocoto (6)



*territorium* Crossio



*territorium* comunis



\* dimensions of land plots and houses unknown

FIGURE 7

Users of private and communal land  
(drawing by the authors).

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the land plots in the burgus for lease.)<sup>71</sup> After the death of Vido in 1280, his widow Ana sold her husband's part in *societas* (in 1282). The notarial records contain a significant number of documents proving that Jakov de Crossio used the land for lease (which can be followed from 1282 onwards).<sup>72</sup> The Crossio document also tells us about the users of the estate. Users of the land in the lease were mostly owners of wooden houses built on it, members of the commoner class – largely artisans, communal officials, servants, and so on. Thus, in 1282, Bogoje, son of Radovan, owned a wooden house (*domus de lignamine*) situated on a land plot owned by Jakov de Crossio. He obtained the house in dowry from his wife Disica, sister of goldsmiths Jurko and Bogdan.<sup>73</sup> Poveresko de Talaua owned a hut (*capannam*) in *territorio Jacobi de Crossio* in 1283.<sup>74</sup> However, in some cases, the leasee could belong to the nobility. In 1283, Prvoslava, widow of Filip de Picinego (neighbour to Crossio in Pustijerna), sold a half of her house in *territorio Jacobi de Crosio* to Dabrica de Orlando.<sup>75</sup> The early 1280s were a period of significant increase in the number of loan contracts (the first book of debit notes, *Debita notariae*, dates from 1282), which was due to political stability in the hinterland, growth of the market, and demographic boom. Many artisans borrowed money in order to launch new businesses, as well as for building houses on rented plots. Regarding the real legal claims that lease contractors had over the wooden houses they had built, one finds data on them and their real estate in various types of documents: sale contracts, last wills, dowry statements,<sup>76</sup> most commonly in the form of receipts, debentures, and promissory notes, which regularly state on whose terrain the said property was situated (FIG. 7).

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Persons and institutions may be mentioned in the documents not only as parties in a legal transaction but also as neighbours to the property in question (in the description of property boundaries or the locality in which the transaction took place). Thus, among the western neighbours of the Crossio estate, the documents mention Gaudencije, son of Teodor de Bodača. The Bodača family was bound to the Crossios by familial and marital ties: Gaudencije's brother Lovro was married to Draga, sister of Vido and Jakov de Crossio, while his brother Stjepan was married to Slava, daughter of Barbije (son of Teodor) de Crossio. But the Bodača family was also related to the Poča (Cipagna), likewise neighbours to the Crossio estate. Paska, daughter of Gaudencije de Bodača, was married to Savin (son of Pasko) de Poča, whose uncle Petar owned a land plot next to Crossio's.<sup>77</sup> West of the Crossio estate, there was land owned by the church of the Holy Saviour, whose patrons included, among others, members of the Crossio family.<sup>78</sup> The southern neighbour of the Crossio estate, Marko de Zimuto, bordered to the east on Ungara (wife of Domanja) de Guerrero,

whose daughter Draža was the second wife of Andrija (son of Teodor) de Crossio (the Goyislavo branch). Their son, Margarito de Crossio, inherited the Guerrero estate<sup>79</sup> and their daughter Slava was married to Marin (son of Lampredij) de Mence and Skimoza (whose land was also located next to the Crossio estate). Thus, the strategies of the real estate acquisition were closely related to familial and marital ties between Dubrovnik's elite families.<sup>80</sup>

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The real estate market in the burgus was very dynamic at the time, with frequent changes in ownership (depending on the demographic, clan-related or financial situation in individual families). Thus, one of the eastern neighbours of the Crossio estate, Savin Gataldi, is soon afterwards (1279) mentioned as selling his land plot to Dabrica, wife of Lovro son of Marin de Mençe.<sup>81</sup> This land plot (FIG. 4) is defined in the records by its boundaries yet without the indication of cardinal points (only as bordering on the lands of Jakov Crossio, Damijan Gondula, and communal land).

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Tenants lived on the neighbouring estates as well: thus, a document from 1280 for a returned dowry *in territorio Gauçoli de Bodacia* mentions a *domus de lignamine* owned by Stana, wife of Marin Radovan de Saua.<sup>82</sup> In 1281, a *capanna* owned by Rada, servant to Nikola de Ceria, *in territorio Marci de Zimuto* is mentioned as sold to Obrad de Liutica.<sup>83</sup> A land plot *in territorio Damiani de Gondula* was leased in 1283 by Migost the hatter and by Radosti de Zepre.<sup>84</sup> In 1283, Damijan de Gondula gave a shop (*statio*) in the lease to Rolandin the apothecary.<sup>85</sup>

Types of property are very important when researching the urban history of a city.<sup>86</sup> With legal changes and the increased urbanity of space, the terminology connected to real estate changed as well. Land intended for building in the burgus was called *territorium*,<sup>87</sup> a term that goes back to its non-urban character. In an area and period without many stone houses, even a wooden house is referred to as *domus*, e.g. *domus de lignamine* (*domus lignaminis*) or *capanna*. Contrary to the private legal documents preserved in the notarial records, the administrative and normative documents such as the Statute or the Book of Communal Real Estate never mention the *capannae*: the generic *domus de lignamine* included all wooden houses.<sup>88</sup> Notaries, on the other hand, listed small single-level cottages as *capannae*.<sup>89</sup> The land plots owed by the elite were mainly intended for lease: in such cases it was a rule that only the landowner had the right to build permanent structures (*ius aedificandi*) – in the legal framework of the time, a stone house thus prejudicated a full right over the land on which it was built.<sup>90</sup> In legal terms, wooden huts were considered movable property. Documents on the permanent transfer of ownership of real estate, besides the description of the property as the “object” of a legal transaction, state its

size in accordance with the local measuring system or systems. These data are crucial, but not always provided: the notaries mostly documented only non-standard or changing sizes. In the notarial document, the *res* formula included only those properties that were subjects of the legal transaction in question and not the neighbouring estates, although are often included in the description. The existing descriptions include the length (*per longitudinem*) and the width (*per latitudinem* or *per amplitudinem*). The largest and most common measurement for the urban surface area (a land plot or a house) was the fathom (*passus*), which equalled 2.048 meters. The span (*palmus*) equalled 0.256 meters and was often used as a measurement for accurate descriptions of real estate or for streets. Some notarial documents also mention so cold *brazolarium*,<sup>91</sup> an old measurement that probably equalled a half of the fathom (as in some Dalmatian cities).<sup>92</sup>

The size of the neighbouring plots was not included in the records since they were not the subjects of the legal transaction in question, but sometimes they are found elsewhere in the database. The lack of measurement indications certainly makes it more difficult to reconstruct some of the properties and map them within the city without resorting to speculation. In order to situate specific properties in space, one must reconstruct as many land plots as possible over the longest period possible, and compare data from the written sources with archaeological finds and spatial analysis. Data on the size of individual properties are extremely valuable since they show the financial status of various families and individuals. These data allow for an analysis of the organisation, structure, and use of land, and are helpful when localising a specific property within the area.

The Crossio estate consisted of three strips. The first (western) one was 5 fathoms (minus 1 span) wide, the second (central) 6 fathoms, and the third (eastern) 5 fathoms (minus 1 span). The length of the central strip was 21.5 fathoms and the shorter strips were 6 fathoms long (or rather 6 fathoms minus 1 span). These measurements serve as the basis for an analysis of spatial organisation in the housing block and indicate the existence of rows perhaps with passages in between. Between the central and the eastern strip, there was a street that may have altered the width of the eastern block. A property of similar width is mentioned in a sale from 1281, in which Margarito son of Petar de Poča bought a land plot that was 5 fathoms wide and 8 fathoms long (and located, according to our reconstruction, in the vicinity of the western strip of the Crossio estate).

The size of the Crossio estate is comparable to the estates owned by other elite families in the burgus, such as the *territorium* of Prvoslava de Mençe (daughter of Pasko de Poča) which is recorded as 20 fathoms long and 4 fathoms wide; or *territorium* owed by Lovro (son of Teodor) de Bodača,<sup>93</sup>

recorded as 10 fathoms long and 2 fathoms wide (FIG. 6). There were other estates measuring 10 fathoms in length, such as that of Marko de Zimuto, a neighbour of the Crossio estate (whose land plot with a wooden house was located *sub via communis*)<sup>94</sup> or that of monastery of St Bartholomew, which was 10 fathoms and 6 spans long (possibly a passage), sold in 1295 to Tripo de Georgio (a western neighbour of the property of the Holy Saviour mentioned in the Crossio document).<sup>95</sup>

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The length of the Crossio estate (21.5 fathoms) indicates that it may have partly overlapped with a street. The Book of Communal Real Estate contains a list from 1286 mentioning some private houses that partly *tennent de territorio comunis*.<sup>96</sup> One of the estate owners, Jakov Crossio, encroached upon communal land with two houses (5 and 6 spans respectively) and thus had to pay a communal fee (one of the houses was inhabited by Bonaça and the other by *Pogluba*, who is mentioned in another notarial document related to the estate of Jakov de Crossio) (FIG. 7). Jakov Crossio was not the only real estate owner who had to pay a communal fee. Thus, the list mentions also a *domus* of Matijaš de Mençe and a land plot owned by Benedikt de Gondula (probably to the east of Jakov de Crossio).

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When analysing the organisation of land in the burgus, one must also take into account the size of land plots and the houses built thereon. In an example from 1283, the monastery of St Symeon gave in the lease a very small land plot (*territorium*) in the burgus (*amplum 2 passibus et palmis 5 et longum passibus 2.5.*).<sup>97</sup> In 1281, a land plot of 4 fathoms is mentioned as owned by Stanče Subb, with several *domibus de lignamine*.<sup>98</sup> Sometimes a half or even a quarter of the hut was sold. There are data on the size of houses from the period after the fire. Thus, in 1297, Serga, widow of Radoš de Lutiça, sold to Orsat de Zereua a *territorium* that was 3 fathoms and 2 palms wide, and 4 fathoms and 3 spans long.<sup>99</sup> In 1296, Margarito de Crossio (son of Ungara de Guererro) signed a lease contract with Grubo the cobbler, whose house was 4 fathoms long and wide *sine gotalibus*.<sup>100</sup>

A crucial element in digital mapping is certainly the description of the locality. In announcements of sale, as well as some other legal transactions (sale, exchange, and donation), part of the *res* formula was the locality description – in the case of real estate, this meant defining its boundaries.<sup>101</sup> In Dubrovnik, the records included the cardinal points and wind directions (in combination) from a very early date.<sup>102</sup> Mostly there are data on the owners of the neighbouring properties, but rarely on streets or famous buildings, which would allow for a more accurate localisation.<sup>103</sup> Thus, we can only follow the neighbouring properties until we reach a point of safe localisation, ideally creating a (smaller or larger) net of reconstructed properties (like a puzzle) that can be compared to the relevant results of fieldwork.

Larger spatial sequences can be put together whenever there are data on the neighbours from the same or at least similar period, and data on the property size, wholly or at least partially (which are often missing). Often one cannot be really sure of the locality until a very large spatial sequence spanning over a longer period of time has been established. The lack of archaeological research (or published and/or available results) is certainly a disadvantage in this sort of enterprise.

In the case of the Crossio estate, some of the neighbouring properties could be tracked further with the help of the database. For instance, the western neighbour, *territorium* of the Holy Saviour, is mentioned again in 1296 (before the fire), although without the size given. At that time, it was bought by two brothers, Matijaš and Lovro sons of Marin de Mençe, with Marko the goldsmith as the middleman, since he was involved in real estate business. (Matijaš's second wife was Marija née Proculo, whose uncle was chaplain at the Holy Saviour at the time).<sup>104</sup> The estate of the Holy Saviour had the following boundaries: with a *territorium* of Matijaš and Lovro de Mençe to the north; *territoria* of Matijaš and Lovro de Mençe, as well as a *domus* of Pasko de Picurario and Marko Poca (undefined property type) to the east; a *territorium* of Tripo de Georgio<sup>105</sup> and a *territorium* of St Symeon to the west; and a *territorium* of St Symeon, as well as a *territorium* of Margarito (son of Petar) de Poča to the south (FIG. 5).

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Most of these neighbouring properties can be tracked even further with the help of the database. Thus, we know that a western neighbour of Holy Saviour, Tripo de Georgio, bought his *terrenum* (10 fathoms and 6 palms long) in 1295 from the monastery of St Bartholomew. This document also includes a description of its neighbours: *ex parte leuantis cum Mathia de Mence, ex parte ponentis cum Martholo Cereue, ex parte tramontane cum comuni Ragusii, ex parte austri cum Triphone Georgii*. To the north, there was a communal land, same as with the Crossio estate. The database also contains documents on properties south of the Holy Saviour: the estate of St Symeon and that of Margarito de Poča. These land plots are also mentioned as neighbouring in a document from 1301 concerning the transfer of a wooden house *in territorio monasterii Sancti (Simeo)nis*: to the east, the house bordered on a *terrenum* (!) of Margarito de Poča and to the south, on a public street.<sup>106</sup>

One can also follow the history of Margarito de Poča's land separately, through the aforementioned document from 1281, which records his purchase of a land plot 5 fathoms wide and 8 fathoms long. The estate bordered on land plots owned by Ungara de Guerrero and Marko de Zimuto to the east, land plots owned by Petar de Cipagna (Poca) to the west and north, and a land plot owned by Marko de Zimuto to the south.<sup>107</sup> Margarito

de Poça's father was a southern neighbour to the estate of the Holy Saviour at the time, as well as an eastern one to the estate of St Symeon, and later on, Margarito inherited the land.

The estates of St Symeon and Poça were both used for rent in the late 13th century: in 1300, Çichana *petrarius*, son of the late master Uçulini, owned a half of a wooden hut on the land of St Symeon (south of it, there was a communal street and east of it an estate of Margarito de Poça). A servant of Vido de Ghetaldo bought a wooden house (*domum lignaminis*) that was in 1300 situated *in territorio Margariti de Poça* (south of it, there was a communal street).<sup>108</sup> Besides offering an insight into the various modes of using the land, these data are valuable because they mention individual streets, and even though we have no data on the size of all estates, their interrelations are of help when applying the reconstructed sequences onto the city map – for example, the fact that both Marko de Zimuto (a southern neighbour of the Crossio estate) and the southern neighbours of the Holy Saviour (St Symeon and Margarito de Poça) bordered on a public street to the south.

In the notarial records of the 13th century, streets are rarely named (they are mostly referred to as *via comunis*), but sometimes they bear the name of the owner of a house, a gate, or an estate where they begin, pass by, or end. Notarial records contain several examples describing the streets: thus, in 1279, Pervoslava, wife of Matijaš (son of Marin) de Mençe, bought a large *territorium* in the burgus from Draža, widow of Palma de Gangulo. The estate bordered to the west on a street leading *ad Puteum*.<sup>109</sup> As mentioned before, in the statutory regulations of 1272 and 1296, streets are named after the same pattern. (Unlike the situation of various other Mediterranean cities, Dubrovnik's size at the time motivated fewer different names and a less precise terminology.)

The Crossio estate was cut in two (between the central and the eastern strip) by a street running along the north-south axis. It was leading *ad portam dompni Petri de Mence*, presumably called after don Petar son of Rusin de Mençe (b. around 1210)<sup>110</sup> and identical with the Mençe gate from the statutory regulation of 1272. A house owned by don Petar de Mençe has been mentioned again in 1281 near the estate and the house of Martol de Cereva.<sup>111</sup> Martol's house is mentioned in the statutory regulation on streets in 1296 as situated at the southern end of the street, next to the city walls,<sup>112</sup> which first passed *inter territorium et domum* of Matijaš de Mençe. A document from 1320 describes a public street 9 palms wide running through the estates of Matijaš de Mençe and all the way to the city wall, where one entered the house of Martol de Cereva.<sup>113</sup> It is also mentioned that the *porta intra territoria* should remain 9 palms wide, same as the street.<sup>114</sup> (This type



of gate leading to the estate is also mentioned in relation to the creation of a new street (today's Kaboga) in 1296.)<sup>115</sup> Data on the street running through the Crossio estate help in reconstructing the neighbouring plots, yet also raise new questions in research and digital mapping.<sup>116</sup>

The description of the sale of the Crossio estate does not mention any known churches or other buildings that can be localized with certainty. However, we know that it bordered on communal land to the north, the position of which is certain only for the period after 1296 (today's Između polača). This communal land was in lease from the early 1280s, which is evident from the notarial records as well as the Book of Communal Leases. The guidelines for renting land were adopted from private estates: a relatively large communal land was first divided into smaller plots, which were then rented with the right to build (wooden) housing facilities.<sup>117</sup> In the List of Communal Leases from 1282 the land plots were listed without a precise location – merely *in burgo* – and thus cannot be localised with certainty. Nevertheless, one can compare the list to the data from the notarial records to reach interesting conclusions. Thus, a communal land plot was leased by the sons of Poveresko de Talaua, the one who owned the house on the estate of Jakov Crossio.<sup>118</sup> It is possible that this information refers to the communal lands in the vicinity of the Crossio estate. Moreover, in 1283 one of Poveresko's sons, Jakov, sold his house in the communal land to Lovro son of Marin de Mençe, the same person whose wife bought a land plot in 1279 from Savin de Getaldi, neighbour to the Crossio estate (and that plot bordered on communal land).<sup>119</sup> In 1282, Mato, son of Radoslava and Petar Teodorov de Crossio, temporarily used a house on communal land (probably also near the Crossio estate).<sup>120</sup>

In conclusion, if one aims at reconstructing the real estate owned by Dubrovnik's elite in the burgus during the 13th century, it is necessary to take into account the social topography of other subjects in order to understand the complex relationship between urban space and urban population. All dynamic changes must be observed and interpreted not only in the context of space, but also in that of demographic, economic, legal, social, and political circumstances.

## Discussion

When studying the urban development of medieval cities and towns, the notarial records are an indispensable source of information on the properties, their owners and users, their location, and sometimes their size. These records can also serve to define various discourses related to space, depending on their purpose and date. Nevertheless, the notarial records were not introduced for this purpose, but for a series of legal and administrative functions in which the description of their locality was less important and

often accidental. The data preserved in the notarial records depended on the notary's knowledge of a particular part of the city and on which data he had obtained from the parties.

Some details on property relations were not written down but rather regulated through mechanisms of the "universally known" common law. It may also be presumed that some issues were solved on the spot, with regard to the actual situation and according to the judge's decision. Moreover, the formal record of property transfer did not always describe the actual situation or the precise relationship between the legal parties, but often depended on the notarial skills, the available legal formulas, and so on. Also, one must be cautious with terminology and the meaning of specific terms. Regarding the fact that individuals often bought, exchanged, or leased properties, the description of their location in the city largely depends on the available data on similar transactions concerning the neighbouring properties. The scarcity of sources (and their discontinuity) causes lacunae in our information on individual properties and their owners. In medieval documents, spatial reconstruction can be obstructed by insufficient identification of individuals. Besides the frequent changes of ownership, an accurate reconstruction can be obstructed by the lack of street names, an insufficient number of fixed orientation points such as churches, squares, city walls, or prominent private and public buildings. Thus, a reconstruction of urban land plots in a wider spatial and temporal context is only partially possible, which is a typical situation with medieval documents. The fragmentary and typologically diverse documents allow us to create a picture only by using the "puzzle" method, with many of the fragments missing. In such a situation, one must frequently resort to the trial-and-error method. Some of the lacunae can be partly filled with data from the later periods, which confirm or refute the original scheme, complementing it in the process.

In this approach, systematic investigation is most important: all relevant local circumstances should be taken into account: legal, political, and social. Even though this methodological approach is complex and time-consuming, with many corrections needed when putting together a large quantity of data, the final results, including linking the data to the actual localities in the city, are a positive reward. Apart from the reconstruction on the basis of data drawn from the notarial records, spatial analysis and archaeological research are crucial elements when deciding on the locality of a specific property. Of course, this often raises additional questions instead of offering a solution, which makes the process even more complex and lengthy.

This paper brings examples of documents and reconstructions of spatial relations made on the basis of data on individual properties – their owners,

neighbours, and users, as well as their descriptions. These are only a part of the research process of digital mapping that we are working on. The key step is to apply such reconstructions on the digital city map, but it is often necessary to reconstruct a property over a longer period of time in order to confirm its localisation.

Owing to the data limitations, digital mapping is performed and presented only in a two-dimensional model. 3D models would only be possible if we had information on the height of the houses and the number of storeys, which is impossible to do for the period in question. Residential, public, and ecclesiastical buildings shown on vedutas and maps preceding the earthquakes are mostly not from the period in question.

The obtained reconstruction is relative and ideal, subject to correction following additional research (e.g. new findings of documents containing relevant data on our period). The research focuses primarily on the properties of urban elites and their function in public space in terms of investment, use, grouping, and impact on urban development and planning. Of course, precise localisation is important, but certain spatial sequences can also be analysed in relative terms.

This research concept reflects the current trends in urban history, focusing on persons who shaped their surrounding and their geographical reality.<sup>121</sup> Inspirational methodologies were those used by urban historians primarily in researching British, Italian, and French cities and towns.<sup>122</sup> (Some international interdisciplinary research and projects,<sup>123</sup> have yielded impressive results). We have sought to contribute to the development of the research methodology by applying digital mapping in the case of 13th-century Dubrovnik.

## Notes

- \* The present study was financed by the Croatian Science Foundation as part of the project *Cities of the Croatian Middle Ages: Urban Elites and Urban Spaces*, IP-2014-09-7235.

1 Irena Benyovsky Latin, "Murus versus montem: Construction of the Dubrovnik Fortifications around the Suburbs up to the End of the Thirteenth Century," *Review of Croatian History* 8/1 (2013): 7-36.
- 2 The "Great Earthquake" of 1667 was preceded by others (in the 16th and 17th centuries), as well as by fires (in the late 13th and 14th centuries). Cf. Vladimir Marković, "Kuća i prostor grada u Dubrovniku nakon potresa 1667. godine," *Radovi Instituta za povijest umjetnosti* 14 (1990): 137-149; Bariša Krekić, "Borba Dubrovnikova protiv vatre (XII-XV. v.)," *Zbornik radova Vizantološkog instituta* 29-30 (1991): 169-171.

- 3 Dubrovnik has been only partly archaeologically researched. Significant findings made by the Conservation Department in Dubrovnik have not been published in entirety. Among those published, one should mention a series of articles by archaeologist Ivica Žile: "Fortifikacijski sustavi u svjetlu recentnih arheoloških nalaza," *Dubrovnik* 4/2 (1993): 223-228; "Zaštitna arheološka istraživanja crkve sv. Vlaha u povijesnoj jezgri grada Dubrovnika," *Starohrvatska prosvjeta* 35 (2008), 185-193; "Rezultati arheoloških istraživanja u palači Kaboga 2-4 u Dubrovniku," *Radovi Instituta za povijest umjetnosti* 16 (1992): 19-27; "Rezultati arheoloških istraživanja u Domu Marina Držića," *Radovi Instituta za povijest umjetnosti* 12-13 (1988-1989): 49-57; "Arheološki nalazi unutar perimetra povijesne jezgre grada Dubrovnika," *Opvscula archaeologica* 23-24 (1999-2000): 336-346.
- 4 Institute of Art History participated in these conservationist projects in Dubrovnik by carrying out spatial analysis and by producing urbanistic and spatial plans, which resulted in a number of studies and expertises.
- 5 Thus, a town map from the 16th century was found in the archives of Turin; cf. Ilario Principe, "Tri neobjavljene karte Dubrovnika iz XVI.-XVII. st.," *Dubrovnik* 1 (1991): 191-202. Especially valuable are the 17th-century panoramic veduttas: cf. Vedrana Gjučić-Bender, "Prikazi Dubrovnika u slikarstvu," *Prilozi povijesti umjetnosti u Dalmaciji* 38 (1999-2000): 215-244. The earliest accurate city map was a cadaster map from the 19th century (the official copy stems from 1837): *Arhiv mapa za Istru i Dalmaciju. Katastar Dalmacije 1823.-1975., Inventar.* ed. Nataša Bajić-Žarko (Split: Hrvatski državni arhiv, Državni arhiv u Splitu, 2006).
- 6 *Monumenta historica Ragusina*, vol. 1, ed. Gregor Čremošnik (Zagreb: Historijski institut JAZU, 1951); *Monumenta historica Ragusina*, vol. 2, ed. Josip Lučić (Zagreb: JAZU, 1984); *Monumenta historica Ragusina*, vol. 3, ed. Josip Lučić (Zagreb: JAZU, 1988); *Monumenta historica Ragusina*, vol. 4, ed. Josip Lučić (Zagreb: JAZU, 1993); Gregor Čremošnik, "Nekoliko dubrovačkih listina iz XII. i XIII. stoljeća," *Glasnik Zemaljskog muzeja u Bosni i Hercegovini* 43 (1931): 25-54.
- 7 Irena Benyovsky Latin and Sandra Begonja, "Nekretnine u notarskim dokumentima 13. stoljeća: primjeri dalmatinskih gradova (Zadra, Šibenika, Trogira, Splita i Dubrovnika)," *Povijesni prilozi* 51 (2016): 7-38; Fedor Breitenfeld, "Pravni poslovi nekretninama u XII i XIII vijeku u Dalmaciji, Hrvatskoj i Slavoniji," *Vjesnik hrvatskog arheološkog društva* 1 (1936): 120-121; Zdenka Janeković Römer, *Rod i grad, Dubrovačka obitelj od 13. do 15. stoljeća* (Dubrovnik-Zagreb: Zavod za povijesne znanosti HAZU u Dubrovniku, Zavod za hrvatsku povijest Filozofskog fakulteta u Zagrebu, 1994), 87-90, 91-93, 106; Branka Grbavac, "Notarijat na istočnojadranskoj obali od druge polovine 12. do kraja 14. stoljeća." PhD dissertation (University of Zagreb, 2010), 86-89.
- 8 The database has been created for the research project *Towns and Cities of the Croatian Middle Ages: Urban Elites and Urban Space (URBES)*, financed by the Croatian Science Foundation (project leader: Irena Benyovsky Latin), <http://urbes.s2.novenaweb.info/hr/baza-podataka/>.
- 9 *Knjige nekretnina dubrovačke općine 13-18. st.* vol. 1, eds. Irena Benyovsky Latin and Danko Zelić (Zagreb and Dubrovnik: HAZU, 2007).
- 10 *Statut grada Dubrovnika* (hereafter: DS). ed. and trans. Ante Šoljić, Zdravko Šundrica, and Ivo Veselić (Dubrovnik: Državni arhiv u Dubrovniku, 2002), L. V, c. 41; L. VIII, 57; *Liber omnium reformationum civitatis Ragusii*, in: *Istorisko-pravni spomenici* book 1, ed. Aleksandar Solovjev (Belgrade: SKA, 1936).

- 11 From the 14th century onwards, notarial documents are organized in units: *Testamenta de notaria; Distributiones testamentorum; Diversa Cancellariae. Venditiones Cancellarie, Liber Dotium*, and so on: State Archive in Dubrovnik: cf. Josip Gelčić, "Dubrovački arhiv," *Glasnik Zemaljskog muzeja u Bosni i Hercegovini* 22 (1910): 537-588.
- 12 E.g. *Monumenta ragusina. Libri reformationum*, vol. 1, ed. Ivan Krstitelj Tkalčić (Zagreb: JAZU, 1879); *Monumenta Ragusina. Libri reformationum*, vol. 2, ed. Ivan Krstitelj Tkalčić (Zagreb: JAZU, 1882); *Monumenta Ragusina. Libri reformationum*, vol. 3, ed. Ivan Krstitelj Tkalčić (Zagreb: JAZU, 1895); *Monumenta Ragusina. Libri reformationum*, vol. 4, ed. Josip Gelčić (Zagreb: JAZU, 1896); *Monumenta ragusina. Libri reformationum*, vol. 5, ed. Josip Gelčić (Zagreb: JAZU, 1897); *Odluke dubrovačkih vijeća od 1390. do 1392.* ed. Nella Lonza and Zdravko Šundrica (Zagreb – Dubrovnik: HAZU, 2005); *Odluke dubrovačkih vijeća 1395-1397. Reformationes consiliorum civitatis Ragusii 1395-1397*, ed. Nella Lonza (Zagreb – Dubrovnik: HAZU, 2011).
- 13 *Knjiga rizničarskih najмова/Liber affectuum thesaurarie (1428-1547)*, ed. Danko Zelić (Zagreb – Dubrovnik: HAZU, 2012).
- 14 E.g. *Chronica Ragusina Junii Restii (ab origine urbis usque ad annum 1451) item Joannis Gundulae (1451-1484)*, ed. Speratus Nodilo (Zagreb: JAZU, 1893); *Annales Ragusini Anonymi item Nicolai de Ragnina*, ed. Speratus Nodilo (Zagreb: JAZU, 1883).
- 15 Zdenka Janeković Römer, *The Frame of Freedom. The Nobility of Dubrovnik between the Middle Ages and Humanism* (Zagreb – Dubrovnik: Zavod za povijesne znanosti HAZU u Dubrovniku, 2012); Nenad Vekarić, *Vlastela grada Dubrovnika*. vols. 1-8 (Zagreb – Dubrovnik: Zavod za povijesne znanosti HAZU u Dubrovniku, 2011-2016); Irmgard Mancken, *Dubrovački patricijat u XIV. veku.* (Belgrade: SANU, 1960). Without thorough prosopographic and genealogical research, it is difficult to identify the persons spearing in documents.
- 16 A method that investigates the location, arrangement, size, changes, and continuity in the real estate owned by specific social groups – elements that are important factors in the formation of urban space. Cf. Jean-Claude Maire Vigueur, "Introduction," in *D'une ville à l'autre. Structures matérielles et organisation de l'espace dans les villes européennes (XIIIe-XVIIe siècle)* (Rome: École Française de Rome, 1989), 1-22; Donatella Calabi, François Loyer, and Susanna Magri, "Formes urbaines et dynamiques sociales," *Geneses* 27 (1997): 124-146; Jean-Claude Marie Vigueur, "Espace urbain et système de relations," *Le Moyen Age* 101 (1995): 297-309; *Die Sozialstruktur und Sozialtopographie vorindustrieller Städte*, ed. Matthias Meinhardt and Andreas Ranft (Berlin: Akademie Verlag, 2005); Vanessa Harding, "Space, Property, and Propriety in Urban England," *Journal of Interdisciplinary History* 32 (2002): 549-569; Martha C. Howel, "The Spaces of Late Medieval Urbanity," in *Shaping Urban Identity in Late Medieval Europe*, ed. Marc Boone and Peter Stabel (Garant: Garant Uitgevers N V, 2000), 65-87.
- 17 One of the results of the URBES project will be a reconstruction of the entire area: <http://urbes.s2.novena.gov.hr/>.
- 18 Irena Benyovsky Latin, "Interdisciplinarnost u urbanoj povijesti: povijest i perspektive," in *Historiografija / povijest u suvremenom društvu*, ed. Gordan Ravančić, Mislav Gregl, Ivana Horbec, Vlasta Švogor, and Dinko Župan (Zagreb: Hrvatski institut za povijest, 2014), 23-34.
- 19 For the present-day spatial situation of Dubrovnik, we have used data from the website of the State Department of Geodetics (<https://geoportal.dgu.hr/>).
- 20 Milan Prelog, "Dubrovački statut i izgradnja grada (1272-1972)," *Peristil* 14-15 (1971-1972): 81-94, 81-82.

- 21 For spatial analyses and digital mapping, we have used AutoCAD Map 2016, SketchUp Pro 2017, Google Maps, Google Earth, and data from Geoportala DGU.
- 22 Lukša Beritić, *Urbanistički razvitak Dubrovnika* (Zagreb: Zavod za arhitekturu i urbanizam Instituta za likovne umjetnosti JAZU, 1958); Lukša Beritić, *Utvrđenja grada Dubrovnika* (Zagreb: JAZU, 1955); Lukša Beritić, "Ubikacija nestalih građevinskih spomenika u Dubrovniku," *Prilozi povijesti umjetnosti u Dalmaciji* 10 (1956), 61-84; Davorin Stepinac, "Problem asanacije i revitalizacija povijesne jezgre u Dubrovniku," MA thesis (University of Zagreb, 1976); Marija Planić-Lončarić, "Organizacija prostora. Urbanizam," in *Zlatno doba Dubrovnika. XV. i XVI. stoljeće* (exhibition catalogue) (Zagreb: MTM, 1987); Marija Planić-Lončarić, *Planirana izgradnja na području Dubrovačke Republike* (Zagreb: Centar za povijesne znanosti, Odjel za povijest umjetnosti, 1980); Marija Planić-Lončarić, "Zajednički prostori stambenih zona srednjovjekovnog Dubrovnika," *Radovi Instituta za povijest umjetnosti* 12-13 (1988-1989): 65-72; Marija Planić-Lončarić, "Ceste, ulice i trgovi srednjovjekovnog Dubrovnika," *Prilozi povijesti umjetnosti u Dalmaciji* 29 (1990): 157-169.
- 23 Danko Zelić, "Wooden Houses in the Statutes and Urban Landscapes of Medieval Dalmatian Communes," in *Splitski statut iz 1312. godine: povijest i pravo povodom 700. obljetnice. Međunarodni znanstveni skup Splitski statut iz 1312. godine, Split, 2012.*, ed. Željko Radić et al. (Split: Književni krug: Odsjek za povijest Filozofskoga fakulteta Sveučilišta u Splitu; Pravni fakultet Sveučilišta u Splitu, 2015), 492.
- 24 These have mostly been published in the document collection *Codex Diplomaticus*, ed. Tadija Smičiklas (hereafter: CD): vol. 2 (Zagreb: JAZU, 1904); vol. 3 (Zagreb: JAZU, 1905); vol. 3 (Zagreb: JAZU, 1906); vol. 4 (Zagreb: JAZU, 1907); and vol. 5 (Zagreb: JAZU, 1908).
- 25 There was litigation in 1258 between members of the elite families Guerrero and Volcassio about the boundaries of an estate in burgus. It also mentions an older document from 1255, which describes the situation of a land owned by the monastery of St Symeon "beyond the old city wall," which tells that the distance between the old wall of Dubrovnik northwards to the milestone with the SI mark was 57 *braccolaria*, and from the new wall northwards to the milestone with the SI mark there were 56 *braccolaria*. South of the St Symeon's estate, there was a communal street and a land plot owned by Volcassio (Vukas Ivanić). CD, V, 612. The "new" wall mentioned in this document, as well as in some narrative sources, would have protected the first suburbs in the mid-13th century, yet remains to be confirmed by archaeological finds before speculating on its direction line. In 1252, the Chronicle of Junio Resti tells that the Serbian army attacked the city with the intention of preventing the construction of "a new city wall" *Chronica Ragusina Junii Restii*, 90. The same chronicle (as well as that by Nicholas de Ragnina), informs us that the year 1266 saw the beginning of the construction of "a new city wall" around the suburbs. *Chronica Ragusina Junii Restii*, 96; *Annales Ragusini Anonymi item Nicolai de Ragnina*, 221.
- 26 L. Beritić, an expert on Dubrovnik's fortifications, localized the old city wall along the line of today's Pećarica, yet we tend to agree with the more recent hypothesis that situates it along the line of today's Strossmayerova Street, which is supported by the archaeological finds of the city wall's foundations. Cf. Beritić, *Utvrđenja*, 15; Planić Lonarić, *Zajednički*, 6. Archaeological excavations were carried out by the Institute of Monument Conservation in Dubrovnik, and the results have been summed up in *Izješće o sondažnim arheološkim radovima* [Report on archaeological sondage] by Ivica Žile,

- Lucijana Peko, Nikola Nađ, Matko Vetma, and Miljenko Mojaš (Dubrovnik, 1987).
- 27 Planić-Lončarić, *Planirana*, 18-19.
- 28 According to M. Planić Lončarić, a communication line would have run through a gate in the wall discovered in Bunićeva poljana, which would have connected it to the city harbour. Planić-Lončarić, *Ceste, ulice i trgovi*, 164-165.
- 29 In the area south of Gučetićevo, there was a church of St Barbara from a precommunal period, which is discernible in the 19th-century cadastre map. Planić-Lončarić, *Zajednički*, 67; Planić-Lončarić, *Ceste, ulice i trgovi*, 164-165; Marija Planić-Lončarić, *Osnovna škola "Miše Simoni" u Dubrovniku (palača i vrt u Gučetićevoj ulici, objekti u Pracatovoj): analiza razvoja i stanje* (Zagreb: Centar za povijesne znanosti, Odjel za povijest umjetnosti, 1984), preserved at the Archive of the Institute of Art History in Zagreb (Unpublished expertise); Marija Planić-Lončarić, *Blok uz Jezuite – Bunićeva poljana. Analiza razvoja, stanje i prijedlozi konzervatorskih smjernica* (Zagreb: Centar za povijesne znanosti, Odjel za povijest umjetnosti, 1994), preserved at the Archive of the Institute of Art History in Zagreb (Unpublished expertise); Romana Menalo, *Izvjешće o arheološkim istraživanjima u vrtu Osnovne škole "Grad"* (Dubrovnik: Dubrovački muzej, 1987), preserved at the Conservation Department in Dubrovnik (Unpublished report).
- 30 This is visible on today's city map with indicated isopleths.
- 31 DS, L. IV, c. 79; Zelić, "Wooden Houses," 496. The role of Ragusan counts (who were Venetian patricians) in the spatial organisation of the suburbs during the 13th century is probable. Marsilio Zorzi who was Ragusan count after the city's last rebellion against Venice in 1252, had significant impact on the urban planning of Korčula several years later.
- 32 Thus, in 1222 there was a land plot *extra portam Leonis* that Valij de Gondula inherited from his uncle. Later on, his sons Benedikt and Damijan owned smaller land plots that they used for housing and lease. CD, III, no. 190.
- 33 Following Uroš's deposition through his son Stefan Dragutin, there was a period of peaceful relations (1276-1282), which coincided with an exceptionally vibrant real estate market. This is also the time when notarial records were first introduced. Cf. Vinko Foretić, *Povijest Dubrovnika do 1808.*, vol. 1 (Zagreb: Nakladni zavod MH, 1980), 88-89.
- 34 Benyovsky Latin, and Ledić, *The Estate*, 20.
- 35 Žile, *Rezultati arheoloških istraživanja u palači Kaboga*, 19-27.
- 36 *De fundamentis inventis sub terra: Fundamentum inventum subtus terram vel equale ad terram, habeatur pro termino et fine illius territorii in quo invenietur*; DS, L. V, c. 18.
- 37 The abovementioned document from 1258 states that a public street must remain 9 spans wide.
- 38 Cf. Marija Planić-Lončarić, *Blok na Gundulićevoj poljani, palača u Zuzorićevoj ulici 6, objekt u Pracatovoj ulici 1, zgrada Općine: analiza razvoja i stanja* (Zagreb: Centar za povijesne znanosti, Odjel za povijest umjetnosti, 1981), preserved at the Archive of the Institute of Art History, Zagreb (Unpublished expertise).
- 39 Planić-Lončarić, *Ceste, ulice i trgovi*, 158; Planić-Lončarić, *Planirana izgradnja*, 18. A similar communication line has been identified on the published map by L. Beirtić, *Urbanistički* (maps).
- 40 A document from 1284 names a *porta de paludo* next to the church; CD; VI, no. 386.
- 41 SD, L. V, c. 41; cf. Beritić, *Urbanistički*, 14-15; Prelog, *Dubrovački statut*, 81-94.
- 42 At the time of the 1272 statute, Marko Giustiniani was the rector of Dubrovnik. During his second mandate (1277-1278), notary Tomasino de Savere came to Dubrovnik.
- 43 *Et via que venit a porta de Celagna (sic) usque ad ecclesiam Omnium Sanctorum*,

- vadat versus levantem usque ad viam que est subtus territorium Mathie de Mence.
- 44 According to Prelog, this street was the main axis of the 1272 regulation. Prelog, *Dubrovački statut*, 81-94; cf. Beritić, *Ubikacija*, 61.
- 45 North of Cvijete Zuzorić Street, a remnant of a wall (presumably a fortification) has been found, which may have (according to Žile) protected the newly emerged burgus. Žile, *Rezultati arheoloških istraživanja u palači Kaboga*, 19-27. (fig. 1, no. 15).
- 46 Thus, in 1273, the estate of Miho Ranina was situated *a foramina muri civitatis ... recto tramite usque ad vitem, que est penes seriem que est secus viam communis*; CD; VI, no. 316.
- 47 MHR II, doc. 812, 186.
- 48 Prelog, *Dubrovački statut*, 81-94.
- 49 The first leased land plot was documented in 1280, on the estate of Matej de Gleda. MHR, I, doc. 384, 109.
- 50 *Liber omnium reformationum civitatis Ragusii*, ed. Aleksandar Solovjev (Belgrade: SANU, 1936), XXVII, 7.
- 51 The Book of Custom Regulations (*Liber statutorum doane*) from 1277 mentions a *platea* that ended with the city gate Od Pila on the one side and with a gate to the sea on the other. Here one also finds the first mention of using public areas for short-term lease or trade. *Liber statutorum doane civitatis Ragusii MCCLXXVII / Knjiga odredaba dubrovačke carinarnice 1277.*, ed. Josip Lučić (Dubrovnik: Historijski arhiv, 1989).
- 52 In 1292/3, Dubrovnik was struck by famine and an epidemic that allegedly lasted for two years, resulting in a great number of deaths, especially of petty commoners. Cf. Vekarić, *Vlastela grada Dubrovnika*, 1, 211; *Chronica Ragusina Junii Restii*, 51; *Annales Ragusini Anonymi item Nicolai de Ragnina*, 222; *Annales Ragusini Anonymi*, 35, 223.
- 53 Apparently, many persons moved to Apulia or beyond the city limits at the time; others participated in rebuilding the city. *Chronica Ragusina Junii Restii*, 101-102.
- 54 Crhonicler S. Cerva noted the following: *Nos Marinus Mauroceno de Ducali Mandato comes Ragusii ad ipsius civitatis readificationem, et statum sigilli sollicitudine intendentes, et specialiter ad constitutionem domorum, sive viarum ipsius civitatis, et burgi, anno sive millesimo supradicto, die vero XXIII intrante mense septembri congrato minori et majori consilio, et laudo populi ad sonum campanarum more solito statuimus et ordinamus, quod ante domus communis. Tunc vetera fere omnia monumenta, tabulasque privatis in domibus servatas ignis consupsit; inde plurimae inter cives exertam de praediorum finibus controversiae.* Seraphinus Maria Cerva, *Sacra Metropolis Ragusina, sive Ragusinae provinciae pontificum series variis ecclesiarum monumentis atque historicis, chronologicis, criticis commentariis illustrata*, Library of the Dominican Monastery in Dubrovnik, call. no. 36-IV-14, f. 261.
- 55 DS, L. VIII, c. 57.
- 56 This regulation states that the owners of houses in the communal street stretching from the Volcassio fonticus in the east to the estate of the Archbishopric should pay an annual fee to the commune for bordering on communal land. DS, L. VIII, c. 57.
- 57 Danko Zelić, "Utilitas et lucrum – Općinske kuće u srednjovjekovnom Dubrovniku," in *Umjetnost i naručitelji. Zbornik Dana Cvita Fiskovića*, vol. 3, ed. Jasenka Gudelj (Zagreb: Institut za povijest umjetnosti, Odsjek za povijest umjetnosti Filozofskog fakulteta Sveučilišta u Zagrebu, 2010), 9-24.
- 58 Nada Grujić, "Dubrovnik-Pustijerna, Istraživanja jednog dijela povijesnog tkiva grada," *Radovi Instituta za povijest umjetnosti* 10 (1986): 21.
- 59 Planić-Lončarić, *Dubrovnik – Blok omeđen ulicama Od puča, Pracatovom, Između polača i Božidarevićevom*, 2.
- 60 Menalo, *Izvjeshće o arheološkim istraživanjima*; expertise *Osnovna škola "Miše Simoni" u Dubrovniku*, 4; Planić-



- Lončaić, *Zajednički prostori*, 70.
- 61 Cf. Irena Benyovsky Latin and Stipe Ledić, “The Estate of the Volcassio Family in Medieval Dubrovnik,” *Dubrovnik Annals* 14 (2106): 7-45; Irena Benyovsky Latin, “Dubrovnik’s Burgus of St Blasius in the 13<sup>th</sup> Century,” in *Towns and Cities of the Croatian Middle Ages: Authority and Property*, ed. Irena Benyovsky Latin and Zrinka Pešorda Vardić (Zagreb: Hrvatski institute za povijest, 2014), 295-326.
- 62 MHR I, doc. 32, 9-10.
- 63 One of the rare preserved documents from the period before the introduction of notarial records mentions in 1233 the house of Teodor de Crossio *ad magnum mercatum* or *super plateam magni mercati*, next to the houses of Andrija Ranina and those of the monastery of St Nicholas. CD III, no. 328.
- 64 Teodor de Crossio had five sons: Goyislav (the Goyislavo branch), Pasko, Rusin (the Rosso branch), Petar (Spavaldo), and Barbio (the Goyislavo branch), as well as one daughter, Ungara. Vekarić, *Vlastela*, vol. 7, 264. Cf. Mankhen, *Dubrovački patricijat*, 394; Benyovsky Latin, *Dubrovnik’s Burgus*, 312.
- 65 Grbavac, “Notarijat na istočnojadranskoj obali,” 86; Breitenfeld, “Pravni poslovi,” 114-116.
- 66 According to the procedure, the seller had to announce the intended sale to the commune and also publicly, in a frequent-ed public place. Lujo Margetić, *Srednjovjekovno hrvatsko pravo: obvezno pravo*, 220, 238.
- 67 Margetić, *Srednjovjekovno hrvatsko, obvezno*, 226, 230-236.
- 68 The descendants of Šimun de Cerneca were in litigation with Ungara, née Crossio, widow of Šimun’s brother, because she had sold the properties of her late husband “to whomever she pleased” – that is, to her parents and nephews, instead of the one who offered more. The documents mention that it was a custom in Dubrovnik to sell real estate to the highest bidder at a public auction. Ungara, however, stated that she had acted upon the instructions given in the last will of her husband, which did not foresee public announcement, only that the property should be sold to the one offering the best price. Ungara claimed that she had investigated who could be the one by asking those persons “who regularly bought real estate.” Even though “she would have gladly sold the property for a higher price,” eventually she sold it to her relatives for a lower one, as she could not find a better bidder. CD VI, doc. 475, 560.
- 69 Lujo Margetić, “Dioba općinskog zemljišta u nekim srednjovjekovnim dalmatinskim komunama,” *Starine JAZU* 56 (1975): 21-23, 35. Cf. Janeković Römer, *Rod i grad*, 102.
- 70 Married to Vuk Domanjin de Babalio.
- 71 MHR IV, doc. 1299, 281-282; MHR II, doc. 863, 198. Thus, the house of Jakov’s son Nikola is mentioned in 1282 next to the property of Juraj de Gleda. MHR II, doc. 892, 206.
- 72 Jakov had three sons: Marin, Teodor, and Mato, as well as four daughters: Liza, Agape (a nun), Deko, and Prvula. Vekarić, *Vlastela*, vol. 7, 262-264.
- 73 MHR II, doc. 925, 217; Josip Lučić, *Obrti i usluge u Dubrovniku do početka XIV. Stoljeća* (Zagreb: Sveučilište u Zagrebu, Institut za hrvatsku povijest, 1979), 67.
- 74 MHR II, doc. 367, 85.
- 75 MHR II, doc. 1253, 314; Lučić, *Obrti i usluge*, 104.
- 76 MHR I, doc. 447, 129.
- 77 Vekarić, *Vlastela*, vol. 8, 207.
- 78 It was the Spavaldo branch, stemming from Teodor’s fourth son, Petar. Vekarić, *Vlastela*, vol. 7, 262-271.
- 79 MHR III, nr. 973, 315.
- 80 Cf. Diane Owen Hugues, “Urban Growth and the Family Structure in Medieval Genoa,” *Past and Present* 66 (1975): 3-28.
- 81 MHR I, doc. 122, 31.
- 82 MHR I, doc. 374, 104.
- 83 MHR I, doc. 608, 190.
- 84 MHR II, doc. 1101, 271.
- 85 MHR II, doc. 337, 78.

- 86 Marija Planić-Lončarić, “Srednjovjekovni tipski stambeni objekti u naseljima na području Dubrovačke Republike,” *Godišnjak zaštite spomenika kulture Hrvatske* 2/3 (1976–1977): 131-136.
- 87 Benyovsky Latin, and Begonja, “Nekretnine,” 16; Zelić, “Wooden Houses,” 496.
- 88 Zelić, “Wooden Houses,” 23.
- 89 *Capanna* has the same meaning as *cabanna* or *cabana* in other European examples, namely “small house” or “hut”. Cf. *Mediae Latinitatis Lexicon Minus: Lexique Latin Medieval - Medieval Latin Dictionary - Mittellateinisches Wörterbuch*, ed. J.F. Niermayer and C. van de Kieft (Leiden: Brill, 2002), 113.
- 90 There was a regulation in the Statute of Dubrovnik *quod nullum laborerium lignaminis habeat possessionem vel terminum stabilem*. DS, L. V., c. 11. Whoever built a structure out of durable material on his house or land plot, had to report so that all those who claimed the property (*habere petere rationem*) could react. DS, L. V, c. 13.
- 91 Cf. Benyovsky Latin, and Begonja, “Nekretnine,” 27. According to Muljević, *brazolar* was a wooden rod “one or two elbows long, used in Dubrovnik from the mid-13<sup>th</sup> century onwards.” Vladimir Muljević, “Mjere i mjerenja u Dubrovačkoj Republici,” *Anali Zavoda za povijesne znanosti HAZU* 29 (1991): 248.
- 92 In the Statute of Hvar, for example, the ratio between the communal fathom, *braccolarium*, and elbow was defined 1:2:4. *Hvarski statut*. ed. Antun Cvitanić (Split: Književni krug, 1991), L. II, c. 47XLVII, 265; Marija Zaninović Rumora, “Hvarske komunalne mjere za dužinu i površinu kroz stoljeća,” *Radovi Zavoda za povijesne znanosti HAZU u Zadru* 50 (2008): 111.
- 93 MHR II, doc. 812, 186.
- 94 In 1283, he was in conflict with his neighbour Petar de Poca over the boundaries of their building plots. MHR II, doc. 1089, p. 267.
- 95 MHR, IV, doc. 262, pp. 78-79.
- 96 The houses bordered on communal land along their width of 5 or 6 palms. This information comes from the *Knjige nekretnina Dubrovačke općine, Knjige nekretnina dubrovačke općine (13-18. st.) = Libri domorum et terrenorum communis Ragusii deliberatis ad affectum (saec. XIII-XVIII)*, vol. 1, ed. Irena Benyovsky Latin and Danko Zelić (Zagreb – Dubrovnik: Zavod za povijesne znanosti HAZU u Dubrovniku, 2007), 131.
- 97 MHR II, doc. 1007, 244.
- 98 MHR I, doc. 483, 143.
- 99 MHR III, doc. 815, 283.
- 100 December 12, 1296; MHR, fol. 86, nr. 984, 317-318.
- 101 Notaries used a localization technique that was typical of Roman law, and thus a similar, standardised description can be found in various European cities and towns: besides the general location, it included a list of neighbouring properties. Grbavac, “Notarijat,” 173.
- 102 Thus, one used the terms “to the east” (*ex parte orientis*), “to the west” (*ex parte occidentis*), or “to the north” (*ex parte septentrionis*), but also wind names: eastern (*ex parte levantis*), western (*ex parte ponentis*), northern (*ex parte tramontane*), southern (*ex parte austri*), south-eastern (*ex parte greci*), north-western (*ex parte boree*), southwestern (*ex parte affracini*), and south-eastern (*ex parte siloci*). Moreover, Dubrovnik’s notaries also regularly used terms derived from geographical orientation points: *ex parte montis* (towards the mountain of Srđ) and *ex parte pelagi* (towards the open sea). Cf. Benyovsky Latin, and Begonja, “Nekretnine,” 24-25.
- 103 Thus, in a document from 1297, Fusko, son of the late Jakov de Binçola, sold a *casale* that was described as bordering “towards the mountain” on the church of All Saints, to the east on a land plot of Matijaš de Mence (*que fuit Kalende Bodacie*), to the west on the *casale* of

- Miho, son of Frano Binzola, and to the south on a communal street. MHR III, doc. 809, 279. Undoubtedly, it was the area between today's Hliđina Street and the church of All Saints. Even the statutory regulation from 1272 stated that the street passing by the houses of Miho Bincola and Marin Villan was to remain the same. DS, L. V, c. 51.
- 104 MHR III, nr. 775, 266-227.
- 105 Who bought a land plot from the monastery of St Bartholomew in 1295.
- 106 MHR IV, doc. 1301, 283.
- 107 MHR I, doc. 484, 143.
- 108 MHR IV, doc. 1301, 283.
- 109 MHR I, doc. 142, 37.
- 110 Vekarić, *Vlastela*, vol. 3, 61, 226.
- 111 MHR I, doc. 639, 200.
- 112 It is known that Martol had two towers at the communal wall in 1282; See: Benyovsky Latin, "Dubrovnik's Burgus," 299.
- 113 It is known that brothers Matijaš and Lovro de Mençe inherited the properties of Petar de Mençe. State Archives in Dubrovnik (hereafter: DAD), *Testamenta notariae*, /f. 47/ 138. (*Testamentum Petri de Menziis*). I would like to thank Gordan Ravančić for providing me with this document.
- 114 DAD, *Diversa cancellariae*, vol. III, f. 60.
- 115 *Que quidem via transeat inter territorium monasterii S. Marie de Melita et domum Ursacii Cereve et intret per portam hedifficatam in muro per quam intratur ad territoria illorum de Gondula, et taliter discurat usque ad murum civitatis veteris*. DS, L. VIII, c. 57.
- 116 For example, when it comes to the fortifications, city towers, and gates. It is known that Martol Cereva had towers built on the city walls (litigation from 1282). Benyovsky Latin, "Dubrovnik's Burgus," 298-299.
- 117 *Knjige nekretnina*, 119-130.
- 118 MHR II, doc. 253, 59.
- 119 MHR II, doc. 986.
- 120 MHR II, doc. 253, 59.
- 121 Jelle Haemers, "Urban History of the Medieval Low Countries: Research Trends and New Perspectives (2000–10)," *Urban History* 38/2 (2011): 346.
- 122 See, for example: John Scrase, "Working with British Property Records: The Potential and the Problems," in *Power, Profit and Urban Land: Landownership in Medieval and Early Modern Northern European Towns*, ed. F. E. Eliassen and G. A. Ersland (Aldershot, Hants: Scholar Press, 1996), 15-38; Rolf Hammel-Kiesow, "Property Patterns, Buildings and the Social Structure of Urban Society," in *Power, Profit*, 39-61; Derek Keene, "Landlords, the Property Market and Urban Development in Medieval England," in *Power, Profit*, 93-119; Derek Keene, "The Use of Documentary Sources in Studying the Topography and Archaeology of Medieval London," *Lübecker Schriften zur Archäologie und Kulturgeschichte* 7 (1983): 77-84; Étienne Hubert, "Noblesse romaine et espace urbain (Xe-XVe siècle)," in *La nobilità romana nel Medioevo*, ed. François Bougard and Sandro Carocci (Rome: École Française de Rome, 2006), 171-186; Jacques Heers, *Family Clans in the Middle Ages: A Study of Political and Social Structures in Urban Areas* (Amsterdam: North-Holland Publishing Co., 1977); Luciano Grossi Bianchi and Ennio Poleggi, *Una città portuale del Medioevo: Genova nei secoli X-XVI* (Genoa: Sagep, 1987.); Wladimiro Dorigo, *Venezia Romanica. La Formazione Della Città Medievale Fino all'Età Gotica* (Venice and Verona: CIERRE Edizioni/Istituto Veneto Di Scienze Lettere Ed Arti/Regione Del Veneto, 2002); David Herlihy, "Mapping Households in Medieval Italy," in *Cities and Society in Medieval Italy* (London: Variorum Reprints, 1980), 54-89; Daniel Lord Smail, *Imaginary Cartographies. Possession and Identity in Late Medieval Marseille* (Ithaca, NY: Cornell University Press, 2000). As for Croatian historiography, see: Irena Benyovsky Latin, *Srednjovjekovni Trogir: Prostor i društvo*

- (Zagreb: Hrvatski institut za povijest, 2009); Mladen Andreis, Irena Benyovsky, and Ana Plosnić, "Socijalna topografija Trogira u 13. stoljeću," *Povijesni prilozi* 25 (2003): 37-92; Mladen Andreis, Irena Benyovsky Latin, and Ana Plosnić Škarić, "Socijalna topografija Trogira u 14. stoljeću," *Povijesni prilozi* 33 (2007): 103-195.
- 123 Such projects are, for example, *Visualizing Venice: Exploring the Urban Past* (<http://visualizingvenice.org>); *Mapping Medieval Chester: Place and Identity in an English Borderland City c.1200-1500* (<http://www.medievalchester.ac.uk/index.html>); *City and Society in the Low Countries, 1200-1800: Space, Knowledge, Social Capital* (<http://www.ulb.ac.be/philu/urbs/>) as well as various projects at the Centre for Metropolitan History of the Institute of Historical Research, University of London (<http://www.history.ac.uk/cmh/projects>), especially *People in Place: families, households and housing in early modern London, 1550-1720* (<http://www.history.ac.uk/projects/research/people-in-place>).

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# Digitalizing Renaissance Florence

Francesco Bettarini

In 1427, the Florentine Signoria decreed a revolutionary method for the valuation of the tax rate. Since the early XIVth century, the Comune had started to collect a part of its taxes, imposing forced loans through a distribution of the amount required by the state among the urban inhabitants.<sup>1</sup> To calculate the tax rate, several householders were asked to establish an estimation (*estimo*) of the wealth of their neighbours living in the same district (*gonfalone*), through a valuation of real estates and trading activities. For a better, and equal, valuation, the Comune adopted in 1427 a new solution, imposing to every householder to deliver a statement of their property assessments together with the description of economic activities, a note of debts and credits and an essential definition of the age of the family members.

The immense potential of this source is well known once the team lead by David Herlihy started to work on a coding-data project from 1427 Catasto. Herlihy applied an innovative method of historical research that was well suited to a computer, examining series of archival documents that provide uniform information about individuals.<sup>2</sup> The systematic analysis of these records permits assessment of individuals in groups and the delineation of social structures and collective destinies. The scheduling process, entering of data in electronic format, marked a milestone for the affirmation of Serial History, especially if we consider the primitive state of the computer systems in the late Seventies. The result of this challenge is available online thanks to the database published by Browne University.

Back to these roots, John Padgett and Nial Atkinson from the University of Chicago started a project concerning the design of a historical city map, trying to link population with its real housing in a virtual urban centre map. Based on coding household-level residential data in the 1427 Catasto, this project supported by Neubauer Collegium in Chicago proposes to develop a time-series of urban maps, which will document the changing spatial, social, and economic ecology of that city over one hundred years. These maps of nearest neighbors will be anchored in spatial infrastructure – streets, walls, major buildings, churches, administrative boundaries, etc. – but because they will be reconstructed through tax-census data, they also will document, at a fine-grained household level of granularity, changing spatial distributions of wealth, occupation, and family size.

In addition to their personal residences, Florentine households in their catasti also declared other properties they owned – economic shops (*botteghe*), urban rental properties, and agricultural farms (*poderi*). These enable spatial geographies of connected properties. These new spatial data, once assembled, will be linked to Neubauer existing (yet unreleased) large relational dataset on Florentine social networks – genealogies and

intermarriage, economic partnership and credit, political factions and speeches – and on Florentine organisations – guilds, elected political offices, parishes.

Through such linkage, changing social, economic, and political networks and organisations will become capable of visualisation in space. One particular architectural research focus of this project will be investigating the social-network embedding and determinants of the rise of the Renaissance palace. However, this is also a service for the public good of many other future researches.

Starting in January 2017, the project is now working on filling data in a database that should standard all the information taken from the sources. Working on relating each field of the database to the crossing-data operations realised by the computer, this will allow us to design a digital dwelling map of the city. For this reason, this paper is just an updating communication to describe the source that we are using for the achievement the goal.<sup>3</sup>

The archival collection of the 1427 Catasto sources is today preserved in the *Archivio di Stato di Firenze*, the institution that collects all the ancient archives of the Florentine state. The documentation is composed by two series, named *portate* and *campioni*. In the first one, we find the original declarations delivered by taxpayers (not always identified with the householders) and then bound in several registers for each one of the sixteen *gonfaloni*.<sup>4</sup> The second series includes the final and official copy of the declarations rearranged by officials in a definitive and standard version. This registration reported to each taxpayer elements taken from the payloads relating to the determination of the tax coefficient. Once calculated the coefficient of land registry and resolved disputes, officials proceeded to fill out another set of registers, called summaries, which show only a list of names of citizens stacked with its tax status: a more agile serie which was then used for the actual tax distribution between payers, according to the respective tax coefficients reproduced in it.

As long as Herlhy used the *campioni* for his database, this collection was valued as the best one to be considered, especially because of the standardised layout of the declarations and the uniform description of the real estate properties. The collection of sources considered for this project not includes only the sixteen registers of the *gonfaloni*. Just because the private property was not responsible for the ownership of the entire building patrimony, the law of the Catasto also ordered to the religious institutions, the guilds and the foreigners to send their declaration. This part of the archive of the Catasto was not considered by Herlhy in his coding because he was dedicated essentially to a social study of the population. Finally, there will be space for another group of sources previously unreleased,

referring to the additions subscribed by officials before the realisation of the second catasto in 1430.<sup>5</sup>

The registers related to gonfaloni not properly show the list of the houses existing within its borders, but include all the residential taxpayers, who could declare estates possessed in other parts of the town or outside the walls; finally, there is a relevant number of householders living outside the gonfalone where they have registered.

The *Campione* declaration always shows the same sequence, splitting between fixed and movable patrimony. The description of the property assets comes at the beginning of the declaration, starting with the dwelling house and the other urban estates. This is a sample taken from the campione of Berto Trinciavelli, edited by Herlihy in the appendix of its volume.<sup>6</sup>

*Sustanze e incarichi di Berto di Guido Trinciavelli*

*Come dice per la sua scritta:*

*Una chaxa posta nel popolo di santa Maria Ughi di Firenze cholle masserizie. Da primo via, secondo terzo Benedetto di Piero degli Strozzi, quarto messer Pslla di Nofri, nella quale abita.*

Each estate is so accounted showing a significant amount of information that allows us to identify the exact location of the building in the urban context at that time: a) Type of property b) Location c) Bordering d) Rental detail e) Value of the property.<sup>7</sup> As we can verify in the sample, this information is not always mentioned in the campioni, depending substantially on the completeness of data provided by the taxpayer in its portata. By the way, I can confirm that the indication of the parish and the neighbouring names are included in almost all of cadastral descriptions.

The first element in our description is the type of property, defined by the nature of the building and its intended use. The most relevant is obviously the building used for residential purposes, defined in different ways depending on its size or the architectural conformation (*chasa*, *chasetta*, *chasolare*, *torre*, *palagio*). The property can also include private spaces outside the building such as a courtyard (*chorte*), a well (*pozo*) and a garden (*orto*) available for the owner of the house; finally, if the house and the taxpayer's domicile are the same, the property can include the furniture necessary for the accommodation (*cholle masserizie*).

When the property is designed to be used for productive or trading business, the description always mentions the type of processing carried out within the workshop (*una bottegha a uso d'arte di lana*<sup>8</sup>). The shops (*botteghe*) are distinguished from the big stores (*fondacho*) and the outer spaces reserved for small operators, like greengrocers and moneylenders (*descho*, *bancho*<sup>9</sup>).

The property related to a business can sometimes be limited to the right of access without also involving the ownership of the building area; the owner of the right of access (*entratura*) can sublet the shop to a third part, retaining the responsibility for the payment of current fees to the rightful owner of the surface.<sup>10</sup> The same condition can be applied to the right of access to a residential property. The phenomenon occurs particularly in areas that are part of the heritage of religious institutions, which were the more profitable yield in perpetuity the right (*avillare*) to use and receiving any rents, in consideration of the payment of an annual tribute.<sup>11</sup> Outer spaces occupied by industrial structures intended for wool clothes manufacturing are also mentioned in specific records with the same procedures applied to houses and shops.<sup>12</sup>

The second element included in the description of the fixed ownerships is the location of the property. The circumscription of the property is for sure the best element that can help us to attribute to a certain building the right position on our virtual map; a delimitation indicated mentioning the neighbour adjacent in each one of the sides that surround the building.<sup>13</sup> Being a description of a circumscription, this information shows the identity of the owner's neighbouring, not the real neighbourhood living or working close to the building indicated. This consideration points out that the renter identification will be essential for our target in this project.

Let us try an operation of city mapping, using the 1427 Catasto. Antonio di Bernardo Ridolfi declares the ownership of a house with a shop on the ground floor.<sup>14</sup> The building is located in Via di Piazza, in the parish of San Felice in Piazza. Ridolfi says that he lives in the upper part of the building, while the shop is rented to a barber, Francesco di Nofri. Scrolling the description of neighbouring, we find the street on the first side and the houses of Luca Alderotti and Francesco di Nofri, the same Francesco who leads the shop in the Ridolfi's dwelling house; finally, on the fourth side, another street named *la via che va al tiratoio de'Pitti*, suggests us placing this building on the corner of the two streets. The next step will be the check of the statement made by one of the neighbour, Checco (Francesco) di Nofri. His house faces again Via di Piazza also bordering the houses of Alderotti, but not with the *Via del Tiratoio* as the Ridolfi one.<sup>15</sup> Checking the Alderotti declarations, we find only one house bordering the Ridolfi and the *via del Tiratoio*, meaning that the Alderotti properties were probably closing the access of Francesco di Nofri to this street with a larger house. In this, case, the analysis of the neighbourhood is simple because the owner and the tenant are the same person in each one of the three descriptions. Otherwise, the rental annotation is essential, we repeat, to find the real householders living there.<sup>16</sup>

According to Herlihy and Klapisch-Zuber, the 15% of the householders surveyed in the Catasto not declare their dwelling house, property, rental or else.<sup>17</sup> The major part of this quote is formed by widows that probably used to live with relatives or other families, even if they were accounted as a different taxpayer. Nevertheless, there is a relevant number of householders who declare to live in other parts of the state, even if they were accounted in the city because they, or their parents, had received the citizenship and had paid in the past the city duties.<sup>18</sup>

Despite all the problems that may be encountered in this type of serial and quantitative analysis, the 1427 Catasto is an incredible resource for the application of digital geography on historical sources. The idea of creating a digital map of the Renaissance Florence is an operation that not only displays an urban environment, but it allows us to answer questions of social history.

- 1 An essential bibliography about the Florentine Catasto: Elio Conti, *I catasti agrari della repubblica fiorentina e il catasto particolare toscano (secoli XIV-XIX)* (Roma: Istituto Storico Italiano per il Medioevo, 1966), 21-119; Guido Pampaloni, "Catasto," in *Guida generale degli Archivi di Stato*, ed. P. D'Angiolini et al. (Roma: Ministero per i beni culturali e ambientali, 1983) Vol. II, 59; Elio Conti, *L'imposta diretta a Firenze nel Quattrocento (1427-1494)* (Roma: Istituto Storico Italiano per il Medioevo, 1984); David Herlihy and Christiane Klapisch-Zuber, *I toscani e le loro famiglie. Uno studio sul catasto fiorentino del 1427* (Bologna: Il Mulino, 1988; trans. from original published in Paris, 1978).
- 2 Robert Burr Litchfield, *A Note on David Herlihy's Computer Files*, introduction to the *Searching the Catasto* website: [http://cds.library.brown.edu/projects/catasto/newsearch/note\\_on\\_herlihy\\_files.html](http://cds.library.brown.edu/projects/catasto/newsearch/note_on_herlihy_files.html).
- 3 The team lead by John Padgett and Niall Atkinson is now working in the Florentine

- archive, consulting the original manuscripts. The team features PhD doctors Katalin Prajda, Claudia Tripodi and myself.
- 4 After the reformation of 1343, the city was organized in four *quartieri*, titled according to the names of the most important churches; each quartiere was then composed by four *gonfalon*i: S. Spirito (Scala, Nicchio, Ferza, Drago Santo Spirito), S. Giovanni (Drago San Giovanni, Leone d'oro, Chiavi, Vaio), S. Maria Novella (Leone Bianco, Vipera, Liocorno, Leone Rosso) and S. Croce (Carro, Ruote, Leone Nero, Bue).
- 5 The sources used for the project are preserved in the *Catasto* fund of the Florentine archive: *Campioni dei Cittadini* (regg. 64-69, 72-81), *Aggiunte* (82-83), *Religiosi* (184-185-194-195), *Spedali e altri luoghi esenti* (190), *Forestieri e Arti* (289-291-292-293). The complete catalogue of the archive of Catasto is now available online: <http://www.archiviodis-tato.firenze.it/asfi/index.php?id=242>.
- 6 Herlihy and Klapisch-Zuber, *I toscani e le loro famiglie*, 867-868.

## Notes

- 7 The cadastral value of the property is provided through an estimated price of the house and the possible perceptible rent. It should be noted as the first building declared, usually coinciding with the dwelling house, reports no estimation value as tax exempt from counting.
- 8 Archivio di Stato di Firenze, *Catasto*, 65, c. 43r.
- 9 Archivio di Stato di Firenze, *Catasto*, 66, c. 163r.
- 10 Archivio di Stato di Firenze, *Catasto*, 65, c. 262r. The taxpayer Agostino di Tedaldo Benozzi declares the ownership of the entratura for a silk cloths shop, paying an annual fee to the real owner of the site, Baldino Borghi.
- 11 For example, we find a large use of the *avillare* in the area of the Camaldoli abbey in the gonfalone of Drago Santo Spirito. Here, only a few number of private owners had received a long-term right of tenure the houses posed in the Via del Fiore, providing to rent them as owners; ASF, *Catasto*, 67, cc. 2r, 15r, 132r, 164r.
- 12 “uno purgho”, “uno tiratoio”; ASF, *Catasto*, 65, c. 292r; 66, cc. 248r, 331v.
- 13 The description is written through the use of a formulary related to a square design. The number of borders is usually defined on four or more sides.
- 14 Archivio di Stato di Firenze, *Catasto*, 66, c. 13v.
- 15 Archivio di Stato di Firenze, *Catasto*, 66, c. 429r.
- 16 Archivio di Stato di Firenze, *Catasto*, 66, c. 382v.
- 17 Herlihy and Klapisch-Zuber, *I toscani e le loro famiglie*, 41.
- 18 Francesco Bettarini, “I fiorentini all'estero ed il catasto del 1427: frodi, elusioni, ipercorrettismi,” *Annali di Storia di Firenze* 6 (2011), 37-64.

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# Medieval urban landscape of the northern part of the city of Dubrovnik\*

Danko Zelić

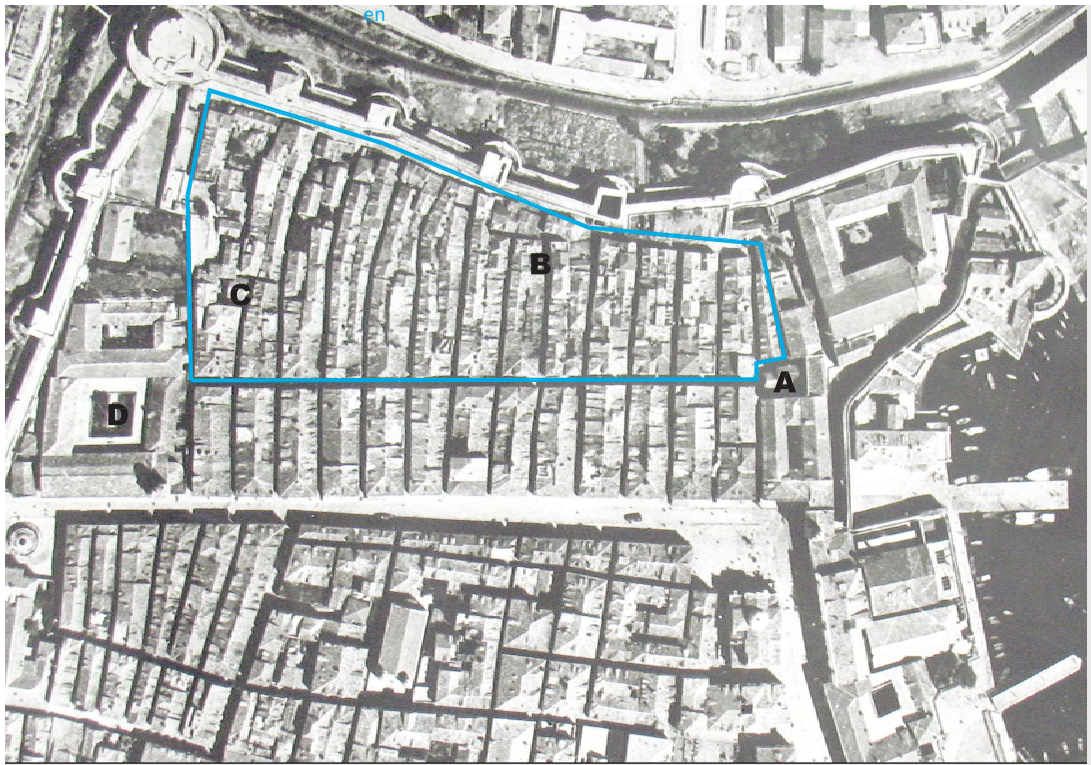
What we today perceive as the medieval (or sometimes as the Renaissance) city of Dubrovnik is essentially an urban whole built for the most part according to the thirteenth-century town development plans, surrounded by fifteenth- and sixteenth-century fortifications. Nevertheless, the majority of its buildings was actually constructed in the late seventeenth and eighteenth centuries, following the devastating earthquake and the disastrous conflagration of 1667. 271

The aim of this paper is to discuss the urban landscape and real property issues in the northern part of the city in the first half of the fifteenth century on the basis of data in two public registers concerning the real property of the commune – *Libro delli terreni et delli afficti delli terreni del comun de Ragusa, del borgo sopra la via de della Plaça* (1382) and *Tute le chase del comun de Ragusa e terreni e fiti che apartien al dito comun* (1417). Owing to the fact that almost the whole of the building land in the examined area was public property, the registers include a complete listing of occupants, building plots and annual rents.

The northern part of the city was enclosed by defensive walls only during the second half of the thirteenth century. Little is known about the spatial organisation of that area – in other words, the southernmost slope of the Mount Srđ – prior to that time. Among older landmarks, two churches deserve to be mentioned: the Holy Transfiguration (*Sigurata*) and St Nicholas. The latter would give its name to what was at the outset a suburb and which subsequently became one of the city's six *sexteria*. Further up the hill, the sources mention dwellings of those afflicted by leprosy and the leather-production facilities.<sup>1</sup>

In the history of Dubrovnik, the thirteenth century was a time of substantial growth in terms of economy, demography, and town development. The increase in trade and activities regarding craft work which would eventually dominate hitherto prevalingly agricultural urban economy, instigated the creation of new living, working, and business premises for the labouring people: both the local commoners (*populus*) and the newcomers (*forenses* and *habitatores*). The spatial dimension of these efforts – the overall regularity of urban plan – is still evident at first glance (FIG. 1). p. 272

In 1296 a conflagration destroyed almost the whole city. In a surprisingly short time, only a few weeks later, the Ragusan Great Council voted in favour of an elaborate town development plan which included the whole of the *sexterium* of St Nicholas.<sup>2</sup> Its layout was based on the then most advanced model of urban planning: in order to use the given area to the full, houses were to be built in the so-called “double rows”. In spite of the arduousness of the terrain on the steep slope of the hill, a regular grid was created, which consisted of 14 parallel streets ascending from St Nicholas



□ Northern part of  
St Nicholas *sexterium*

- A St Nicolas Church
- B St Vitus Church
- C Holy Transfiguration (*Sigurata*) Church
- D Franciscan convent

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FIGURE 1  
Aerial view of the northern part of St Nicholas city district (blue lines indicate the outer limits of the examined area) (photograph by Krešimir Tadić, Institut za povijest umjestnosti, Zagreb; drawing by Goran Vareško).

Street upwards. The latter (*via lunga; via longa Sancti Nicolai; strata comunis*), running from the east (from St Nicholas Church) to the west, had to be 3 fathoms (approx. 6.24 m) wide. Each of the streets perpendicular to it had to be 10 spans (2.6 m) wide, thus delimiting the narrow double rows of identical building plots between them. Each building plot was obliged to have its street front, whereas the posterior sides of the single rows were divided by narrow sewage canals for rainwater, 3 spans (0.78 m) wide. The original plan envisaged that all houses would have identical surface areas of 3 × 3 fathoms.<sup>3</sup>

The town development pattern that features the orthogonal street grid and blocks consisting of double-row houses is, however, not peculiar to the northern part of Dubrovnik. It had previously been used, on a very large scale, elsewhere in the city<sup>4</sup> as well as in many other thirteenth-century urban centres of the Adriatic-Apennine region. Besides the fact that the existing constructions had perished in the fire, such ample planning campaign was made possible by the fact that almost the entire land in this part of the city was the property of the commune.

We should not imagine that the area covered by town planning was immediately filled with solid masonry houses. According to the ancient rule of the local customary law, only the owner of the land, i.e. the building plot, was entitled to build a stone house. Since a large part of urban space was either owned by the commune, wealthy individuals or local religious institutions, wooden dwellings were predominant. In fact, wooden structures were legally considered as movable property and rents were to be paid by their owners for the use of the building plots.<sup>5</sup> However, the vulnerability of wooden houses was precisely the reason why the recurring conflagrations had been, in an odd way, instrumental in the unmaking of the early medieval and the making of the late medieval urban landscape.<sup>6</sup>

In the aftermath of the last one in a series of catastrophic fires, which broke out in 1370, the municipal authorities reacted immediately. Due to an entire set of provisions, promulgated by the Major Council in 1370 and 1372 in order to minimize the risk of future fires, the wooden dwelling was doomed to disappearance.<sup>7</sup> Henceforth, either the building of new wooden houses or the renovation of those spared by the fire was strictly prohibited within the city limits. Indeed, all tenants of the plots owned by the commune were expected to build solid masonry or dry stonework houses (*domos de muro vel de macerie*) or otherwise their status was revoked. Anyone willing to do so within a two-year period was exempted from paying for the tenancy in the subsequent decade, after which the rent would not exceed the amount that the occupant had to pay prior to the fire. Furthermore, the owners of stone houses which were to be built on communal land north of St Nicholas

Street were granted the perpetual usufruct of the building plots with fixed annual payments.

A large-scale campaign aiming to replace the (movable) wooden houses with the (immovable) masonry ones, however, raised yet another major question, that of legal nature. As opposed to the previous legislation, aimed at protecting the owners of the (wooden) houses, the new circumstances emphasised the need to protect the rights of the owners of a building land. The solution for recording the building lots on *territoria comunis* was to introduce a new kind of public register. In 1382 the Minor Council was put in charge of conducting a comprehensive survey of the communal real property and establishing a distinct public register of that matter.<sup>8</sup>

The emergence of the 1382 register temporally coincided with the expiration of time limits imposed on the occupants through the laws promulgated in 1370, i.e. a two-year term to build a masonry house together with a ten-year period of rent exemption. The parchment manuscript codex, of which unfortunately only the first half-quire survives,<sup>9</sup> was rather large in size (25.5 × 35.5 cm) and written in Gothic chancery script, thus closely resembling other important public administrative books of the fourteenth-century commune.

The content of the volume is clearly described in its opening chapter: *Questo e lo libro delli terreni et delli afficti delli terreni del comun de Ragusa del borgo sopra la via (...) in lo qual se contene chi tene quelli terreni et case et quanti passi sono et quanto pagano. (...) Et va per le rughe tute et comença da Sancto Nicola de Plaça et va per ordene per le rughe inverso Sancto Francesco secondo usança antiga.*

The register was, therefore, supposed to comprise an orderly arrangement of information on communal lands in the entire northern part of the former suburb (*borgo*) of St Nicholas, i.e. in the streets (*rughe*) that ran northbound from St Nicholas Street towards the city walls. However, its eight preserved sheets do merely contain evidence of the five easternmost streets. Gathered by the systematically conducted survey, the records include the name of the occupant, the length of the corresponding street front, as well as the amount of rent he was obliged to pay every year.

Although the creation of the new register, in 1417,<sup>10</sup> was preceded by a new survey, its structure was modelled upon the previous volume. Consequently, it also opens with a listing of houses in fifteen streets above St Nicholas Street, whose owners paid annual rent for using plots on communal land (*Chase di spicial persone de ladi de San Nicolo disopra de via lunga che paga al comun per lo teren*).

As regards the nature of the archival sources under scrutiny, it can be affirmed that their content is determined by their twofold purpose: to

serve both as stable inventories of communal real property and of their “users”, i.e. the persons who were required to make annual lease payments (*affictus*).<sup>11</sup> For the area above St Nicholas Street those registers are, above all, a listing of obligates, compiled to mirror the actual positions of their houses on the building plots within the streets of the area.

Every street is identified by its ordinal number, starting from the *prima ruga* (above the Church of St Nicholas) in the east and moving westwards to the *quintadecima ruga* (by the Franciscan convent). Judging by the expression used in the heading of the volume of 1382 quoted above – *secondo usanza antiga* – such manner of perception, i.e. the administrative order of streets, followed the path of an ancient tradition and was, moreover, in full compliance with the then almost a century old town development plan of 1296.

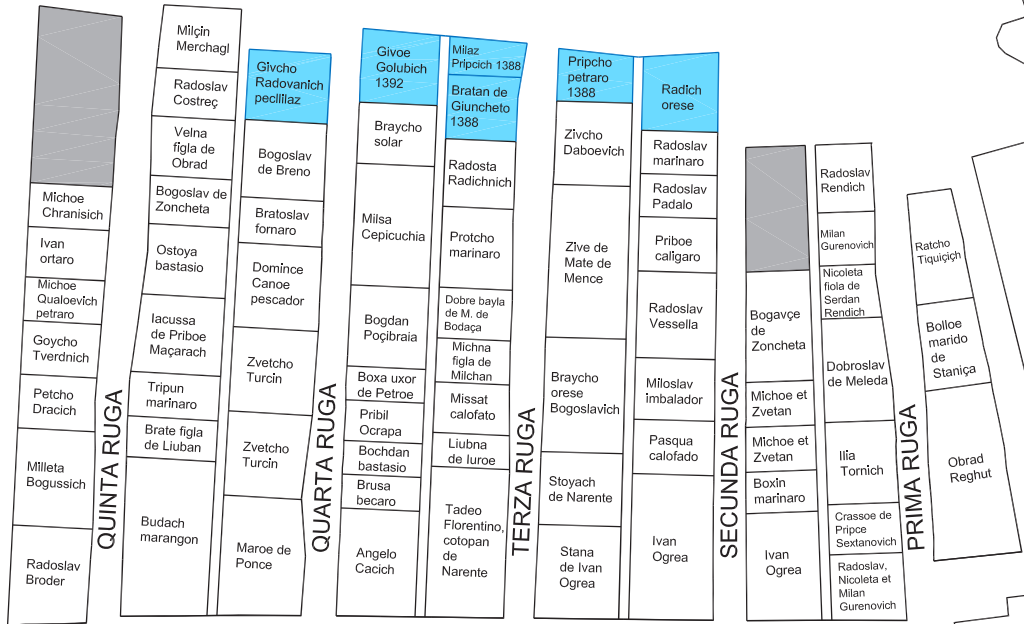
Although, there were (and there still are) actually only fourteen streets running from St Nicholas Street upwards, the registry involves fifteen. The reason for this lies in the fact that the (quasi-)orthogonal street grid laid-out in 1296 interfered with the ancient church of the Holy Transfiguration in the western part of the *sexterium*. The street that ran up to the church building was thus marked “13th Street”, whereas the one beginning immediately above the church and stretching up to the northern city walls was termed “the 14th Street”.

Below every street name, the names of the house owners were arranged from the bottom to the top of the street – that is, from the south towards the north (*de pellago inverso monte*). The names of the occupants that were entered first were of those in the houses on the eastern side of the street (*le porte della qual guarda inverso ponente*) and then followed the western side of the street (*le porte della qual guarda inverso levante*). As it marked the outer limit of the area, the 15th Street was furnished with houses on the eastern side only.

All plots were rectangular, or, more precisely, roughly rectangular in shape. Given that the depth of the plots was uniform (plan-defined, i.e. 3 fathoms), their basic feature and the only (numerical) value which was recorded was the length of the street fronts of the corresponding houses.

The distance measuring units that were used were *passo* (fathom; approx. 2.08 m) and its eighth part called *palmo* (span; approx. 0.26 m). Since all recorded dimensions that were given in spans were reduced to the whole numbers, the surveyors had apparently used a measuring rod (or a measuring rope) with the partitions (or knots) of one span.

The annual rents that were to be paid by each occupant and plot are specified in *hyperpers* and *grossi*. *Hyperpers* were the money of account, whereas its twelfth part, the *grosso*, was the effective currency.



buildings plots and occupants in 1382

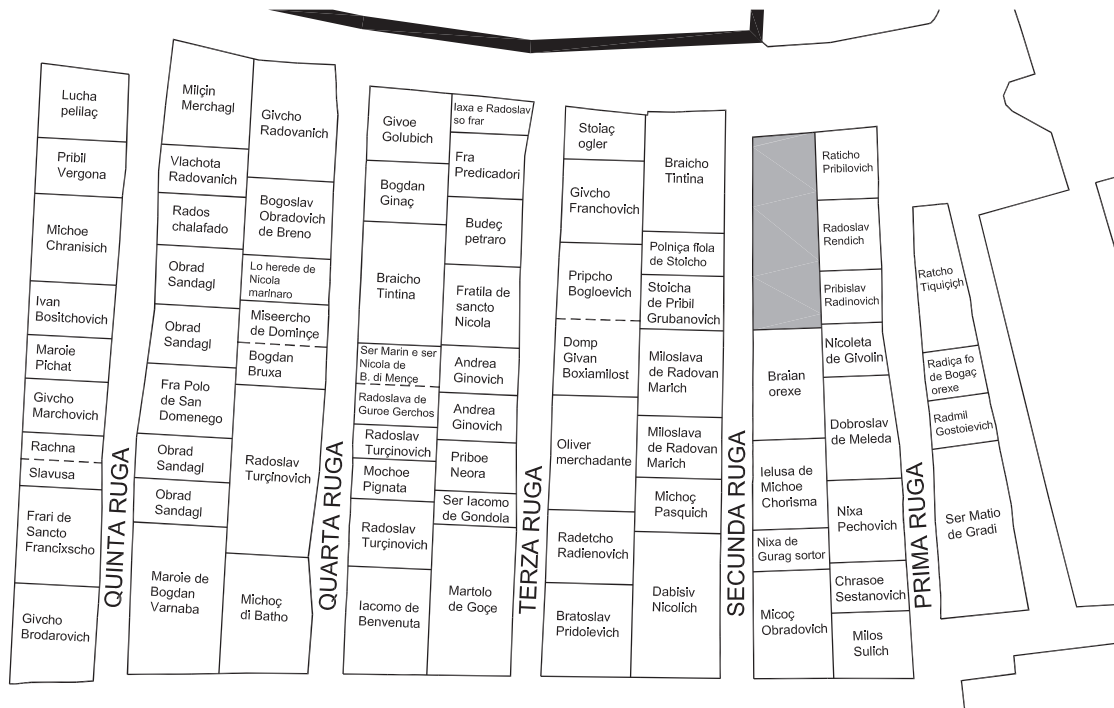


buildings plots and occupants registered after 1382



no data

FIGURE 2  
Building plots in the first five streets in 1382  
(drawing by Goran Vareško).



buildings plots and occupants in 1417
  no data

Medieval urban landscape of the northern part of the city of Dubrovnik

FIGURE 3  
 Building plots in the first five streets in 1417  
 (drawing by Goran Vareško).



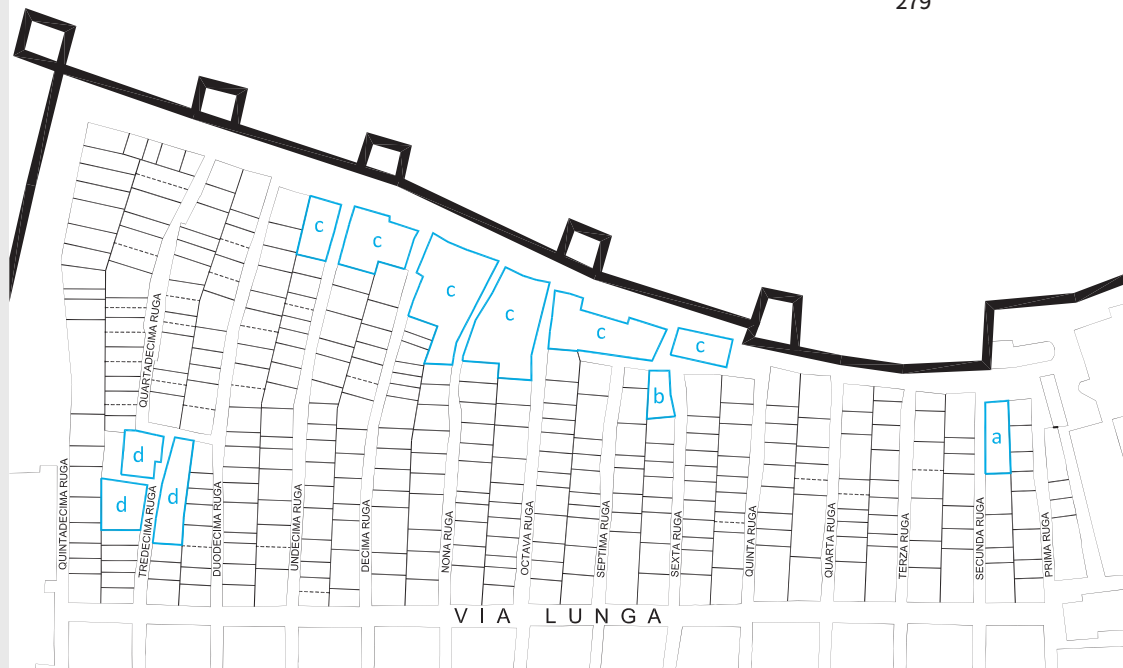
The data in two oldest books of communal real property address a number of questions and a wide range of topics, some of which are: What is the difference between the corresponding entries in the (incomplete) volume of 1382 and the volume of 1417? What is the extent of the preservation of the medieval urban layout? Has it been preserved until the present day? Or, more specifically, do the present-day street grid, blocks and houses show the disposition and dimensions of their fifteenth-century precursors? Furthermore, in what way were the annual rent amounts related to the positions and to the dimensions of the plots/houses? How much can the archival data reveal about the use of the buildings and overall structure of the dwelling? Is it possible, and to what extent, to discuss the social standing and professional circumstances of their owners? In order to facilitate the analysis it seems appropriate to visualize the relevant data, i.e. to graphically display the original “serial” information (arranged in a table-like manner), and present it onto the thematic maps.

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According to what has already been said, the present-day layout of the street grid and blocks in the northern part of the St Nicholas city district corresponds to the town development regulations inaugurated in 1296. Since the building of solid masonry houses in this area started only in 1370s, the register of 1382 testifies to the degree of the process that had been accomplished up to that date. The maps of the building plots recorded in the first five streets in 1382 (FIG. 2) and 1417 reveal overall similarity (FIG. 3). Yet, some notable differences should be emphasised, regarding both the occupants and the number of plots. The names of many occupants changed: replaced either by their heirs or other, unrelated persons. Even more significant is the fact that the total number of dwelling units in the registry of 1417 is noticeably higher, because it includes the houses in the upper parts of the streets that were in the meanwhile either successively “added” or completed. Evidently, by that time the construction sequence – which commenced at the bottom and gradually (i.e. contiguously) progressed upwards to the top of the blocks – had been completed. All available surfaces between the 1st and the 5th streets were built.

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In fact, the disposition of the streets as recorded in 1417 almost fully conforms to the contours of the blocks on the modern plan. In other words, the sums of numerical values (the street front lengths) given for the building plots along the streets match their current dimensions. Nevertheless, the mapping showed some inconsistencies in that regard, which made it possible to recognise certain parts of the examined urban area that had been (without any notice) omitted from the register, doubtlessly due to the fact that the building land there was not communal (FIG. 4). Starting from the east towards the west, these areas include (a) the building plots in



- |          |   |          |  |
|----------|---|----------|--|
| <b>a</b> | building plots in the upper part of the E side of the 2nd street                            | <b>c</b> | areas in the N parts of the blocks between the 7th and 11th street, owned by Goçe and Benessa families |
| <b>b</b> | the church of St Vitus with an adjacent building on the top of the W side of the 6th street | <b>d</b> | Holy Transfiguration ( <i>Šigurata</i> ) church and terrains in 13th street                            |

FIGURE 4

Parts of the examined urban area that had been omitted from the 1417 register (drawing by Goran Vareško).

the upper part of the east side of the 2nd Street; (b) the Church of St Vitus with an adjacent building at the top of the western side of the 6th Street; (c) two rather large areas in the northernmost parts of the blocks between the 7th and the 11th streets, where the two groups of plots were owned by the Goçe and Benessa families; as well as (d) the terrains south to the Church of the Holy Transfiguration (*Sigurata*), which were built with the houses inhabited by the community of pious women (*reclusae*) who lived near the church and, partly, an indeterminable number of plots that were in possession of that church.

The survey of 1417 recorded the total of 290 communal building plots. Although of identical, the previously defined depth (3 fathoms), their size varies considerably, ranging from the narrowest ones, of barely 1, to those of over 6 fathoms wide: from approximately 2 to 15 metres. As a matter of fact, the plots were mostly oblong in shape (232), with their shorter sides facing the streets. In other words, the length of the street fronts typically corresponded to the width of the houses. Only seventeen plots were of square shape (3 × 3 fathoms), that were initially, in 1296, prescribed as the standard dimensions of the houses to be built. However, albeit forty-one houses exceeded that width, plots with street fronts longer than 10 metres were quite rare.

It is also worth noticing that the comparison with the modern plan reveals that a considerable number of borders between the building plots, as recorded in 1417, do match the positions of the existing partition walls between or inside the houses. This confirms that the sizes of the respective plots (and arguably of the corresponding houses) are medieval.

There is no doubt that houses were spread across all plots, because to build and/or to possess a house was a basic requirement for using the communal land in this part of the city. Still, since it was generally implied, the term itself (*casa* or *caxa*) was mentioned in the examined books very rarely, only when an individual owned two or three distinct but contiguous houses or when the ownership of a single house was divided between two persons, and each of them had to pay the rent for *meça caxa*. In addition, the unit corresponding to the largest recorded building plot is described as *una caxa e uno casal*. The term *casal* was initially used for the building plots surrounded by solid masonry or dry-stone walls (of either ruined or unfinished houses). But, in this particular case, it was a word associated with an inner open space (courtyard) that used to be part of the dwelling. It was, however, the only residential complex of that type in this part of the city. Since twenty-five out of 290 houses recorded in 1417 were divided into two separate units, the total number of distinct dwellings reached 315. Nearly all of them were owned by individuals, with the exception of six that were



#### Owners of contiguous houses

<b>AG</b>	Andrea Ginovich (2)
<b>BR</b>	Bogich Radienovich (2)
<b>MR</b>	Miloslava de Radovan Marich (2)
<b>OS</b>	Obrad Sandagl (2 x 2)
<b>PC</b>	Piercho Clunovich (2)
<b>PS</b>	Petroe Sestanovich de Breno (2)
<b>Rb</b>	Radul becharo (2)
<b>RI</b>	Radin Iliich (3)
<b>RM</b>	Radin Medanich (2)
<b>RP</b>	Radoslav Provoevich (2)

#### Owners of more than one house on different positions

<b>BT</b>	Braicho Tintina (2)
<b>EP</b>	Elia di Poça (2)
<b>MN</b>	Miocho Niegusich (2)
<b>MS</b>	Miladin Seç (2)
<b>NP</b>	Naliescho Putçich (2)
<b>Pt</b>	Petroe tavernaro (2)
<b>Rs</b>	Radoslav sortor (2)
<b>RT</b>	Radoslav Turçinovich (6)
<b>S.D.</b>	Frari di San Domenico (2)
<b>S.N.</b>	Sancto Nicola de Piaça (2)
<b>So</b>	Stoiaç ogler (2)

FIGURE 5

Proprietors who owned more than one house in 1417 (drawing by Goran Vareško).

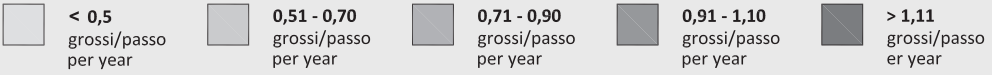
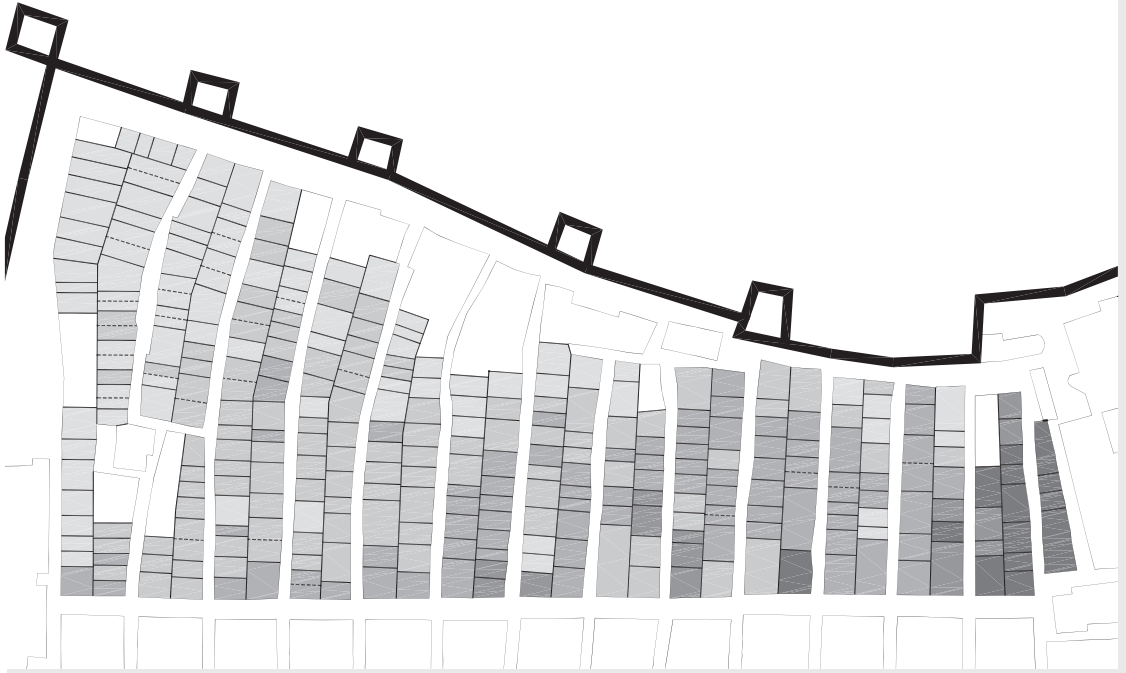


FIGURE 6  
The cost-per-length ratio for each plot/dwelling unit in 1417 (drawing by Goran Vareško).

in possession of legal entities. Two houses belonged to the Dominican (*fra predicatori* or *frati di San Domenego*), and one to the Franciscan friars (*frari de Sancto Francixscho*), two were owned by St Nicholas Church and another one by the fraternity dedicated to the same saint (*fratila de Sancto Nicola*), based in the same church.

The list of individuals who owned houses in the northern part of the St Nicholas city district involves 292 persons. The vast majority of them did not own (at least within the examined area) but one dwelling unit. There are three cases of the houses being the undivided property of two co-owners. Twenty-five units, on the other hand, were recorded as belonging to two distinct owners, and each had to pay for his/her half. The reasons for these could be the division of inheritance, and the voluntary or, in some instances, forced sale. In such circumstances, allegedly, the interior spaces of buildings were definitely split into two self-sufficient dwelling units by inserting a partition wall, whereupon their outer appearance remained unaltered. The dimensions of these, let us call them half-houses (as well as the rents paid by both leaseholders), were usually equal, but it was not always necessarily so.

Among the proprietors, twenty-one owned more than one house (FIG. 5). Rather frequently, in eight instances, those were “double”, i.e. contiguous houses, supposedly acquired by the voluntary purchase of the bordering dwelling units on the part of their immediate neighbours. Indeed, one of the occupants, Obrad Sandagl, had two such pairs of contiguous houses along the eastern front of the 5th Street, separated by a house in between, owned by another person. Radin Iliich had three neighbouring houses at the bottom of the 7th Street. It seems likely that, over time, the interiors of these buildings were in a certain way joined together. Finally, there were eleven persons who had more than one piece of real property within the city district, yet on different locations. Most of them were in possession of two houses, with one notable exception: in 1417 the real property of Radoslav Turčinovich consisted of no less than six houses in different parts of the St Nicholas district.

As it has already been said, in 1370 the individuals willing to replace their wooden houses with masonry constructions were promised that the rents for the building plots they had been paying would not be raised. As on other similar occasions, the municipal officials who had been put in charge of negotiating with individual leaseholders were instructed to act in the best interest of the commune and to procure as much money as possible. Apparently, over time, new occupants were, on average, expected to pay ever-increasing annual rents, which depended on their condition

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as well as both the size and the position of the plots. Several notes added subsequently in the volume of 1382 can be considered as indicative in that regard: in 1388 and 1399 some of the new house owners were charged the rate of 4 or 6 *grossi per passo*.

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The data in the book of 1417 allow for establishing a correlation between the amounts of the annual rent each occupant had to pay and the dimensions of his/her building plot, i.e. to calculate the cost-per-length ratio for each unit (FIG. 6). In order to get comparable figures, the measures and the rent amounts were reduced to the smallest common units (i.e. *passi* to *palmi* and *hyperpers* to *grossi*). The amount of *grossi* paid for one *palmo* varies rather significantly – from 0.28 to as much as 1.76 *grossi per palmo*, which is over 1:6.

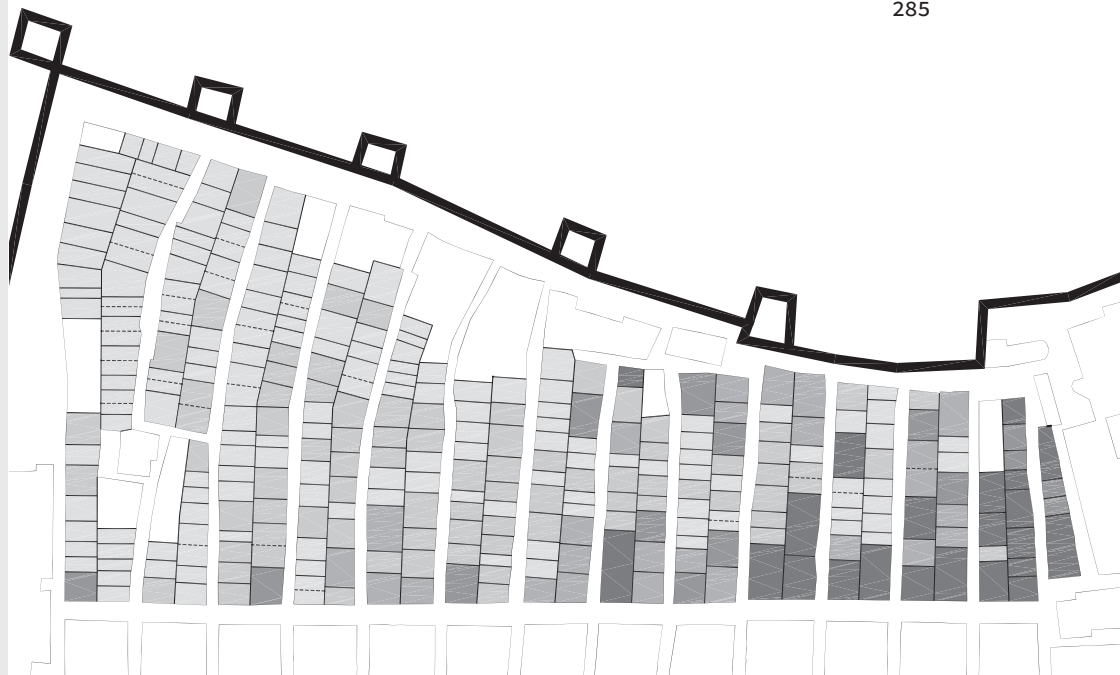
p. 285

The absolute amounts of the rents paid for single houses ranged from 3 *grossi* to 7 *hyperpers* (i.e. 84 *grossi*). The rental values map (FIG. 7) clearly reveals that, apart from plot sizes, the rates were essentially related to the locations of the plots or, more precisely, their distance from the city centre. Consequently, the rents on average tend to be lower from the east to the west and from the bottom to the top of the streets. With regard to the differences between the plots of the same quality/attractiveness, it can be inferred that the amount of rent was inversely proportional to the length of the period during which the occupant (i.e. his/her ancestors) held the plot. Compared to the revenues coming from other communal real estate objects, the total annual amount of the rents collected for the plots north of St Nicholas Street, that is 314 *hyperpers*, was rather modest. At the same time, to illustrate the point, the total cumulative rent for the easternmost of the six blocks on the northern prospect of the main street (*Platea*) – with the surface of 6 × 3 fathoms, subdivided into four tiny units called houses with shops – amounted to approximately 250 *hyperpers* annually.<sup>12</sup>

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Out of 292 house owners recorded in 1417, 229 were males and 63 females (21%, which is one fifth). As regarding their social rank (FIG. 8), the stable family names and the title *ser* make the members of urban nobility most easily identifiable. However, since there were only eight of them (all males), they constituted a small, almost insignificant part of the whole. The same applies for yet another group – the illegitimate sons of urban nobles; the 1417 register contains the names of only three commoners of noble descent.<sup>13</sup>

In fact, the commoners constituted the large majority of house owners. However, considering their social and professional status one can only rely on onomastics, i.e. the indicators provided by their names. Yet, the surveyors' approach was far from being consistent thereupon. In fact, following the common administrative practice of the time, they used to



Medieval urban landscape of the  
northern part of the city of Dubrovnik

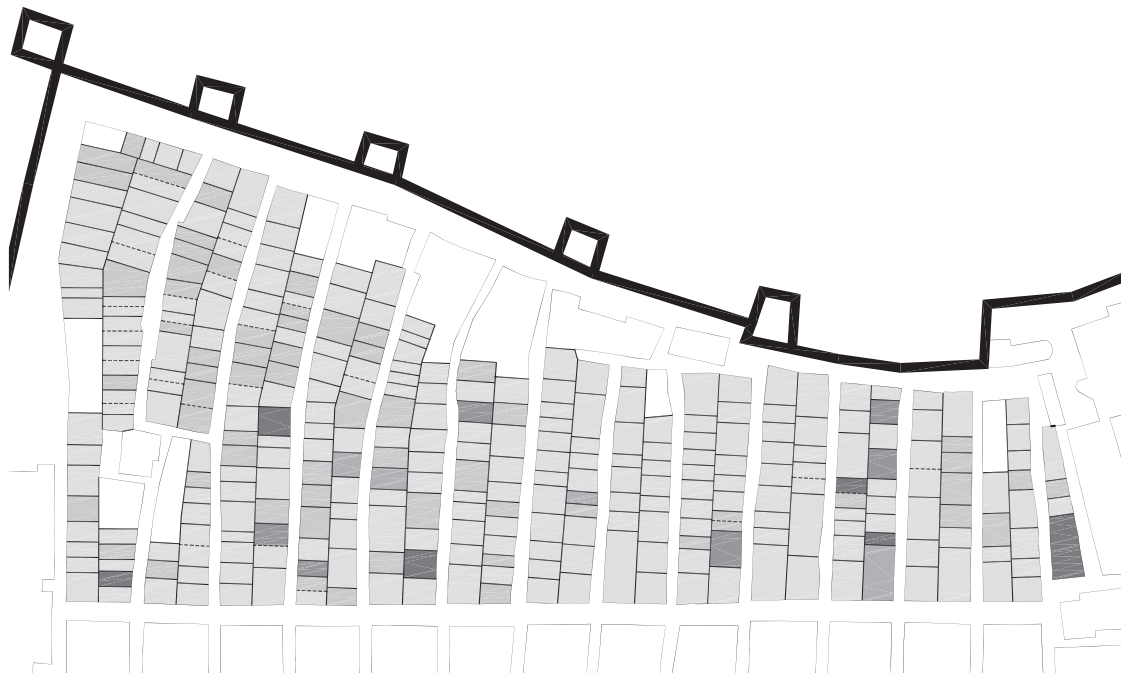
FIGURE 7

Rents for the plots/dwelling units in 1417  
(drawing by Goran Vareško).

p. 284

n.  
12-13





**Commoners**

□ males

■ females

**Patricians**



**Illegitimate sons of  
the city's patricians**



**Corporate owners  
(churches, fraternity)**



FIGURE 8  
House owners: structure by social groups and  
gender in 1417 (drawing by Goran Vareško).

note down merely the minimum information that would enable them to distinguish between these individuals. With the exception of a few who were recorded by their first name alone,<sup>14</sup> male individuals were usually identified by using the two-part name formula, where the surname is a patronymic, profession, nickname or a place of origin.<sup>15</sup> On the other hand, first names of female house owners are typically supplemented with male first names, either of their fathers or spouses, which is usually impossible to determine with certainty.

Regarding the socio-professional profile of the inhabitants in the examined area, it should be pointed out that books of communal real property are neither censuses of the town population nor of household heads, but the lists of house owners. Nevertheless, assuming that, apart from the nobility, the majority of registered persons actually lived in the houses they were liable to pay for, it may be useful to offer some observations on their origin, civic status and professional structure. When it comes to these, one also has to rely on the information implied by the personal name.

Since the possession of a house within the city was a prerequisite for acquiring the legal status of *civis*, there can be no doubt that all registered individuals were the citizens of Dubrovnik. However, it seems that the names of those who came from the neighbouring coastal regions or the hinterland, soon lost any indication of origin. It is safe to assume that all individuals whose names carry that information came either from the immediate vicinity of the city or from the territory of the commune.<sup>16</sup> Although Dubrovnik was, during this period, a home to a substantial number of naturalised foreigners, in 1417 none of these owned a house in the northern part of the St Nicholas district.<sup>17</sup>

In view of the fact that there were only 42 (14%) individuals whose line of work was stated as their surname (FIG. 9), these data should also not be approached without reservation. Firstly, besides one priest and one friar, professions as recorded in the names of individuals were not necessarily these individuals' actual occupations.<sup>18</sup> Secondly, the fact that the list of house owners includes the members of the city's all major artisan groups – stonemasons, shipbuilders, skinners, butchers, tailors, goldsmiths, sword makers, furriers, textile workers, blacksmiths – as well as sailors, carriers, taverners, gardeners, apothecaries, does not necessarily imply that they were the only representatives of their trades in that part of the city.<sup>19</sup> On the contrary, it is quite certain that many were not registered, either as such or at all, since they did not *own* the houses. Furthermore, it can be presumed that many of them dwelled in the houses owned by their spouses. Indeed, the fact that they were daughters or widows was only rarely explicitly established, and it proves that most of women who owned

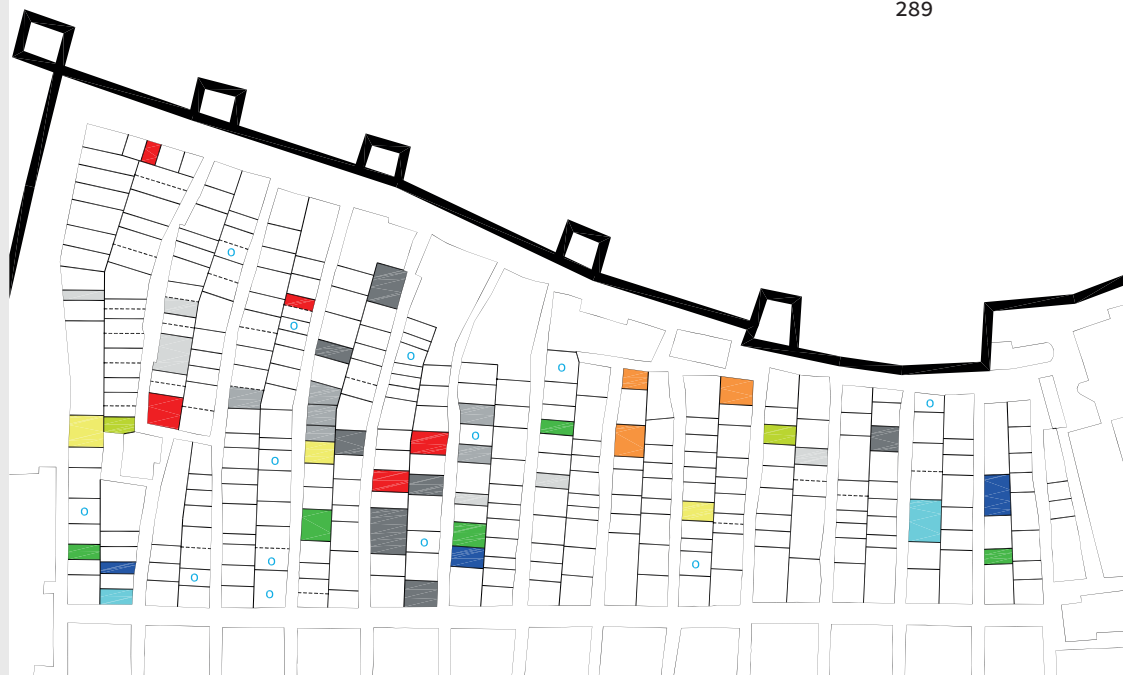
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the houses – either acquired by purchase or received through dowry or inheritance – lived there with their families.

It is therefore highly implausible that this number of registered professionals is commensurable with the overall proportion of their trades in the workforce of either the examined area or the whole city. Dubrovnik was predominantly a city of merchants and, as other sources abundantly prove, there were not many people who were not, in one way or another, involved in commerce. Nevertheless, only two persons are explicitly registered as *merchadanti*. Likewise, despite numerous sources testifying to women's active participation in urban economy, the occupation of a female house owner was entered only once: for Miliça, *baila deli Goçe* (the maid with the Goçe family). Nevertheless, in view of the fact that most registered professionals were engaged in manual, labour-intensive lines of work, it is, however, arguable that their presence in the St Nicholas city district could be a convincing indication of their modest material conditions, i.e. low average incomes.

The examined registries show no explicit evidence of the use of the houses. All things considered, there can be no doubt that most of them were intended exclusively for dwelling, whereas the larger buildings could have included storage chambers. Regarding the possibility that some of them were also used for other purposes, two particular details are worth mentioning. Firstly, there was an obvious concentration of leather craftsmen in the northernmost parts of the St Nicholas city district, i.e. in the area where their presence had been confirmed even before it became one of the city's six *saxteria*. Secondly, in the upper, steep parts of the streets to the west of the examined area, namely the 9th, 11th and 12th streets, one can perceive the "clustering" of taverners, thus corroborating certain literary sources which refer to that part of the city as the one with proverbial scenes of indecent nightlife.

Notwithstanding the fact that the examined sources provide no data on either the substantial appearance or the architectural quality of the buildings, some preliminary remarks should be made in that regard. Firstly, it is beyond doubt that, on average, the plot sizes were in proportion with the occupants' assets. Assumedly, the houses on larger plots were more expensive, particularly those on the corner plots, with two street-facing sides, i.e. on the southern ends of the blocks, facing St Nicholas Street. It can therefore be inferred that, along with the average decrease in the plots up the slope, the quality of the dwelling decreased as well. Secondly, positions in lower parts of the streets were certainly more attractive, since they were closer to the city centre and, due to the fact that the whole city district was built on a sloped terrain, more easily accessible.



■ *petraro* (stonecutter)

■ *tavernaro* (taverner)

■ *marinaro* (sailor)

■ *bastaxio* (carrier)

■ *pelilaç* (skinner)

■ *marangon* (carpenter)

■ *sortor* (tailor)

■ *chalafado* (shipbuilder)

■ *orese* (goldsmith)

■ *merchadante* (merchant)



○ others:

*baila* (house-maid); *çapador* (digger);  
*çimador* (textile-worker); *çipular* (bird-hunter);  
*corir* (carrier); *dele chadeine* (chain-maker); *fabro*  
 (blacksmith); *ginaç* (?); *grinçar* (leather-worker);  
*ogler* (oiler); *ortolan* (gardener);  
*piliçaro* (furrier); *spader* (sword-maker);  
*speciale* (apothecary)

Medieval urban landscape of the  
 northern part of the city of Dubrovnik

FIGURE 9

House owners by profession (if indicated)  
 in 1417 (drawing by Goran Vareško).

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All things considered, it seems that in the first decades of the fifteenth century the area north of St Nicholas Street was, on the whole, not a particularly attractive place for living, at least its upper parts. Generally speaking, it was characterised by simple, modest dwellings and it was, arguably, densely inhabited by ordinary townspeople. The majority of the population included artisans and manual labourers and their families. This was precisely in accordance with the idea that supported the late thirteenth-century town-planning provisions which shaped the urban layout – to provide as much housing space as possible for the workforce that would subsequently contribute to a growing urban economy. Nevertheless, the evidence in the 1417 book of communal real property clearly indicates that the process of a socio-spatial stratification in the northern part of the St Nicholas *sexterium* was already under way. As a matter of fact, the aggregation and/or (above average) dimensions of the building plots along the northern prospect of St Nicholas Street anticipated the emergence of large, more expensive if not luxurious houses, owned by the most prominent families among the commoners. The explicit testimony of this inequality can be found in legal provisions regarding the distribution of the costs of a new sewage system, begun in 1436. In accordance with a custom that was typically followed on similar occasions elsewhere in the city, the Major Council initially decided that each house owner should participate in the total cost in proportion to the size of his/her house, i.e. the length of its street front.<sup>20</sup> However, in 1439 the law was amended in order to prevent the discrimination of the poor. Deeming the proposed solution unjust – since the houses in the lower parts of the city district were much more expensive and their owners wealthier – the councillors decided that the amount each owner was to pay should be determined according to the estimated worth of house.<sup>21</sup>

## Notes

- \* This work was fully supported by the Croatian Science Foundation's funding of the project *Dubrovnik: Civitas et Acta Consiliorum. Visualising the Development of the Late Medieval Urban Fabric* DUCAC-UIP-11-2013-9492.
- 1 Nella Lonza, ed., *The Statute of Dubrovnik of 1272 = Liber Statutorum Civitatis Ragusii Compositus Anno MCCLXXII* (Dubrovnik: Državni arhiv u Dubrovniku, 2012), 252,
- 2 Lonza, ed., *The Statute of Dubrovnik*, 322-326, L. VIII, c. LVII, *Qualiter ordinate*
- L. VI, c. LVI, *De domibus factis in loco leprosororum: Statuimus quod domos, quas conciatores pellium fecerunt vel facient sibi extra civitatem, in loco ubi conserunt morari leprosi, sint eis firme, nec super ipsis possint a comuni vel ab aliqua alia persona molestari. Et leprosi non possint morari ibi, sed longius a civitate vadant ad habitandum.*

- sunt vie et domus in burgo tempore civitatis combuste.*
- 3 Lonza, ed., *The Statute of Dubrovnik*, 324, L. VIII, c. LVII: *Item in costeria burgi, incipiendo circa ecclesiam s. Nicole, transire debeat via una latitudinis passorum trium per teritorium comunis, eundo per ponentem usque ad murum civitatis. Item in dicto burgo debeant hedificare domos super stratam comunis, incipiendo a parte levantis eundo in parte ponentis, et quelibet domus sit latitudinis passorum trium, et totidem in longitudine, et cadant inter ipsas domos gotales in spacio palmorum trium de canna. Dimitatur eciam vie inter dictas domos latitudinis palmorum decem de canna pro qualibet via. Que quidem vie cum eadem latitudine continuentur et vadant usque ad murum civitatis ex parte montis. Et tali modo et ordine continuari debeant domos cum suis gotalibus et viis usque ad murum civitatis porte de Pilis (...).*
  - 4 See more extensively: Lukša Beritić, *Urbanistički razvitak Dubrovnika* (Zagreb: Zavod za arhitekturu i urbanizam Instituta za likovne umjetnosti JAZU, 1958), 13-18; Milan Prelog, "Dubrovački statut i izgradnja grada (1272–1972)," *Peristil* 14-15 (1971–1972): 81-94; Marija Planić-Lončarić, *Planirana izgradnja na području Dubrovačke Republike* (Zagreb: Centar za povijesne znanosti, Odjel za povijest umjetnosti, 1980), 9-14.
  - 5 Danko Zelić, "Wooden Houses in the Statutes and Urban Landscapes of Medieval Dalmatian Communes," in *Splitski statut iz 1312. godine – povijest i pravo: povodom 700. obljetnice*, eds. Željko Radić, et al. (Split: Književni krug, 2015), 489-507.
  - 6 Bariša Krekić, "Dubrovnik's Struggle against Fires (13th to 15th Centuries)," in Bariša Krekić, *Dubrovnik: A Mediterranean Urban Society, 1300–1600* (Aldershot: Variorum, 1997), VI, 1-24.
  - 7 Aleksandar Solovjev, ed., *Liber omnium reformationum civitatis Ragusii* (Beograd: Srpska kraljevska akademija, 1936), 86-87, Pag. XV, c. XII: *Item omnes illi quorum domus combuste fuerunt super terreno comunis, si voluerint facere domos de muro vel de macerie (...), debeant esse franchi et non solvere afflictum comuni pro dicto terreno usque ad X annos proxime futuros. Et finitis X annis debeant solvere comuni pro dicto terreno illum afflictum quem solvunt ad presens. Et omnes illi qui facient domos muri vel maceriei in terreno comunis a via sancti Nicholai superius versus montem, habeant dictum terrenum in perpetuum, solvendo afflictus sicut solvunt ad presens; c. XV: Et omnes illi qui se presentaverint ad faciendum dictas domos muri vel maceriei infra duos annos proxime futuros, et cum se presentaverint, debeant fecisse dictas domos. Et qui non fecerint, commune possit eis auferre suum ius et dare aliis.*
  - 8 Mihajlo J. Dinić, ed., *Odluke Veća Dubrovačke Republike, knjiga I = Acta consiliorum Reipublicae Ragusinae, tomus I* (Beograd: SANU, 1951), 176: *Ser Blasius de Sorgo, ser Petrus de Saracha et ser Lucas de Bona in Minori Consilio facti fuerunt ad taxandum et ordinandum afflictus terrenorum comunis et ad faciendum quaternum de dictis afflictibus secundum partem Maioris consilii hodie captam.*
  - 9 Državni arhiv u Dubrovniku / State Archives in Dubrovnik (hereafter: DAD), ser. XII. *Cathasticum*, vol. 11, f. 8; published in Irena Benyovsky Latin and Danko Zelić, eds., *Knjige nekretnina dubrovačke općine (13–18. st.) = Libri domorum et terrenorum Communis Ragusii deliberatis ad afflictum (saec. XIII–XVIII)* vol. 1 (Zagreb: Hrvatska akademija znanosti i umjetnosti; Dubrovnik: Zavod za povijesne znanosti HAZU u Dubrovniku, 2007), 139-145.
  - 10 DAD, ser. XII. *Cathasticum*, vol. 11, f. 88, published in Benyovsky Latin and Zelić, eds., *Knjige nekretnina*, 149-246.
  - 11 As a matter of fact, the communal officials charged with the collection of payments would make separate accountancy books every year in which the collected sums and

- persons who actually paid were recorded. Starting with the oldest one preserved, from 1590, these books are as well kept in DAD, ser. XXXXVII, *Libri afflictuum communis*.
- 12 As opposed to those on building plots north of St Nicholas Street (the rents of which were not subject to change), the houses on the main street were communal property, i.e. publicly financed and intended for renting every five years to the highest bidder at public auctions, see Danko Zelić, “Utilitas et lucrum – općinske kuće u srednjovjekovnom Dubrovniku,” in *Umjetnost i naručitelji. Zbornik radova sa znanstvenog skupa “Dani Cvita Fiskovića” održanog 2008. godine*, ed. Jasenka Gudelj (Zagreb: Institut za povijest umjetnosti; Odsjek za povijest umjetnosti Filozofskog fakulteta u Zagrebu, 2010), 9-24.
  - 13 Although those *filii naturales* could not claim to inherit noble status, they were entitled to bear their fathers’ second names.
  - 14 Mostly infrequent, unusual names such as *Obradaç* or *Rachna*.
  - 15 Some of the more picturesque nicknames, which are derived from Italian as well as the Slavic vernacular, are *Bruxa* (Flame), *Chorisma* (Lent), *Pçeliça* (Bee), *Bieda* (Misery), *Boxiamilost* (God’s Mercy).
  - 16 For instance: *de Breno* (Župa dubrovačka), *de Zupana* (The Island of Šipán), *de Zoncheto/Çoncheto* (Šumet), *de Gravuxa* (Gruž), *de Vergato* (Brgat).
  - 17 However, one of the house owners registered in 1382 was *Tadeo Florentino cotopan de Narente* – the captain, i.e. the communal official in charge of the salt market in Drijeva (in the Neretva River delta) operated by the Ragusans.
  - 18 There were people like *Bogavaç*, a skinner by trade, who held the post of the government’s representative (*vice comes*) in an administrative division on the territory of the Dubrovnik commune and is therefore recorded as *Bogavaç pelilaç beschonte*. Another example is *Radoslav chasnaçh*. “Kaznac” was head of a rural administrative unit called *kaznačina*.
  - 19 For instance, the abovementioned *Obrad Sandagl* was a shipbuilder and proto-master of the Arsenal, i.e. a relatively high-ranking communal employee, but the register of communal real property provides no detail thereupon.
  - 20 Branislav M. Nedeljkić, ed., *Liber Viridis* (Beograd: SANU, 1984), 245, c. 296: *Per la via larga de san Nicolo oltra la piazza se debia far uno gatto il qual scorra a levante a ponente secondo acade il terreno nelo qual se debia voydar le case di sopra essa via. E la spesa de far esso gatto debia pagar per uno terzo lo nostro comun e li altri doy terzi le ditte case che usarano de esso per rata deli passi che tochara a zaschaduna de esse case.*
  - 21 Nedeljkić, ed., *Liber Viridis*, 268, c. 320: (...) *Perche l’ordine altre fiade fatto sopra lo gato da fir fato per la via larga de san Nicolo oltra la piazza espressamente vole che la spexa de esso gato se debia pagar li doy terzi le case che usarano de esso per rata deli passi che tochara a zaschaduna de esse case, la qual cosa e molto remota e discrepante dala equitade e iustixia e cade in grande oppression delle povere persone, conzo sia che le caxe che sono poste di sopra di esso gato sono pizole e di pocho valore e quelle di sotto sono mazore e di gran valore (...) ordenemo e reformemo che la detta spexa del gatto, zoe de doy terzi se debia pagar per le dette case sopra el valor e stima da esser fata de esse case (...).*

- Benyovsky Latin, Irena, and Danko Zelić, eds. *Knjige nekretnina dubrovačke općine (13–18. st.) = Libri domorum et terrenorum Communis Ragusii deliberatis ad affectum (saec. XIII–XVIII)*. Zagreb: Hrvatska akademija znanosti i umjetnosti; Dubrovnik: Zavod za povijesne znanosti HAZU u Dubrovniku, 2007.
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- – “Wooden Houses in the Statutes and Urban Landscapes of Medieval Dalmatian Communes.” In *Splitski statut iz 1312. godine – povijest i pravo*, edited by Marko Trogrlić, Željko Radić, Massimo Meccarelli and Ludwig Steindorff, 489-507. Split: Književni krug, 2015.



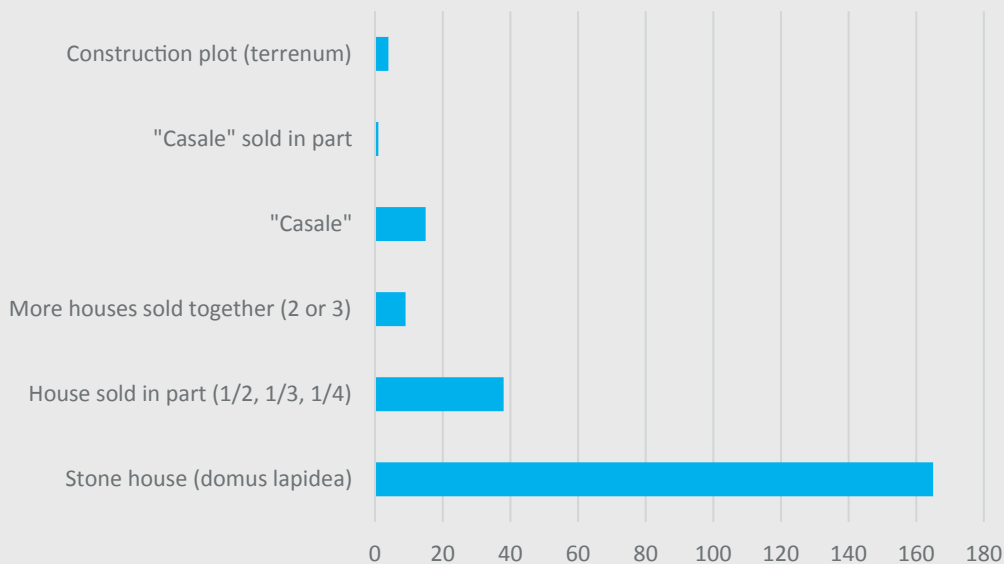
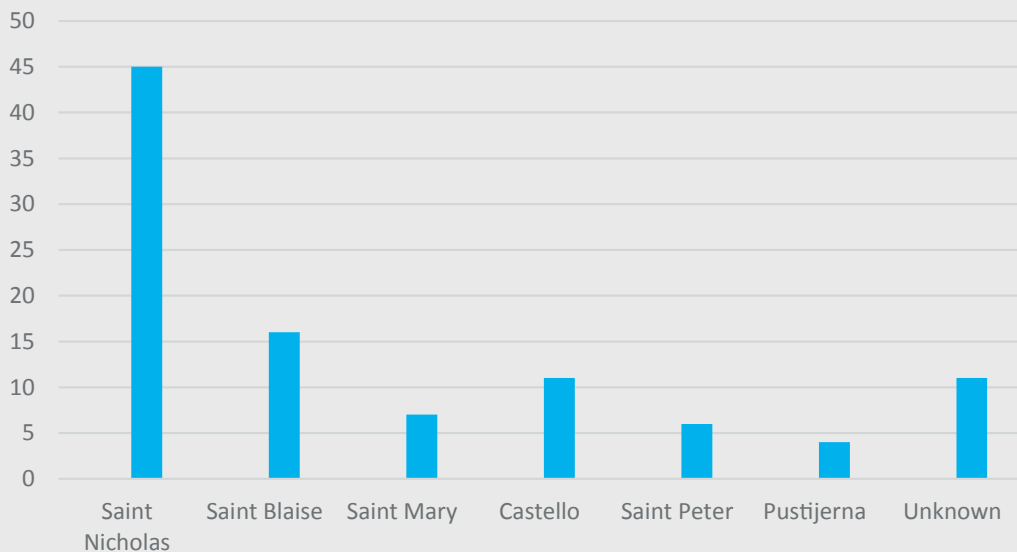
# Mapping housing market in late medieval Dubrovnik: The Saint Nicholas *sexterium* (ca. 1420–1450)\*

Matko Matija Marušić

The Saint Nicholas *sexterium*, today better-known as Prijeko, was incorporated into the city walls of Dubrovnik by the end of the thirteenth century. The blocks of the orthogonal grids of the district, defined by fifteen streets running south-north, cut by the Prijeko Street in direction east-west, have remained largely unchanged to this day. The layout of the district, therefore, is an accomplished achievement of the later medieval urban development, and as such has gained considerable attention in the scholarly literature.<sup>1</sup> Moreover, the scholars have primarily dealt with the medieval and early modern residential architecture, a result of which is a noticeable amount of studies.<sup>2</sup> At the same time, certain aspects of this intriguing city district have not gained significant treatment. To partially fill in this lacuna, it is my aim here to investigate the issue of the real estate market by analysing both published and unpublished sources from the fifteenth century. The issue of the transaction of immovable property, including buying, selling, renting and donating dwellings, may offer new insights into the various under-researched phenomena of the area in question.

The scrutiny of the sources regarding the property transactions can be conducted in several ways; one can put an emphasis on the issues of the urban morphology or can affront the more “slippery” topics, such as the social topography or social stratification. At any rate, such investigations require an in-depth analysis of a wide range of sources through an extensive period and therefore go well beyond the scope of a short article. Given the space I have here, my intention is to discuss the transactions of immovable properties in the first half of the fifteenth century, from ca. 1420 to ca. 1450. More specifically, the scope of the present paper is to visualise the data concerning the changes in the ownership of private houses in the upper part of the Saint Nicholas’ *sexterium*, between the Prijeko Street and the northern city walls by mapping the dwelling units quoted in the archival sources. The results obtained from the analysis, such as the legal status of sellers and buyers, the average price of the stone houses sold, or the frequency of transactions carried out on certain streets will deliver a clearer picture of the housing market in the fifteenth-century Dubrovnik.

The analysis and the mapping of the data will furthermore be extended by several case-studies related to Prijeko, i.e. some distinguished individuals and/or specific groups which have taken a prominent part in the real property transactions as well as the the areas which have witnessed considerable changes in the property ownership during the period examined. To that extent, the final section of the paper will present two such cases – a particular social/professional group – the rich merchants who were members of the Confraternity of Saint Anthony – and the other concerning the transactions in the immediate vicinity to the church of Sigurata. Since the data will be



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FIGURE 1  
Distribution of houses sold in Dubrovnik's sexteria according to *Venditiones Cancellariae* (percentage) (drawing by the author).

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FIGURE 2  
The dwelling units sold in Saint Nicholas district (drawing by the author).

mapped, it is also necessary to reflect upon the restraints of mapping of the urban changes that were not physical and did not imply the modifications of the urban fabric. What emerges from the outline of my paper is that the final aim is rather ambitious. For that reason, here I will present my work and findings up to now, while the full-scope research is still a work in progress.

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The archival sources I will examine are kept in the State Archives in Dubrovnik. The most important source are the unpublished volumes of the *Venditiones Cancellariae*, public registry books of real property sales, (hereafter VC), nine books of which refer to the first part of the fifteenth century.<sup>3</sup> The second source, although not as nearly rich with data, is the recently published *Liber affectuum thesaurarie*, The Book of the Treasurers' Rents, (hereafter LAT), the institution of which occurred in 1428.<sup>4</sup> The nature of these sources differ, however, what combines them is the fact that they contain the proclamations of the sales of the real estate properties, as well as the data concerning the houses rented. It is important to underline that neither of these two sources relates exclusively to Saint Nicholas district, yet to the whole city.<sup>5</sup>

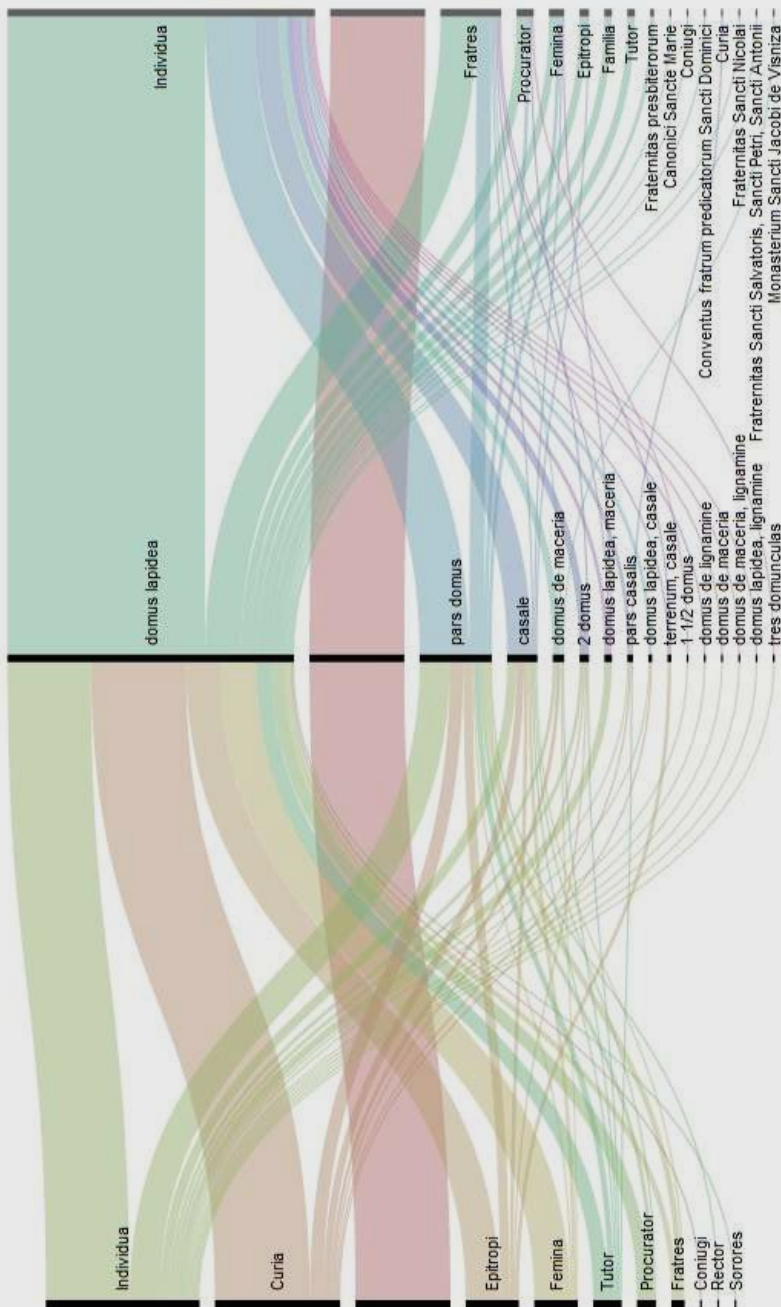
*Venditiones Cancellariae and Liber Affectuum Thesaurarie: The analysis of the sources*

The district of Saint Nicholas was selected since almost half of the dwelling units sold in the fifteenth-century Dubrovnik were located there, which signifies a considerable change in the ownership of houses during the first half of the fifteenth century. **FIGURE 1** shows the percentage of the dwellings sold in the Saint Nicholas in comparison to other districts of the city. These results are not surprising since the Prijeko is arguably the largest among the six cities' administrative units, and the results obtained from the analysis to a certain extent mirror this fact. **FIGURE 2** displays the data pertaining to the urban landscape of Saint Nicholas – the quality of the dwelling units sold. In nearly seventy percent of cases at stake were stone-built houses (*domus lapidea*, or more commonly only *domus*). Recorded were also the sales of a half, a third or a fourth of a house. Other dwelling units include houses which included several smaller dwellings combined in a sort of a court (*casale*, *caxale*) or construction plots (*terrenum*).

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For the scope of this paper, the data concerning the type and/or quality of dwelling units, as well as social conditions of the house owners, buyers, and tenants have been extracted in order to trace and reconstruct the real property transactions. A brief note should, therefore, be made upon the analysis of the sources. The data from the VC have been classified into the following categories: 1) the date of the transaction, 2) the seller of the property, 3) the buyer of the property, 4) the quality of the dwelling unit, 5) the price of the property sold, and 6) the physical boundaries of the dwelling unit according to the document or its precise borders, if stated



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FIGURE 3 Profiles of sellers and buyers of the dwelling units (drawing by the author).

in the document. The sellers and buyers were noted down in the exact form of their name written in the document. I have included their social status, for instance, the title *ser* in the case of patricians (distinguishable by their family name, as well), or their profession, if stated, given the fact that seldom only names or nicknames were recorded.<sup>6</sup>

The quality of the dwellings was furthermore compared to the profiles of sellers and buyers. The **FIGURE 3** compares this aspect of sales and reveals that the dwellings were prevalently sold and bought by male individuals. Moreover, a significant percentage of the dwelling was sold by the Dubrovnik's *Curia civilium*, as a result of law suits for solving debts. A smaller amount of sales was executed by the *epitropi* as an execution of a will, or by the legal representatives (*tutores*) of under aged individuals. The analysis of the buyers' profiles shows that male individuals were, even more numerous group. The second most numerous category of buyers were brothers (*fratres*), commonly joined when acquiring new family dwellings. Finally, several ecclesiastical and fraternal institutions have obtained new dwellings in the Saint Nicholas, including the emerging confraternity of prominent city merchants (Saint Anthony), two Dominican friaries and the confraternities of priests and butchers.

The question arises on how can the data obtained from the statistical analysis be visualised and be "placed" in the space of the early fifteenth-century Dubrovnik. The major obstacle is the inconsistency of the sixth category of data – the boundaries of the dwelling units. On the other hand, the outer borders of the Saint Nicholas are clearly defined, which is not the case with the limits of other city *sexteria*.<sup>7</sup> Moreover, the urban layout of the Prijeko has remained largely unchanged to the present day which is both of great help in the mapping of the data. However, despite the fact of knowing the names of both old and new owners of the dwellings in question, as well as those of the bordering dwellings, it is not always possible to locate the houses recorded in the sources examined. Similarly to VC, evidence from LAT reveal as much as they hide. The number of the dwellings administered by communal treasurers is significantly smaller to that of the dwellings sold in the VC. In fact, when houses were rented, the bordering units were not regularly stated, yet it was more common to describe the position of the house by a neighbouring landmark. Furthermore, no additional information on the quality of the dwelling units can be found in this source – as, in VC, houses were recorded only as *domus*, or in the case of LAT, *cassa*. Therefore, when trying to map the data, we are faced with the difficulties to detect the exact, if not the approximate location of the dwelling unit.

## Mapping the data

While the more or less precise location of the dwellings cannot be traced through the VC and LAT books, there are other contemporary sources which could offer a substantial piece of evidence for visualisation of the data. In the first place I am referring to the *Libro delli terreni et delli afficti delli terreni del comun de Ragusa, del borgo sovra la via de della Plaça* (1382–1417), and *Tute le chase del comun de Ragusa e tereni e fiti che apartien al dito comun* (1417–1449).<sup>8</sup> While in the VC and LAT in most cases only the name of the *sexterium* is indicated, in these type of sources the properties and their owners in Saint Nicholas are listed in the precise order that mirrored the physical situation of every single street running from the Prijeko Street up to the northern city walls. Apart for some particular lacunas, therefore, we have information on the owners of every single house, as well as the length of the main façade facing the street and the amount of annual rent paid to the commune for the terrain, since the length and the layout of the building blocks have still remained intact, it is possible to determine the precise location of the dwellings from the VC and LAT. Given that all of these sources are more or less contemporary, a great number of owners mentioned there have remained unaltered during the first half of the fifteenth century. At the same time, the names of the owners are in different sources recorded in various ways, in some cases only by the first name, most usually followed by patronymic or profession. In order to trace a particular individual, it was, therefore, necessary to combine other sources which enabled their identification.

The overlapping of the layers of the data from the abovementioned archival sources has therefore enabled the mapping of the dwellings sold by using the so-called “puzzle technique” of combining different records to get the complete picture.<sup>9</sup> The starting point for the mapping was the 1417’s list of owners (see Zelić’s study in this volume). The names and professions were confronted to the names of the sellers, buyers and the owners of the bordering dwellings to pinpoint the property sold in the *sexterium*. Out of the 294 dwelling units recorded in the VC, roughly one third of them (102) have been mapped. As is shown in [FIGURE 4](#), they are rather evenly distributed within the area of the district.

Other dwellings mentioned in the VC could not be mapped due to different reasons. In some cases, the bordering units remain unrecorded. Other unmapped dwellings in the Saint Nicholas were located in the parts of the *sexterium* not covered by the 1417 census. Seemingly, larger part of the real property transactions was effectuated in the southern part of the district, between the Prijeko Street and Stradun, as well as in certain areas in its northern part, as for instance in the thirteenth street, below the Sigurata church, or in the uppermost zone, between the fifth and the tenth street.

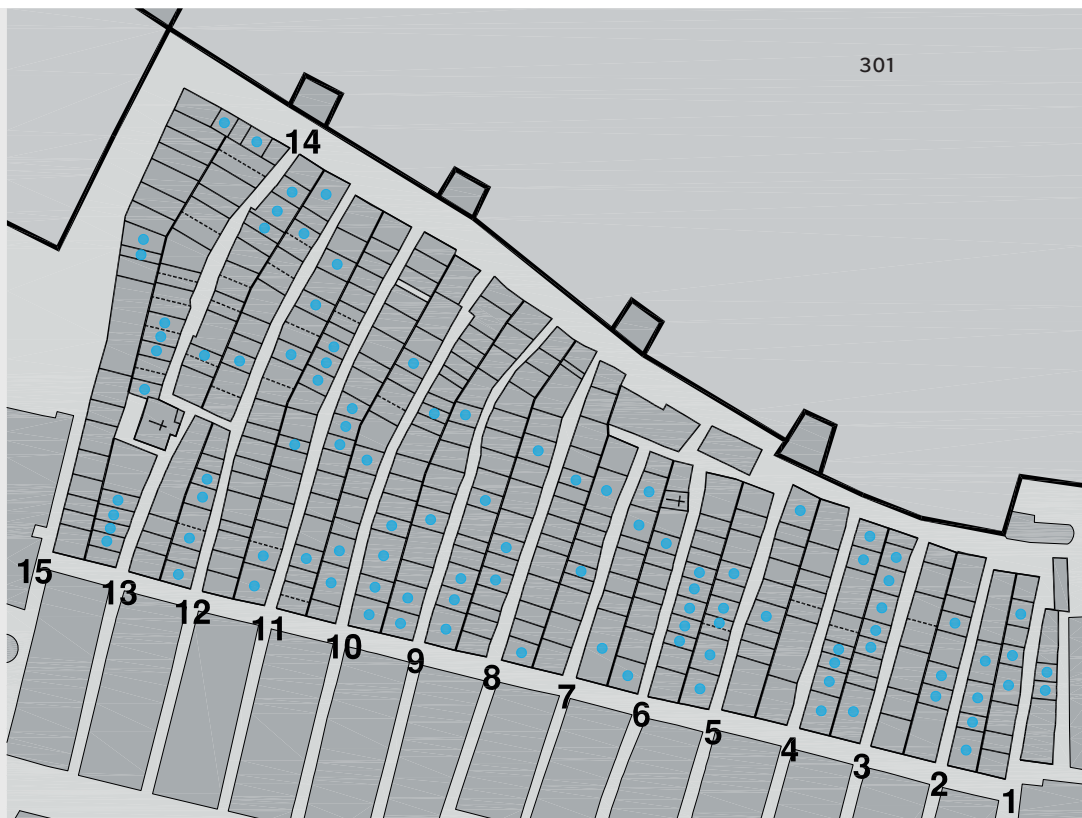
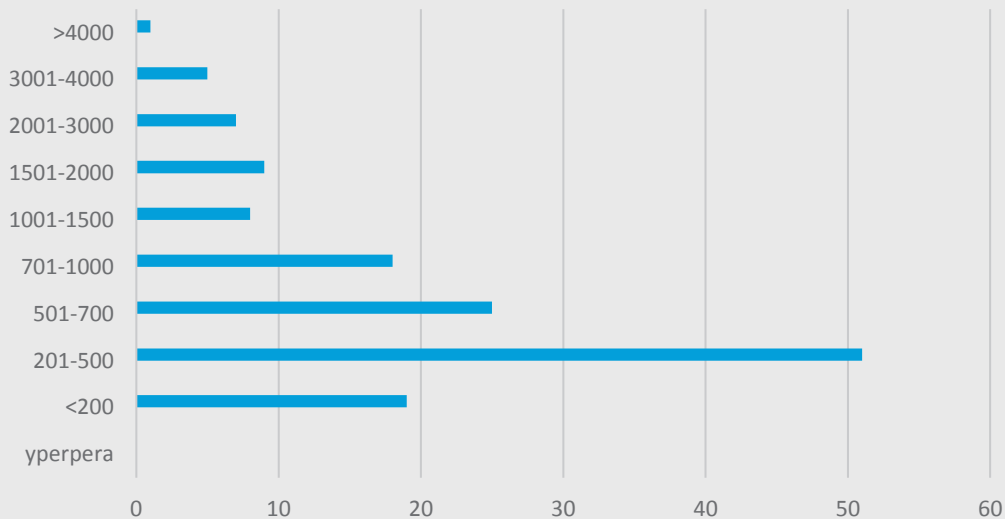
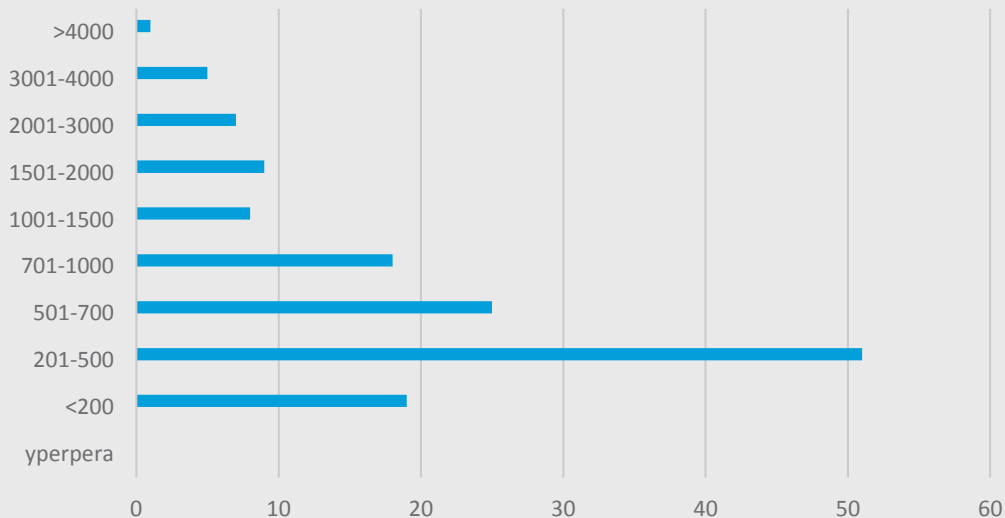


FIGURE 4

The mapped dwelling units recorded in the *Venditiones Cancellariae* (map by Goran Vareško, Institute of Art History, Zagreb).

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FIGURE 5  
Price ranges of stone houses in Saint Nicholas district (drawing by the author).

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FIGURE 6  
Price ranges of stone houses in Dubrovnik, all *sexteria* included (drawing by the author).

Therefore, a considerable amount of houses and terrains sold in these areas can be of great interest for the further study of the parts of the district where the terrain was not owned by the commune.

The southern part of the Saint Nicholas can be divided into two further parts. Its eastern area was covered in communal houses rented every five years, while the building plots in the western segment were partly owned by the commune and partly by individuals.<sup>10</sup> Moreover, certain smaller areas in the northern part not included in the 1417 census because were either ecclesiastical or private property. Although the houses in these parts of Saint Nicholas cannot, so far, be mapped with precision, a plenty of information in the VC and LAT can contribute to a better understanding of the urban topography of this part of Dubrovnik.<sup>11</sup> Nevertheless, on a more general level, several hundred dwellings (similarly to VC, including lavish patrician houses or far modest properties and building plots) that were sold or bequeathed are indeed the valuable body of evidence for the study the housing market prices in the later medieval Dubrovnik.

The mapping of the dwellings opens up the way to further analysis of data. Out of all dwellings mapped, roughly a half were sold (53 cases), and their prices can be analysed with regard to their micro-location within the district, and their size recorded in the 1417 census. Therefore, the same sources, of crucial importance for the mapping, could also serve as a starting point for further inquiries which involve not only their spatial distribution but as well its possible implications.

**FIGURE 5** displays the price range of the stone houses sold in the Saint Nicholas in the first half of the fifteenth century. The amounts have been divided into several categories, the most frequent being the amounts from ca. 200 to 500 yperpera. Certain houses in the lowest price range have been sold for the sum of 10 yperpera. In such cases, the price did not correspond to the market value of the dwelling nor to its location, but the surprisingly small sum was a result of some sort of agreement between the sellers and buyers. In several such cases, the transactions were executed among close relatives or the members of the same family which possibly explains the strangely low price. The prices of dwellings in the Saint Nicholas can be compared to those in the whole of Dubrovnik, and the relation of the real estate values can deliver a clearer picture of the scale of prices in later medieval city. In fact, the most expensive dwelling in the mid-fifteenth century Dubrovnik, we observe from the **FIGURE 6**, were sold in the Prijeko district.<sup>12</sup>

Among Dubrovnik's *sexteria*, Prijeko is commonly perceived as a "popular" district,<sup>13</sup> from its very beginnings inhabited by the "popular working

**The real estate prices: Saint Nicholas vs. other *sexteria***

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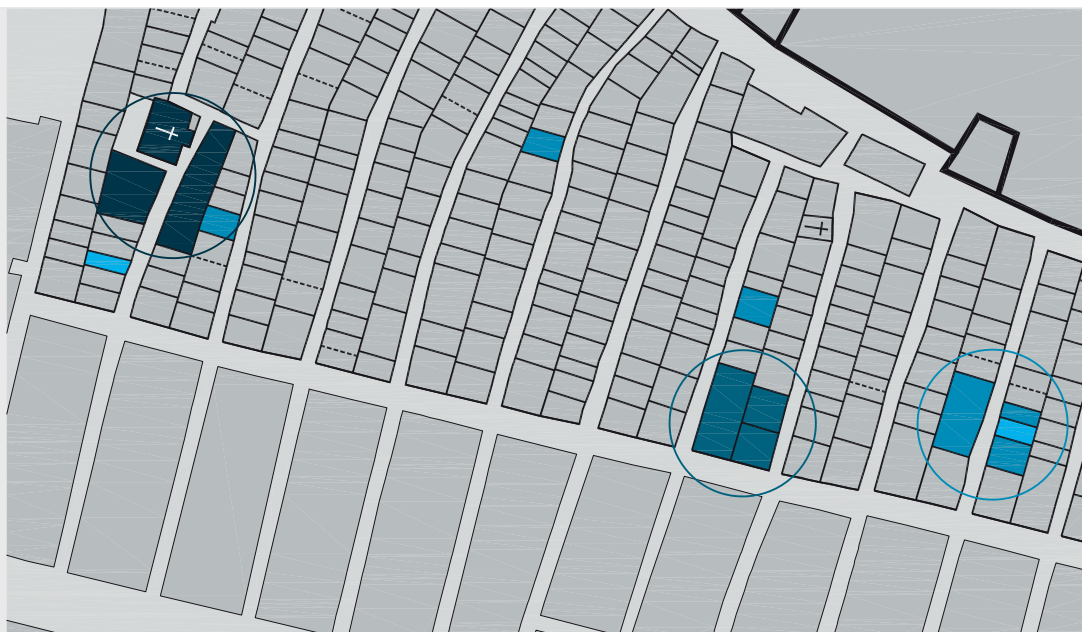
Mapping housing market in late medieval Dubrovnik:  
The Saint Nicholas *sexterium* (ca. 1420–1450)

class”.<sup>14</sup> Some hundred years later, during the period examined, this image only partially holds true, as is also evident from the examination of the real estate costs. Concerning the prices of the dwellings, the most interesting comparison can be drawn with regard to the data concerning the *sexterium* Pustijerna, usually perceived as the most elite residential district of Dubrovnik. The comparison reveals that, out of all *sexteria* of Dubrovnik, Saint Nicholas witnessed the highest transaction cost. However, the correlation between real property values in certain neighbourhoods is not as straight-forward as it may seem. The fact that Pustijerna was in the most part inhabited by the established patrician families implies that their houses were rarely sold, rather being inherited, *de herede in herede*. Nevertheless, the evidence concerning the house prices is certainly stimulative for future research, and in order to outline other possibilities in examining the real estate market in the Prijeko, I will now turn to two selected case-studies.

### Mapping Antunines in Prijeko: three examples

In order to investigate the social topography of certain neighbourhoods, one needs to undertake an in-depth insight into social layers that included rich and not so fortunate merchants, craftsmen of different trades and other groups. In that instance, the first case study I will present concerns wealthy merchants, an uprising social group of late medieval Dubrovnik. The Antunines were a group of wealthy families assembled in Saint Anthony’s confraternity. As was recently demonstrated by Zrinka Pešorda Vardić, these families have in many instances assembled patricians.<sup>15</sup> Pešorda Vardić also devoted attention to the spatial distribution of the Antunines, observing that their dwellings were evenly distributed in the Dubrovnik’s *sexteria*.<sup>16</sup> This is most certainly correct, as is also evident from VC, yet the Saint Nicholas seems to be particularly relevant to this social group. Among the names of sellers and buyers, considerable part were members of the Antunine confraternity which makes possible to establish the positions of their houses. Here I will briefly present intertwined cases involving several such families.

The Antunine who possessed the highest number of houses was Radoslav Turchinovich. By 1417 Turchinovich owned six stone houses in the Saint Nicholas *sexterium*,<sup>17</sup> while in 1431 he bought a house in the Saint Peter’s *sexterium*,<sup>18</sup> and in 1434 another house in the Saint Blaise.<sup>19</sup> Apparently, most of them were rented which must have represented considerable income, but it is uncertain which house was his residence. An already impressive number of cases in possession of the Turchinovich family was further enlarged by his sons – Florius and Matchus. The siblings united in fraternal company bought further houses together, joined in *fraterna*: in 1437 they purchased a house between the two already in possession of their



- Sigurata church and its territory
- Dwellings of the Turchinovich family
- Dwellings of the Turchinovich family
- Dwellings of Petrus Primi

FIGURE 7

The case studies of the clustering of the dwelling units of the Antunine families and the Sigurata church (map by Goran Vareško, Institute of Art History, Zagreb).

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Mapping housing market in late medieval Dubrovnik:  
The Saint Nicholas *sexterium* (ca. 1420–1450)

father,<sup>20</sup> and during the following decade they bought three further houses in Saint Nicholas.<sup>21</sup> Except for one, the exact locations of other dwellings are known. On **FIGURE 7**, we see the grouping of the Turcinovich family in the fourth street, while the largest dwelling on its western side was most convincingly their residential house.

An interesting case of enlarging the dwelling at the prestigious location on the Prijeko Street was that of Petrus Primi, also known as Clunovich, a rich merchant and leaseholder in Bosnia.<sup>22</sup> By 1417 Primi owned first two houses located on the western side of the sixth street, the first therefore on the northern side of the Prijeko Street. In 1419 he bought the largest dwelling in Saint Nicholas – a stone house with a *casale*, owned by Nikša, son on Gin Liessevich, as well members of the Antunine confraternity.<sup>23</sup> Buying Liessevich's large dwelling unit, Primi became the first individual who possessed two houses facing the Prijeko Street. However, only several years later, in 1423, Primi was constrained to sell the recently acquired *domus cum casale* due to his debts to Givchus Radosalich called Castrat, yet another of the Antunine brethren.<sup>24</sup> In 1429 he sold one of his houses he owned in 1417 to Pribissavus Radulini (himself as well an Antunine), located *prope domus Guichi Castrat*, for 5500 yperpera, which makes this the largest sum in the period examined.<sup>25</sup>

Castrat, like other distinguished Antunines, was in possession of houses in other districts of Dubrovnik – including a house in Saint Blaise district<sup>26</sup> and a *casale* in Castello,<sup>27</sup> but the house in Prijeko was most certainly his residence. This is witnessed in LAT where a renting a house *in la contrata de Givcho dito Castrat* was recorded.<sup>28</sup> Castrat's house, therefore, stood out as prominently placed, obviously larger in scale, and was owned by a prominent member of an emerging social group, which granted her the status of a landmark in the Saint Nicholas urban landscape.

**A case-study  
of a landmark:  
the Church  
of the  
*Transfigurationis  
Domini*  
(Sigurata)**

In a matter of fact, there were certain such landmarks around which a considerable number of real estate transactions is recorded, which so far cannot be precisely located. One such case is the early medieval church of the *Transfigurationis Domini*, today as then better known as Sigurata. Sixteen dwelling units sold from 1420 to 1450 were located somewhere near (*apresso de, prope, circa, subtum*) the church or in the same street (*in ruga*).<sup>29</sup> Out of all these houses, only two can be precisely located.

Back in the fifteenth century, Sigurata church was a free-standing building, with its own *campus*, as was attested in one of the sales recorded in the VC.<sup>30</sup> On the other hand, the terrain bordering the church was not densely covered in stone houses as it appears today. For instance, in the sale of 1437, one such *casale* in part bordering the *campus* of the church from its'

southern edge, was sold under the condition that the buyers were free to build there using the wall at the western edge of the dwelling unit.<sup>31</sup> Moreover, the list of 1417 reveals that the terrain south and east from the church was not included in the census, meaning that the rent (*angaridium*) was not paid to the commune. Seven houses located around the church, that is nearly half of all mentioned in the VC, were paying the rent directly to the church, with one additional house disbursing the sum both to the church and to the commune.

It is therefore highly likely that the houses in question were located on the terrain owned by the Sigurata church and therefore not covered by the 1417 census. This would also explain why only such a small portion of houses in this area can be precisely mapped: given the fact that we did not know their owners in 1417, we cannot match them with the houses sold in the following decades recorded in the VC.

The aim of this paper was to present the possibilities of studying yet unpublished volumes of *Venditiones Cancellariae* for studies pertaining to the immovable property transactions in the fifteenth century Dubrovnik. What emerges from the analysis of the sources, and the attempt to map the data, is, on the one hand, the impossibility to precisely locate the dwellings. Although there are more or less contemporary sources with a complete list of owners, i.e. the 1417 census, in some cases, we cannot establish the precise location (for instance the area around the Sigurata church).<sup>32</sup> The changes of the ownership are not physical changes in the urban layout and the analysed sources, no matter how valuable they are, so far cannot reveal the precise locations of the recorded dwelling units. What is lacking, therefore, is the detailed state of the fourteenth and fifteenth centuries which could lead to a better understanding of the real estate transactions during the wider amount of time. Future research must, therefore, include other sources, such as the censuses from 1389 and 1484. The combining of these sources with the transactions in the VC and the rents in LAT, as well as other relevant sources kept in the State Archives in Dubrovnik, could most surely offer a clearer picture of some problems outlined in this paper, including not only the general comparisons of Saint Nicholas to other Dubrovnik's *sexteria*, but as well its detailed urban and social profile.

## Conclusion

## Notes

- \* This work was fully supported by the Croatian Science Foundation's funding of the project *Dubrovnik: Civitas et Acta Consiliorum. Visualising the Development of the Late Medieval Urban Fabric* DUCAC-UIP-11-2013-9492.
- 1 Milan Prelog, "Dubrovački statut i izgradnja grada (1272–1972)," *Peristil* 14-15 (1972): 81-94; Marija Planić-Lončarić, *Planirana izgradnja na području Dubrovačke Republike*, Studije i monografije Instituta za povijest umjetnosti, vol 1 (Zagreb: Centar za povijesne znanosti, Odjel za povijest umjetnosti, 1980); Igor Fisković, "Tradicije i inovacije u urbanističkome liku starog Dubrovnika," *Dubrovnik* 5/4 (1994): 103-123.
  - 2 Maja Nodari-Krstelj, "Dubrovačka stambena arhitektura XV./XVI. stoljeća," MA Thesis (University of Zagreb, 1977); Igor Fisković, "Crkvice 'Sigurate' u Dubrovniku – ratom oštećeni te obnovljeni višeznačni spomenik," *Radovi Instituta za povijest umjetnosti* 20 (1996): 59-81; Nada Grujić, *Kuća u Gradu: studije o dubrovačkoj stambenoj arhitekturi 15. i 16. stoljeća* (Dubrovnik: Matica hrvatska – Ogranak Dubrovnik, 2013).
  - 3 The books concerning the first part of the fifteenth century are the following: *Venditiones Cancellariae* (hereafter, in notes: *Vend. Canc.*) no. 5 (1419–1427), no. 6 (1428–1433), no. 7 (1433–1438), no. 8 (1438–1441), no. 9 (1441–1443), no. 10 (1443–1446), no. 11 (1446–1448), no. 12 (1449–1451), and no. 13 (1451–1454). These books were digitalised in the State Archives in Dubrovnik by Ana Plosnić Škarić and Danko Zelić from the Institute of Art History in Zagreb as part of the DUCAC research project, see also: Ana Plosnić Škarić, "Dubrovnik: Civitas et Acta Consiliorum. Vizualizacija mijena kasnosrednjovjekovnog urbanog tkiva / Dubrovnik: Civitas et Acta Consiliorum, Visualizing Development of Late Medieval Urban Fabric – uspostavni istraživački projekt," *Kvartal* 12/1-2 (2015): 79-81.
  - 4 The source was recently edited and indexed in 2012; Danko Zelić, ed., *Knjiga rizničarskih najmova = Liber afflictuum thesaurarie: (1428–1547)*, Monumenta historica Ragusina, vol 12 (Zagreb, Dubrovnik: Hrvatska akademija znanosti i umjetnosti, Zavod za povijesne znanosti, 2012). On the source see the introductory chapter: Danko Zelić, "Liber afflictuum thesaurarie / The Book of the Treasurers' Rents (1428–1547): Perpetual Legacies Providing Funding for Pious Purposes".
  - 5 The VC concerned the territory of the Republic of Dubrovnik as well, including other towns, islands and localities. I have limited the research to these two sources, while a certain amount of transactions of dwellings can be found in other series of the Satate Archives in Dubrovnik, among others in *Diversa cancellariae*.
  - 6 The following categories from the VC can be consulted at the web page of the DUCAC project, [https://ducac.ipu.hr/project/data/venditiones\\_cancellarie/](https://ducac.ipu.hr/project/data/venditiones_cancellarie/), accessed March, 29, 2017.
  - 7 For the overview of Dubrovnik's *sexteria*, see: Ivana Lazarević, "Granice dubrovačkih seksterija," *Analiz Zavoda za povijesne znanosti HAZU u Dubrovniku* 50 (2012): 63-74.
  - 8 Both sources were published and indexed in 2007, while a separate study of the latter source, authored by Zelić, can be found in this volume; Irena Benyovsky Latin and Danko Zelić, eds., *Knjige nekretnina dubrovačke općine (13–18. st.) = Libri domorum et terrenorum communis Ragusii deliberatis ad afflictum (saec. XIII–XVIII)* (Zagreb – Dubrovnik: Hrvatska akademija znanosti i umjetnosti, Zavod za povijesne znanosti u Dubrovniku, 2007); Danko Zelić, "Medieval Urban Landscape of the Northern Part of the City of Dubrovnik (1372–1450)," in *Mapping Urban Change*, ed. Ana Plosnić Škarić (Zagreb: Institut za povijest umjetnosti, 2017), 270-293.

- 9 Valentina Zovko, "Socijalna topografija Dubrovnika krajem 13. i početkom 14. stoljeća na primjeru obitelji de Sorgo (Sorkočević)," *Povijesni zbornik* 4 (2009): 25-26, 32.
- 10 Benyovsky Latin and Zelić, *Knjige nekretnina dubrovačke općine (13–18. st.)* = *Libri domorum et terrenorum communis Ragusii deliberatis ad afflictum* (saec. XIII–XVIII); Danko Zelić, "Utilitas et lucrum – općinske kuće u srednjovjekovnom Dubrovniku," in *Umjetnost i naručitelji. Zbornik znanstvenog skupa "Dani Cvita Fiskovića" održanog 2008. godine*, ed. Jasenka Gudelj (Zagreb: Institut za povijest umjetnosti u Zagrebu, Odsjek za povijest umjetnosti Filozofskog fakulteta Sveučilišta u Zagrebu, 2010), 9-24.
- 11 The exact location of certain areas, such as the terrains of the Suieri (*terrenum illorum de Suieri*) and of Junius de Sorgo (*terrenum ser Junii de Sorgo*) are yet to be investigated more closely and located more precisely.
- 12 It must be added that the most expensive dwelling was not a stone house, but a *casale*, sold by the Curia in 1433 for 8000 yperpera; *Vend. Canc.*, 6, f. 194r. This technical term is commonly understood as a "house not suitable for living". This surely was not the case with the dwelling unit in question, although we know nothing about its dimensions and qualities.
- 13 Zrinka Pešorda Vardić, "Property and Ownership in Dubrovnik's Confraternity of St Anthony in the Late Medieval and Early Modern Ages," in *Towns and Cities of the Croatian Middle Ages: Authority and Property*, ed. Irena Benyovsky Latin and Zrinka Pešorda Vardić (Zagreb: Hrvatski institut za povijest, 2014), 328.
- 14 Joško Belamarić, "Urbanistički aspekti prve dubrovačke industrije u 15. stoljeću," in *Renesansa i renesanse u umjetnosti Hrvatske. Zbornik radova sa znanstvenih skupova "Dani Cvita Fiskovića" održanih 2003. i 2004. godine*, ed. Predrag Marković and Jasenka Gudelj (Zagreb: Institut za povijest umjetnosti, Odsjek za povijest umjetnosti Filozofskog fakulteta Sveučilišta u Zagrebu, 2008), 360.
- 15 Cf. Pešorda Vardić, "Property and Ownership"; Zrinka Pešorda Vardić, *U predvorju vlasti. Dubrovački antunini u kasnom srednjem vijeku* (Zagreb – Dubrovnik: Hrvatska akademija znanosti i umjetnosti, Zavod za povijesne znanosti u Dubrovniku, Hrvatski institut za povijest, 2012).
- 16 Pešorda Vardić, "Property and Ownership," 336.
- 17 Benyovsky Latin and Zelić, *Knjige nekretnina dubrovačke općine (13–18. st.)* = *Libri domorum et terrenorum communis Ragusii deliberatis ad afflictum* (saec. XIII–XVIII.), 40.
- 18 *Vend. Canc.* 6, f. 125r.
- 19 *Vend. Canc.* 7, f. 58v.
- 20 *Vend. Canc.* 7, f. 202r.
- 21 *Vend. Canc.* 8, ff. 23r, 26v, 149v.
- 22 See Đuro Tošić, "Petar Primović – dubrovački trgovac i zakupac carina u Bosni," *Godišnjak Društva istoričara Bosne i Hercegovine* 37 (1986): 75–89.
- 23 *Vend. Canc.* 5, f. 1v.
- 24 *Vend. Canc.* 5, f. 123v.
- 25 *Vend. Canc.* 6, f. 42v.
- 26 *Vend. Canc.* 5, f. 252r.
- 27 *Vend. Canc.* 7, f. 86r.
- 28 Zelić, *Knjiga rizničarskih najmova = Liber afflictuum thesaurarie*, 40.
- 29 *Vend. Canc.* 5, ff. 124v, 135v; 6, ff. 127v, 167v, 176v, 196v; 7, ff. 35v, 85r, 192r; 8, ff. 26r, 43v; 10, 108v, 151r; 11, ff. 19v, 21r; 12, f. 103v.
- 30 *Vend. Canc.* 7, f. 192r.
- 31 (...) *cum hoc pacto quod dictus Sergius si velint edificare possit se apprehendere in muro et super murum que est inter dictum casale et domum Radosavi Thomchovich, quem murorum dicti fratres dixerunt esse comunem ipsarum et dicti Radossavi et pro comuni promiserunt ipsam defendere ut mantenere dicto Sergio (...).* *Vend. Canc.* 7, f. 192r.



- 32 For similar research problems encountered in other Eastern Adriatic towns, see: Ana Plosnić Škarić, “Real Property of Wealthy Commoners: The Formation and Rise of Commoner Lineages in Trogir after 1420,” in *Towns and Cities of the Croatian Middle Ages. Authority and Property*, ed. Irena Benyovsky Latin and Zrinka Pešorda Vardić (Zagreb: Hrvatski institut za povijest, 2014), 351.

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- – “Crkvice ‘Sigurate’ u Dubrovniku – ratom oštećeni te obnovljeni višeznačni spomenik.” *Radovi Instituta za povijest umjetnosti* 20 (1996): 59–81.
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- — “Dubrovnik: Civitas et Acta Consiliorum. Vizualizacija mijena kasnosrednjovjekovnog urbanog tkiva / Dubrovnik: Civitas et Acta Consiliorum, Visualizing Development of Late Medieval Urban Fabric – uspostavni istraživački project.” *Kvartal* 12/1-2 (2015): 79-81.
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*Felix Arba*

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Visualising urban  
social change,  
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*Reinout Klaarenbeek*

*Thomas Coomans*

# Processing data with GIS

# Felix Arba – reconstructing urban and rural economic capacities through GIS<sup>\*</sup>

Goranka Lipovac Vrkljan  
Ana Konestra  
Nera Šegvić

Most historic towns along the Adriatic coast and islands have lived through a multitude of administrations, wars, different economic conditions, being shaped by many phases of building and destruction, often reflecting the current state of affairs in the wider Adriatic and European region. As cities are not entities existing on their own but are part of a complex system involving their rural hinterland,<sup>1</sup> communications and nearby urban realities, they can be regarded in correlation to the balance within this structure.

Following these concepts, the subject of our analysis is the historic town of Rab, and its insular hinterland. Data collected through field survey within the projects *Archaeological topography of the island of Rab* (Ministry of Culture) and *RED: Roman economy in Dalmatia* (HRZZ)<sup>2</sup> will be the basis for the discussion on the development of the town and its insular rural hinterland in the 1st millennium AD. Limited by the lack of excavations, a new approach was pursued to analyse earlier information together with new data. Inspired by new surveys showing a substantial presence of rural sites which can so far be dated to later-Roman times, some with onward occupation continuity, our intention was to compare the two realities, urban and rural, and try to see if any, and which, interdependencies would arise. As both spatio-temporal issues emerge, authors address both assuming aforementioned “urban-rural relationship”, while applying appropriate analytical models, to make the most of the ambiguous data.

In doing so, the Roman ruralscape is seen as a generator of surplus (and thus wealth), instead of a self-sufficient entity, interacting with the nearby town, providing the products and goods, all within the shared limits of their landscape.<sup>3</sup> Accordingly, we will try to establish whether the development of the city can be traced through the monuments’ spatio-temporal distribution and whether these changes are also evidenced in other areas of the island. If changes can indeed be traced in both areas, the question is whether they can be regarded as correlated through both spatio-temporal associations or whether different processes developed in different parts of the island. The city and the island of Rab are suitable for such analysis, as the island is, compared with the surrounding ones, rather small (93.6 km<sup>2</sup>). What geologically differentiates Rab from the surrounding karst landscape is the presence of large flysh fields and the rich system of temporary and permanent streams.<sup>4</sup> Also, Rab fits into the Mediterranean zone (Csa),<sup>5</sup> creating perfect conditions for rural exploitation and different productive activities.

As archaeology is a fundamentally spatial discipline, the use of GIS seems almost self-explanatory. Longley et al.<sup>6</sup> name several important arguments advocating using GIS in research, all of which are conditioned by the quality of the underlying spatial database. The main aims of the Rab database are

## The Rab GIS

standardisation, storage, manipulation, visualisation and analysis of the data compiled from the field surveys undertaken on the island from 2013 onwards, data registered in the National Inventory of Cultural Heritage and data recorded in archival and literature sources. This heterogeneity in data sources demanded unification and standardisation in addition to the compilation of various cartographic sources before the data could be analysed.

The basic conceptual schema of the database is given in [FIGURE 1](#). The database is defined by three core archaeological levels with spatial representations, Sites, Features and Finds, the basis of which is a unique code enabling the interconnectivity of the entities.

The core levels are further supplemented with subsidiary levels such as Archival, Literature Sources, and Survey conditions to mention a few. Most importantly, the archaeological levels are defined by their Datation which can be broadly defined with main historical periods or related sub-periods restricted by their *terminus post quem* and *terminus ante quem* years. Further, precise years can be entered separately.

The database was built using open-source PostgreSQL/PostGIS RDBMS on a VPS Linux Debian 7.0 provided by SRCE. The data is accessed and manipulated within open-source desktop-based software QGIS while viewing and basic queries are also possible within Quantum GIS Web Client. Accessing the data is protected, so the indicated distributed aspect could be the prospective dissemination asset.<sup>7</sup>

### Limits to the reconstruction of Rab's first urban scape

Lack of systematic excavations, grey literature and lack of collected finds represent a problem for researchers studying the early urbanism of Rab. The major reshaping of the historic urban tissue, at that time in a severely ruined state,<sup>8</sup> took place at the end of the 19th and within the first half of the 20th c. with the onset of tourism and some major construction undertakings within the town walls or in the immediate vicinity.<sup>9</sup> Apart from scarce photographic documentation, the only records of potential features discovered are rare mentions, mostly within pseudo-historic sources.<sup>10</sup> The few professional reports on the main monuments and features also date to this period,<sup>11</sup> often remaining the only source for the study of the ancient town to this day.

Any archaeological and historical reconstruction of the town's ancient and medieval grid is biased by these shortcomings, also evident in earlier works. From V. Brusić who tackled the problem from his viewpoint in the 1920s to the most recent literature studying the ancient town's area,<sup>12</sup> all scholars examined the subject mainly on the basis of the few ancient monuments still present at Rab or known to have originated there (summarised by

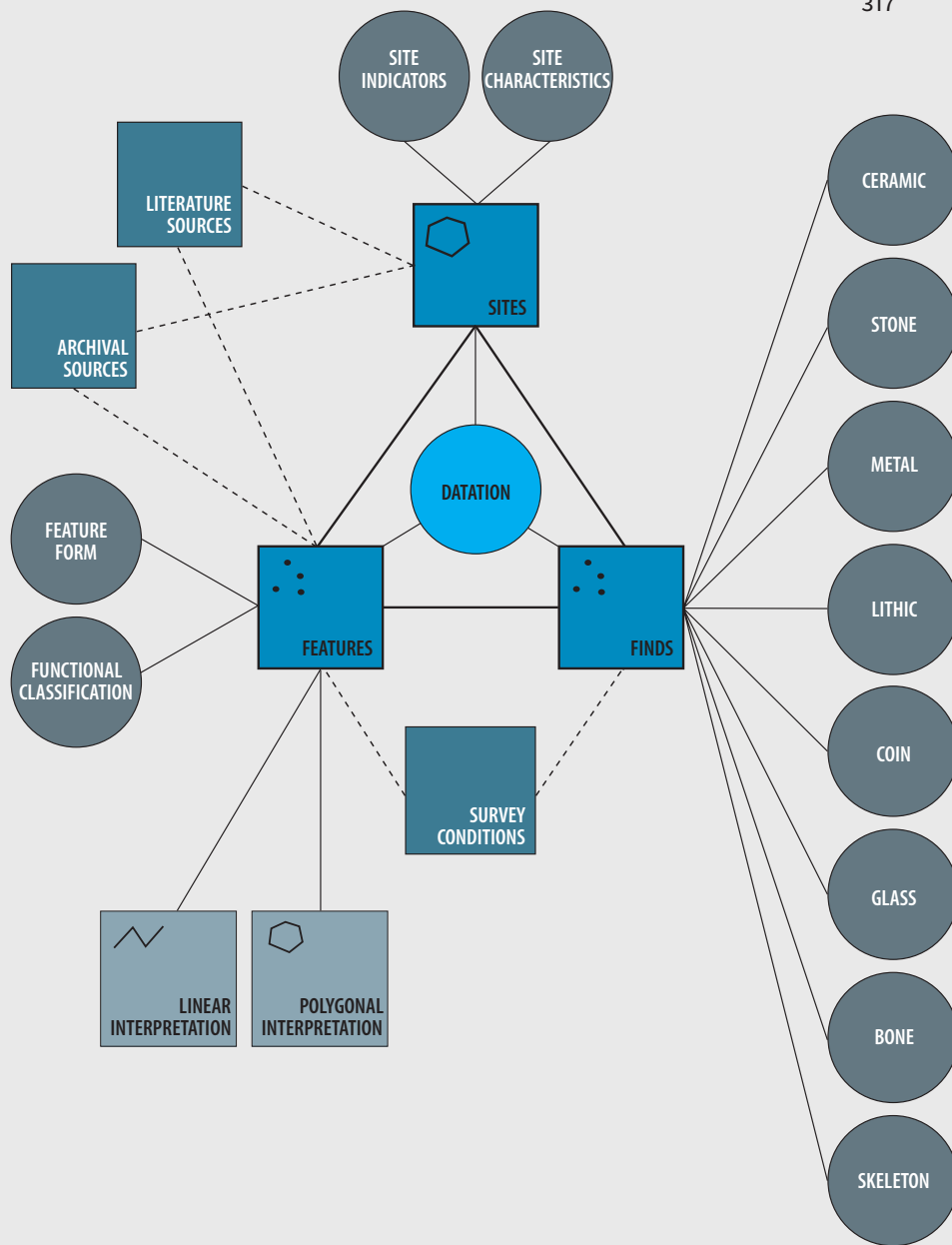
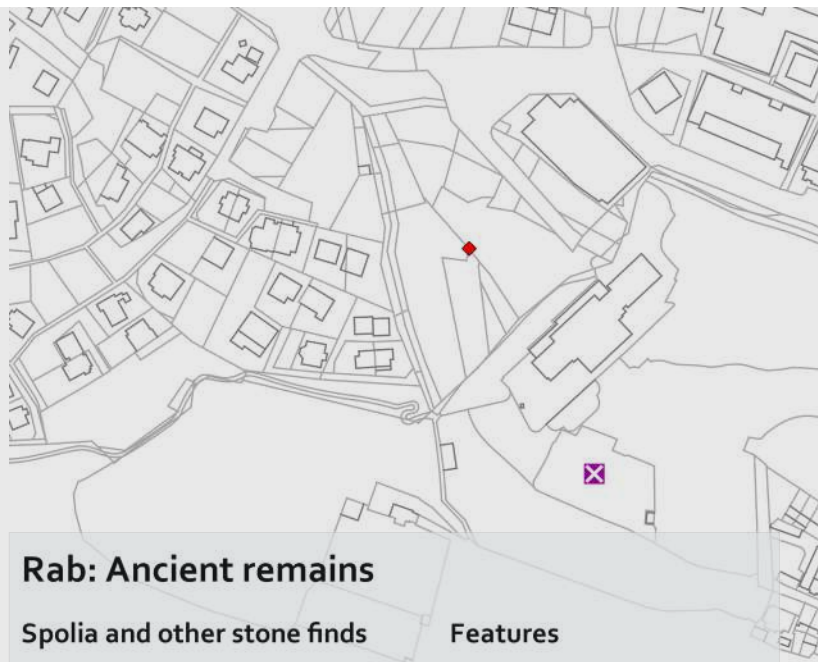


FIGURE 1  
Schematic representation of the Rab database structure (drawing by N. Šegvić).





### Rab: Ancient remains

#### Spolia and other stone finds

- ARCHITECTURAL ELEMENTS
- Antiquity
- Late Antiquity
- CHURCH SCULPTURAL ELEMENTS
- Late Antiquity
- ◇ PUBLIC MONUMENTS
- ◆ Antiquity
- ◆ Roman
- ◆ Late Antiquity
- ▽ SEPULCHRAL MONUMENTS
- ▼ Antiquity
- ▼ Roman
- ▼ Late Antiquity
- ⬠ SARCOPHAGI
- Late Antiquity
- △ DEDICATIONS/EPITAPHS
- ▲ Antiquity
- ▲ Roman

#### Features

- DEFENCE PURPOSE
- ⊕ Late Antiquity
- HYDRAULIC PURPOSE
- ⊕ Antiquity
- UNKNOWN PURPOSE
- ⊗ Antiquity
- SACRAL PURPOSE
- ⊕ Late Antiquity

#### Polygonal Interpretation

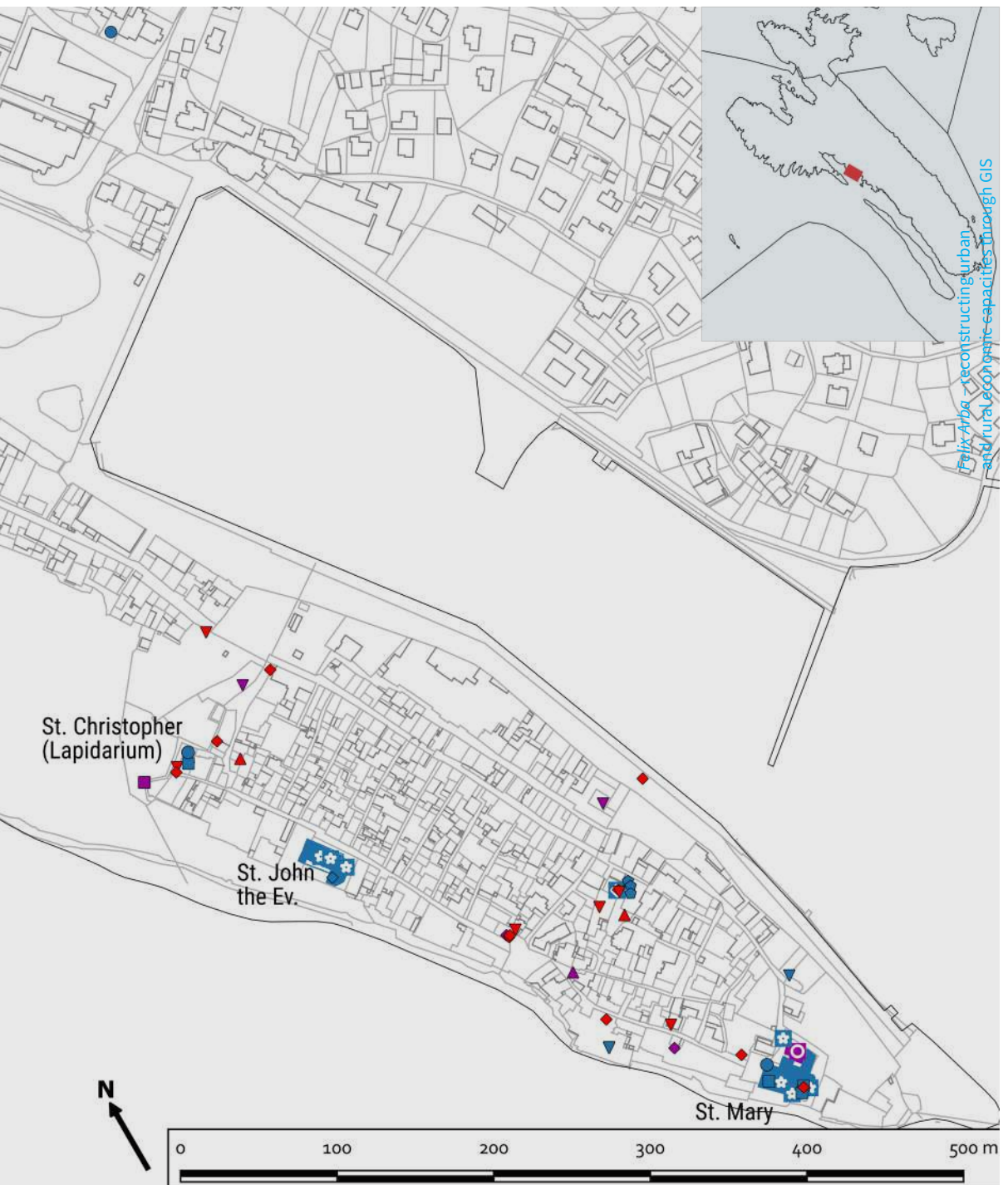
- Antiquity
- Late Antiquity
- Modern cadastral data
- Modern cadastral data

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FIGURE 2

Ancient features, spolia and other stone finds within the area of modern Rab. Clustering at St. Christopher church is due

to its modern function as *lapidarium* (source: Rab GIS, Basemap: DGU; drawing by N. Šegvić).



B. Nedved).<sup>13</sup> It resulted in discussions limited to identifying the area occupied by the ancient town as opposed to that of the late medieval one, mainly based on stone monuments – *spolia* (FIG. 2).

Spatial distribution of finds (FIG. 2) is rather a proof of their post-classical value as a building material, reuse of decorative features and as collectables, as they are usually understood.<sup>14</sup> Although some of these monuments hold value for identifying structural and decorative features of the ancient town, the lack of spatial certainty hinders possibilities to locate them with any accuracy.

Building a coherent ancient reconstruction on inconclusive data is debatable. Hence it is important to preserve this aspect in the database reflecting different scales of spatial certainty and distinguishing features known only from historical/archival sources. Whenever possible, the finds were placed in their first known location, while their current location was preserved as an attribute in terms of the depository. Obviously, if *spolia* still exist in their current location, they were given the appropriate spatial reference and marked as *in situ*, the evident dilemma remaining their authentic position. Lastly, finds mentioned in the sources, but today lost, were put in their referred location but marked as supposed existence. In this way, these finds can still tell some of the town's history, if one takes into account aspects other than the precise date and spatial location.

**Aoristic analysis:  
merging the gap  
between rural  
and urban  
histories**

Having dealt with the spatial uncertainty issues in the city, accounting for diverse temporal scales, also prominent in the data, required a different approach. Sources of the analysed data (FIG. 3) are extensive field surveys, literature and archival sources. As such, a well-defined archaeological context and precise dating are usually unknown. These circumstances pose difficulties for analysis of spatio-temporal patterns possibly hidden in the data. The issue is inherent in archaeological research and should not be disregarded in analysis and visualisation. Furthermore, as few precisely dated finds and structures do exist, there is a need to preserve and visually emphasise the presence of different temporal scales. Aoristic analysis, defined by Ratcliffe,<sup>15</sup> refers to similar problems in crime mapping. The method was first applied to archaeological data by Johnson<sup>16</sup> and few times since<sup>17</sup> while Wilson<sup>18</sup> applied similar probability calculations to economic proxies.

Aoristic analysis identifies the probable time of events which certainly occurred within known temporal parameters, but whose exact time is unknown. Specifically, architectural structures, epigraphic monuments or sculptures, which echo the expected construction events, can only be determined with their *terminus post quem* (TPQ) and *terminus ante quem*

FIGURE 3

Tables showing type, function and datation of finds (upper table) and features (lower table) included in aoristic analysis (drawing by N. Šegvić).

Type of finds	Purpose	Datation
Sarcophagus	Sepulchral monument	Antiquity
Cipus		
Tombstone		
Roman altar		
Dedication /Epitaph inscription		
Stone inscription	Public monument	Antiquity/Late Antiquity
Sculpture /Sculptural element	Public/private monument	Antiquity/Late Antiquity /Early Middle Age
Epigraphic monument (statue base)	Public/private monument	Antiquity/Late Antiquity
Pluteus	Church sculptural element	Late Antiquity
Ciborium	/Architectural elements	/Early Middle Age
Transenna		
Architrave (altar screen)		
Column fragment (capital, pilaster)		
Architectural element	Unknown	Antiquity/Late Antiquity /Early Middle Age

Type of features	Purpose	Datation
Grave	Funerary	Antiquity
Pottery kiln /Pottery kiln indication	Manufacture	Antiquity
Mosaic	Church decoration	Late Antiquity
Fortification wall	Defence	Late Antiquity /Early Middle Age
Defence moat		
Fortification tower		
Church	Sacral	Late Antiquity /Early Middle Age
Monastery		
Chapel		
House/palace	Residential	Middle Age
Architectural feature	Unknown	Antiquity/Late Antiquity /Early Middle Age

(TAQ) delineating a time span within which the event must have occurred. The temporal query will be conditioned by the predefined time slice with a specific duration. The resulting weighting defines the probability of a certain event occurring within a certain time slice within a known time span. Thus, the aoristic weight will be given as a ratio between the temporal resolution (time slice) and the time span of the event:<sup>19</sup>

$$t_{es} = \Delta / (TAQ_e - TPQ_e)$$

where  $t$  represents the aoristic weight,  $e$  represents the event,  $s$  represents the time slice under consideration, and  $\Delta$  represents the duration of the time slice.

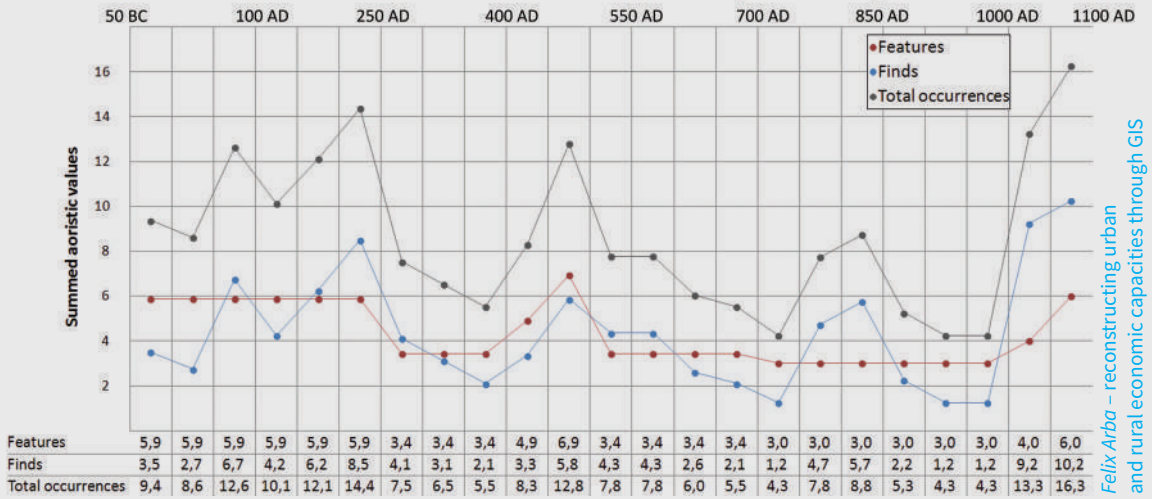
To apply aoristic analysis on the selected data, several assumptions had to be imposed on the archaeological record under examination:<sup>20</sup>

- construction time must be considered as a singular occurrence
- the construction event in question occurred only once which gives every event a value of 1.0 adjusted by the aoristic weight reflecting the probability of the event happening within a time slice
- construction events are considered as independent, i.e. it is assumed that one construction event would not stimulate another spatio-temporally correlated event
- the probability distribution of construction events throughout the examined time span is uniform
- time slices must be of equal duration for all queries
- the events with a time span shorter than the predetermined time slice have to be rounded up to the temporal resolution of the time slice.

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According to these hypotheses, the data (FIG. 3) were considered as presumed evidences of construction, craft or artistic activity: architectural remains such as residential, sacral or fortification architecture, manufacturing remains, stone inscriptions echoing construction events,<sup>21</sup> public or private sculptures reflecting adornment, and church sculptural elements and mosaics indicating decoration or redecoration of churches. Arguably, the progress of society might also be evaluated through the existence of sepulchral monuments or sepulchral remains indicating a certain expenditure and allocation of resources, though on a private and small-scale level. These activities might be seen as a result of increased economic capacities for such projects regardless of their scale or origin. The scope of the investments ranges from small scale to large scale while their origin might be seen in the public or private sphere. The act of completion of these projects can be seen as a temporally unique event be it a result of construction, craft or artistic activity.

Estimated number of construction events (50BC - 1100AD)



Felix Arba – reconstructing urban and rural economic capacities through GIS

FIGURE 4

Graph showing the accumulated aoristic values for architectural remains (red line) and stone finds (blue line) dated from Antiquity to the early Middle Ages. The total sum of all values (gray line) gives the number of probable construction events on the island.

The timeline and temporal weighting reflect the datation of the main diachronic periods and sub-periods on Kvarner: Antiquity (50BC-700AD), Roman period (50BC-250AD), Late Antiquity (250AD-700AD), Early Middle Ages (700AD-1100AD) (source: Rab GIS, Basemap: DGU; drawing by N. Šegvić).

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n. 19-21

The results (FIG. 4) give the temporal distribution of the events, based on probability weighting, while the area defined by the graph can be regarded as an indication of the magnitude<sup>22</sup> of construction events. Specifically, the graph indicates the probability of construction activity occurrences from Antiquity to early Medieval time on the island while the Y axis gives the sum of the construction events ascribed to a certain time slice given their probability of occurrence.

The following conclusions can be derived from the graph:

- the majority of features could have been dated only to broad time spans. Hence, the accumulated aoristic values generate a generally stable line
- stone finds (epigraphic and sculptural monuments) echoing a construction activity can be dated more precisely. Accordingly, the resulting accumulated aoristic values show greater variability over time
- increases in construction activity, judging from the architectural remains, can be observed in 5th c., henceforth P-2, and from 1000 AD onwards, henceforth P-4. The former increase can be considered as a peak in an otherwise stable probability of construction events
- P-2 is also evident in stone finds
- the aoristic values of stone finds show a substantial increase from 1000 to 1050 AD which continues onward on a smaller scale
- stone finds show two peaks in Antiquity: one in the first half of the 1st c. and the second from the first half of the 2nd c. to the first half of the 3rd c. As the time span shows an increase in relation to previous years, it will be referred to as P-1
- stone finds show an increase in second half of the 8th to the first half of the 9th c., henceforth referred to as P-3
- the aforementioned peaks are followed by decreases in the activities on the island

### Interpretations and inputs for future research

In an attempt to overcome the imperfections of the data collected through survey and written sources, we have exploited the advantages of GIS and the complex database developed for data recording and analysis. Apart from demonstrating economic potentials and time frames for the major construction waves in the town and on the island within the 1st millennium AD, we have shown how data lacking precise spatio-temporal attributes can still be useful for historical reconstruction.

Indirectly, these results offer a better understanding of certain problems tackled by previous scholarship and shortly outlined before. As the graph and maps show, the intense activity can be allocated to the first centuries

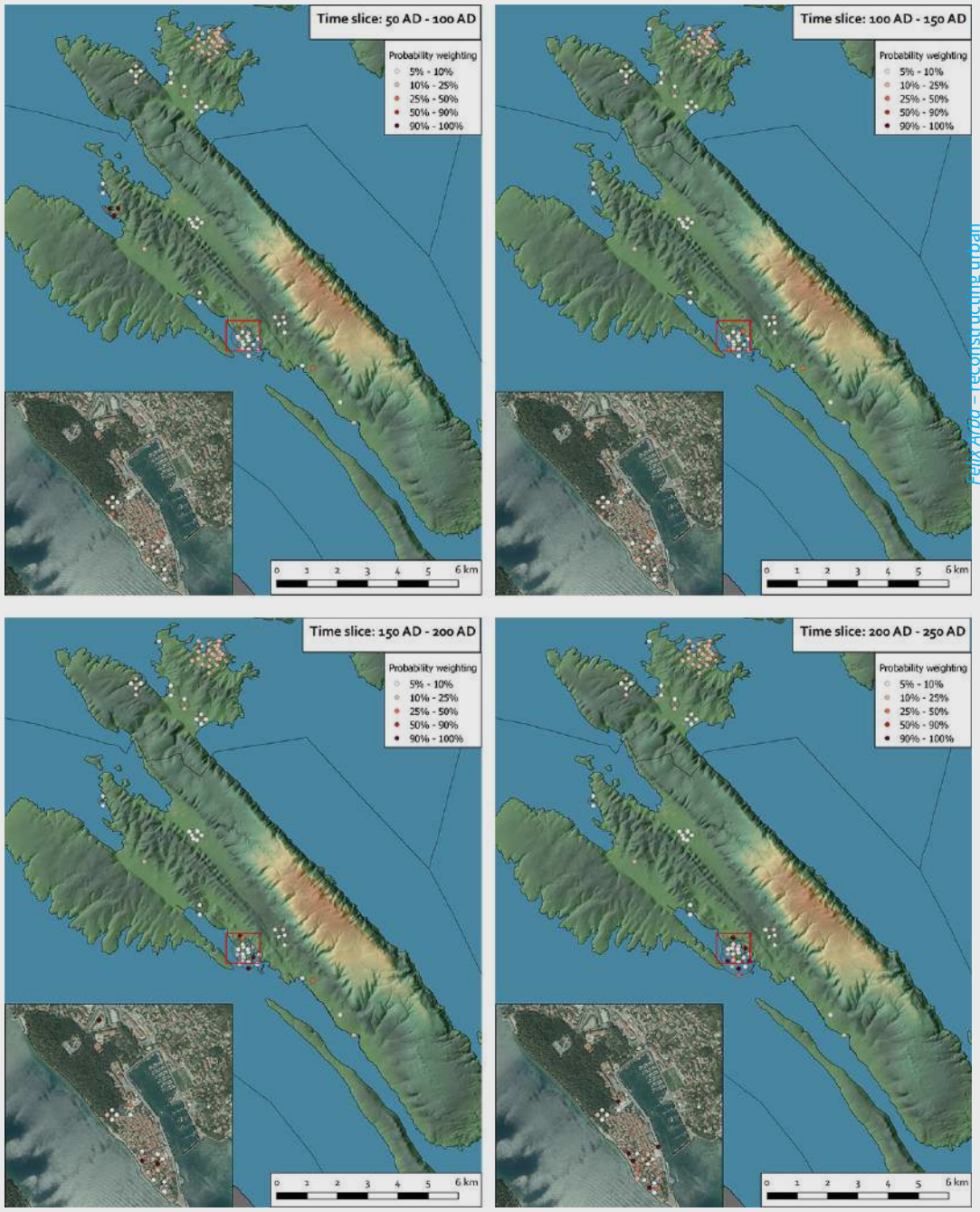
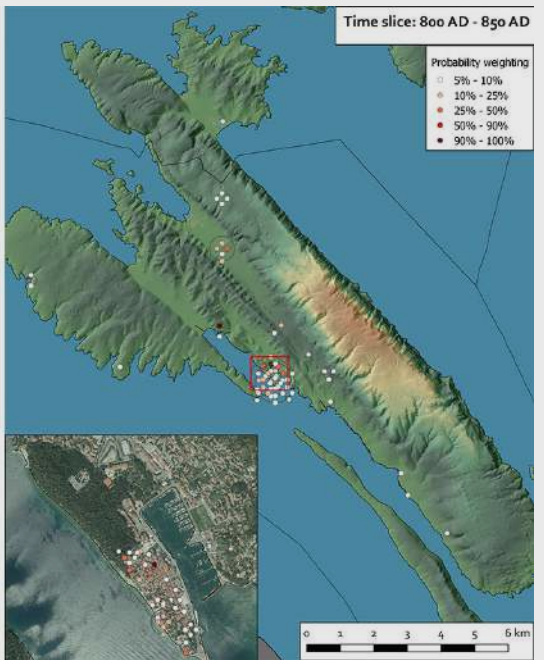
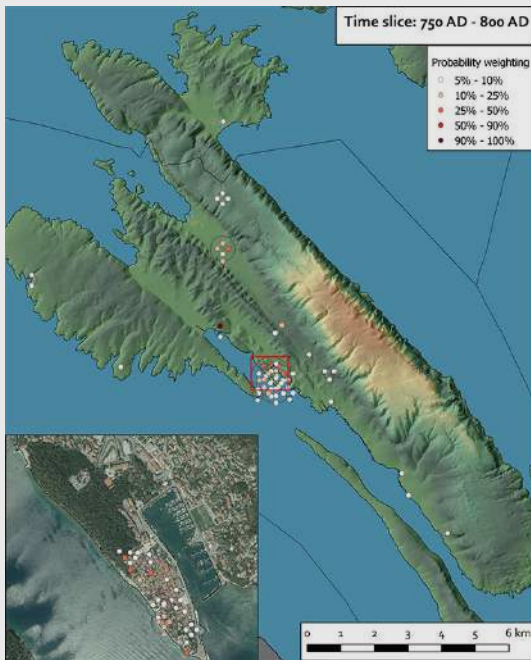
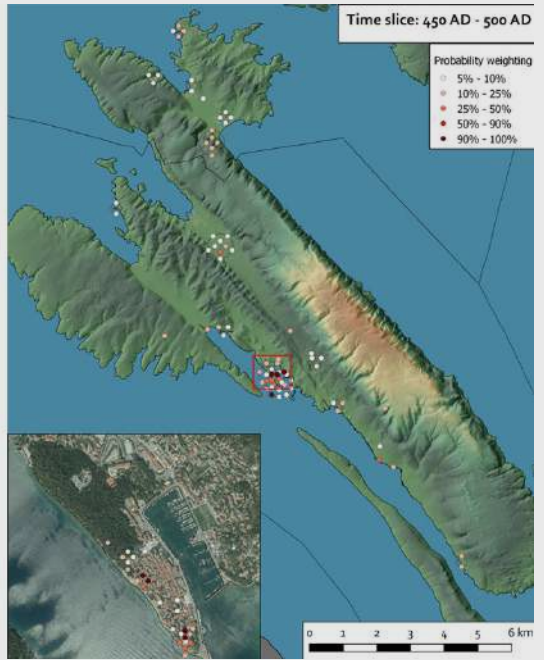


FIGURE 5  
 Spatial distribution of finds and features  
 reflecting P-1 in the graph on Fig. 5  
 (source: Rab GIS, Basemap: DGU;  
 drawing by N. Šegvić).





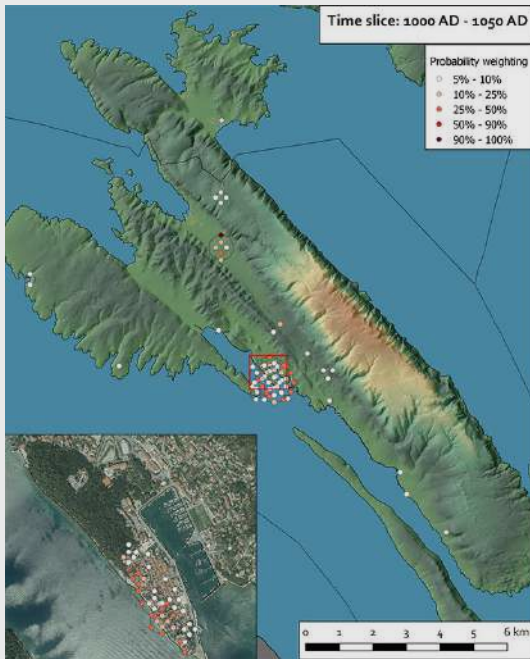


FIGURE 6  
Spatial distribution of finds and features reflecting P-2 in the graph on Fig. 5 (source: Rab GIS, Basemap: DGU; drawing by N. Šegvić).

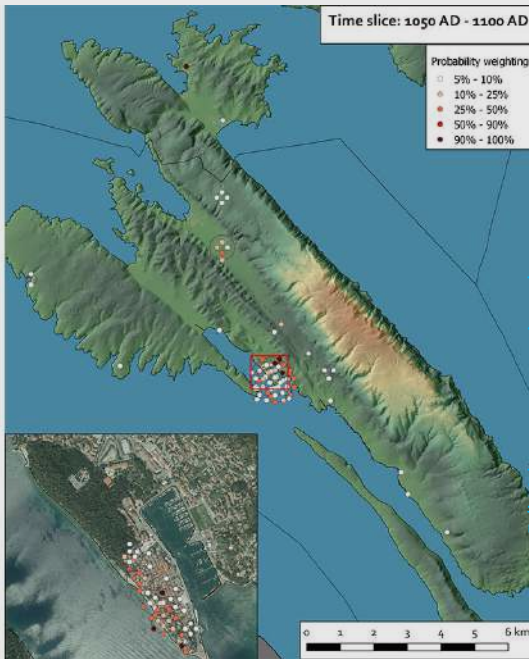


FIGURE 8  
Spatial distribution of finds and features reflecting P-4 in the graph on Fig. 5 (source: Rab GIS, Basemap: DGU; drawing by N. Šegvić).

FIGURE 7  
Spatial distribution of finds and features reflecting P-3 in the graph on Fig. 5 (source: Rab GIS, Basemap: DGU; drawing by N. Šegvić).

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AD (P-1, FIG. 5), mostly due to finds datable to this period. These are indicators of the shaping of the first urban reality on the island, and, while still ephemeral and spatially ambiguous, this analysis suggests conditions must have been favourable for construction, artistic or craft activity. Most notably, this activity, which had major repercussions within the town, where it peaks through a series of dedicatory monuments of Severan date,<sup>23</sup> affected rural locations on the island as well. A clear connection between rural and urban can now be traced on the basis of inscriptions pointing to Roman island's elite families<sup>24</sup> and as an indication of their wealth generated from the rural resources exploitation. In fact, survey data has shown a vibrant rural landscape in flysh fields, with surface finds of later-Roman datation, and rare stratigraphic data,<sup>25</sup> in all but one case,<sup>26</sup> indicating these notions.

The following centuries show a stable occupation of the previously located sites, with a new peak in Late Antiquity (P-2, FIG. 6), now given by a clearer combination of finds and features, parts of which are probably due to the erection of many sacral urban and rural complexes which are, for now, sole indicators of the island's economic capacity.<sup>27</sup> The following, early Medieval (P-3, FIG. 7) and Medieval peaks (P-4, FIG. 8) are again signs of intense sacral renovation.

On the urban level, no private or communal building activity can, so far, be linked to the early middle ages (biased by the lack of excavations), while the building activity on the island regains their previously level only in 11th-12th c. (again evidenced only in ecclesiastic buildings),<sup>28</sup> which agrees with the town's development as proposed by R. Ivančević.<sup>29</sup> The author, in fact, in his view of the development of Rab took into account a wider comparative approach, spanning the entire Adriatic, but having a close analogy at Osor and postulated an ever-changing urban tissue which could fluctuate following diverse societal needs, and ultimately displaying its economic possibilities. Rare finds seem to point in this direction as well; in this period, we can then imagine the limits between town and *suburbium* fade (burials in sarcophagi within town), while the urban tissue is shaped by new places of worship (the former Cathedral, St. John and perhaps the first church on the site of St. Justina,<sup>30</sup> are of early Christian foundations), emergence of empty spaces and different forms of residential architecture,<sup>31</sup> and with its defences being refitted to this new settlement pattern (segment of fortifications described by N. Budak<sup>32</sup>). It is on this, simplistically outlined Late Antique/early Medieval bases, and not those of the early Roman town, that Medieval Rab later developed.<sup>33</sup> This view can be further backed by the recent discoveries at *Fulfinum* (island of Krk), which demonstrate the change Late Antiquity brings to the urban composition through contraction and reclamation of urban spaces.<sup>34</sup> Such changes, supposedly having occurred

at Rab as well, bringing it closer to the wider Adriatic region, where this phenomenon has been widely identified and debated in all its nuances,<sup>35</sup> are yet to be confirmed through excavation. 329

The town is thus seen as an ever-evolving organism, deriving goods from the hinterland while also acting as a factor of coherence, providing the seat for municipal institutions, and later, ecclesiastic and communal ones, but also being the place of trade and the setting where the economic status of the island's inhabitants is jointly publicly displayed. Ultimately, it seems that the development observed within the town walls can be followed throughout the island, where rural sites evolve and change, following similar patterns to those traced in the urban reality. Here, we see rural sites and their mutual relations being transformed with the building of churches (some becoming monastic settlements at a later date?)<sup>36</sup> which become new meeting places,<sup>37</sup> and the emergence of new forms of settlement (e.g. short-lived fortified sites), drawing from the same sources of sustenance as before, while maintaining a firm connection to the *civitas*.<sup>38</sup> It is this combination of rural and urban, that allowed *Arba* to bear the name of *Felix* and, later, to develop in a Medieval town inserted in the wider Mediterranean commercial network laid out by Venice.<sup>39</sup>

Lastly, since the discussion is based on the state of the Rab GIS as concluded by March 2017, the results are yet too sensitive to few precisely dated material as a result of lack of excavations. Thus, the trend lines reflect the scarce temporal knowledge which is yet far from proving general temporal activity patterns on the island. However, it does suggest the general direction in which research can be guided, confirming or rejecting these hypotheses. Introducing new, precisely dated evidence would likely increase the robustness of the model and, consequently, the understandings of the island's diachronic processes.

Without the pretence to answer persisting questions in a definitive and irrefutable manner, we hope to have shown how GIS can help us tackle not only spatial, but also temporal questions within the evolution of an urban reality, correlating it with its hinterland, seen as the source of its wealth, means of sustenance and other resources needed for it to thrive.

## Notes

- \* This paper stems from the work carried out within the framework of the project *RED - Roman economy in Dalmatia: production, distribution and demand in the light of pottery workshops* (HRZZ, IP-11-2013-3973). The authors would like to thank all the colleagues working on Rab for sharing experiences and information, as well as for the possibility to visit their excavations.
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  - 6 Paul Longley et al. *Geographic Information Systems and Science* (New York: Wiley, 2005), 39.
  - 7 As proposed for e.g. by Enrico Cirelli, "Applicazioni GIS all'archeologia urbana: il caso di Ravenna," *Archeologia e calcolatori* 27 (2016): 244.
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# Visualising urban social change, Bruges 1300–1700\*

Heidi Deneweth  
Ward Leloup  
Mathijs Speecke

Around 1550, Hadrianus Marius from Malines admired the rich and elaborate appearance of private dwellings in Bruges.<sup>1</sup> Only forty years later, Zeghere van Male, a former councillor of Bruges, bewailed how in this same city, many people had left their houses or converted them into gardens, since mortgages had become very high and repairs were unaffordable.<sup>2</sup> The contrasting depictions of the houses by these two writers is striking but could be attributed to the very different times in which they wrote: before and after the economic and demographic crisis of the 1580s.

Starting from the concept that everyone chooses housing according to his means or status, the evolution of housing and the resulting social topography can serve as excellent indicators of social change. In this contribution, we will investigate the relationship between economic development and social change, and how these factors shaped the social topography of Bruges between 1380 and 1670. In the late medieval period, Bruges was the main commercial gateway and the prime financial centre of North-western Europe and an important centre for cloth production. The sixteenth-century rise of Antwerp, which took over Bruges' leading role in trade and finance, encouraged the latter to reconvert its economy. Bruges remained an important regional centre throughout the early modern period, but the composition of its population changed over time. Whereas many socio-topographical studies focus on urban expansion and resulting residential patterns, studies of intra-urban transformations are rare. Bruges provides an excellent case study for exposing transformations driven by economic reconversion and social change.

Visualising urban social change is quite a challenge, especially when dealing with the late medieval and early modern periods. Given the lack of extensive, comparable sources and accurate maps, researchers face an additional challenge when trying to visualise and explain social and urban transformations from a longitudinal perspective. For this purpose, we used fiscal sources (taxes on the rental values of houses) for three benchmark years: 1382, 1583 and 1667. These sources provide data on the number of housing units, their use (owners or tenants) and their rental values. Historical GIS helps to explore the spatial dimension of these data and to visualise the impacts of profound economic change in the urban tissue from a longitudinal perspective. The added value of GIS is that it establishes the co-existence of diverging patterns and evolutions on the meso- and micro-levels and therefore leads to a better understanding of urban history.<sup>3</sup> Following a short survey of some trends in the historiography of social stratification and topography, we present our specific case study, including sources and methodology. Finally, we present key results and conclude with some points of discussion.

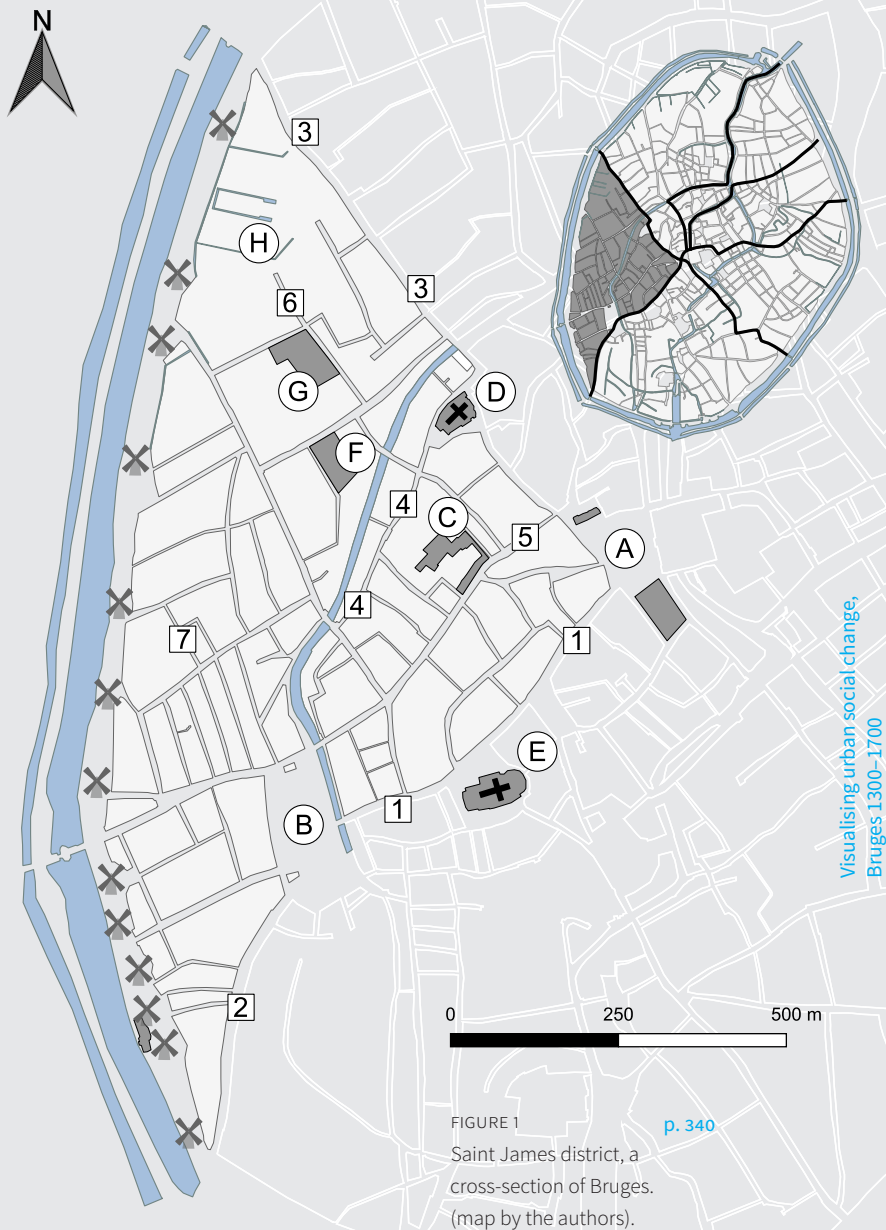
## Social structure and social topography

Social structure and social change have fuelled historiographical debates from the 1970s onwards.<sup>4</sup> Since Herlihy's study of the Florentine *catasto* of 1427 (Italy) and Boone, Reusens and Dumon's work on late medieval Ghent (Southern Netherlands), fiscal sources (housing taxes) have been used to reconstruct urban social stratification.<sup>5</sup> Housing can serve as a proxy for social structure since every household, whether an owner or tenant, is believed to have lived according to its financial means and status.<sup>6</sup> Therefore, housing values are very useful to position all urban households in relative order. They are, however, no indicators for absolute wealth levels; for housing, similar to Engel's law for food, it has been established that the percentage of a household budget spent on it is inversely proportional to household income. This is the closest we can get to a reconstruction of urban social stratification and its topographical dimension.<sup>7</sup>

Social topography has attracted much attention since Gideon Sjoberg described pre-industrial cities as highly segregated spaces, with luxurious dwellings for the elites in the city centre and small, flimsily constructed hovels for the outcasts on the city's fringes. Furthermore, according to Sjoberg, fundamental change in urban society and urban social topography was only brought about by the Industrial Revolution.<sup>8</sup> Nowadays, urban historians reject this highly-polarized and static model, as empirical studies of early modern cities have revealed a more dynamic and diversified social topography.<sup>9</sup> The *spatial turn* in history, and new tools such as GIS, have redirected attention from analyses at the macro level (the entire city) to meso- and micro-levels (respectively, neighbourhoods and individual plots or houses).<sup>10</sup> While pre-industrial cities may indeed have had wealthier centres and poorer fringes, most districts and even single building blocks housed a mixture of different social groups. Moreover, most diachronic comparisons of social topography in Low Countries' cities focus on changes from early modern to modern times. Our focus is on the transition from medieval to early modern times, and how the changing social topography of Bruges reflected the economic and demographic change.

## Bruges' economy and population

By the Late Middle Ages, Bruges was the undisputed commercial gateway to and the prime financial centre of North-western Europe, and an important production centre for high-quality cloth that was exported all over Europe. Around 1350, the city housed an estimated 57,000 inhabitants, many of whom were immigrant textile workers.<sup>11</sup> Around 1500, however, Bruges' economy was hit on two fronts. First, the city lost its prime position as a commercial gateway, overtaken by Antwerp, which was better positioned with regard to the shifting international trade routes. Gradually, Bruges lost its international standing and refocused on its function as a regional



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FIGURE 1  
Saint James district, a  
cross-section of Bruges.  
(map by the authors).

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- A.** Market,
- B.** Zand Square,
- C.** Prinsenhof,
- D.** Saint James church,

- E.** Saint Saviour church,
- F.** Cloister of the Franciscan nuns (from ca. 1450),

- G.** Cloister of the Maricolen nuns (from 1667),
- H.** Cattevoorde,

- 1.** Steenstraat/  
Zuidzandstraat,
- 2.** Boeveriestraat,
- 3.** Ezelstraat,
- 4.** Moerstraat,

- 5.** Geldmunstraat,
- 6.** Raamstraat,
- 7.** Tweede Sint-Jansstraatje.

trading centre. Second, by 1500, the city's exports of luxury cloth were declining due to foreign and domestic competition. A reorganised textile industry, producing lighter fabrics, regained sufficient market share, but this happened at the expense of employment in the preparatory and finishing sectors. A compensatory trend was growth in the production of luxury commodities such as arts and crafts, and fashion, for the increasingly important domestic consumption market.<sup>12</sup>

The crisis around 1500, exacerbated by the revolt against Maximilian of Austria, caused the already declining population to drop from 40,000 to 30,000 inhabitants, a loss of 25%. A similar situation occurred at the end of the sixteenth century when the combination of political change and economic crisis resulted in the emigration of a third of the population: a fall from 38,000 to 25,000 inhabitants. By 1670, reconversion of the economy made the city attractive to new migrants, and the population recovered to 33,000 inhabitants.<sup>13</sup>

Topographically, the city can be subdivided between the old inner city, an area of 75 hectares demarcated by the first urban ramparts dating back to 1128, and the thirteenth-century urban extension. The second ramparts of 1297–1300 encompassed a zone of 430 hectares, including the old city centre and the former suburban area where housing initially spread along the main entrance roads, and industrial zones filled the empty spaces in between. Although noble residences and religious convents were located in this area as well, the majority of the inhabitants belonged to the middling and lower social groups.<sup>14</sup>

In this contribution, we will focus on the district of Saint James (*Sint-Jakobszestendeel*), one of the six administrative sections of Bruges (FIG. 1). Each district runs from the Market to the second ramparts and includes higher status zones in the old city centre, commercial zones along the main entrance roads and lower status and industrial zones in the urban periphery. Our study draws on fiscal and topographical data for medieval Bruges that have not been published before.

#### Sources

The selection of Saint James was a pragmatic choice in the light of the available sources: a unique, late fourteenth-century tax register on a cadastral basis has survived for this district.<sup>15</sup> In December 1382, following the defeat of rebellion, the city government imposed a housing tax to raise money to protect against future attacks. The register in question contains the names of taxpayers, both house owners and tenants, living in Saint James. These individuals are listed street-by-street and house-by-house with the tax amount due. Although the source itself does not mention the tax rate, it is safe to assume that the amounts paid by the individuals

reflect the (rental) value of the property.<sup>16</sup> For example, in 1382, linen weaver Willem Rogier paid 12 groats for a house in the *Raamstraat*, which we know was a small house with a thatched roof. It was indeed a rather modest sum compared to the overall median of 18 groats.<sup>17</sup> This stands in stark contrast to the highest-taxed house in this district, located in the *Steenstraat* near the Market, for which tenant Jan Calf paid a tax of no less than 612 groats. At the lower end of the spectrum are the houses described as *cameren*, cheap single-room rentals, with correspondingly low tax values of 6 groats on average.

Between 1569 and 1585, taxes on rental values were levied all over the Spanish Netherlands as local contributions for the Spanish wars.<sup>18</sup> These taxes disappeared after the reconciliation with Spain (1585) but reappeared as annual urban taxes in the 1630s and continued to exist until the end of the eighteenth century. The benchmarks of 1583 and 1667 were selected to represent the early modern period since rental values were readjusted to real market prices in these years only. In addition to having actual rental values, the registers offer full information on location, owners and tenants, and on housing typology (dwellings versus buildings with economic, social, public or religious functions).

Administrative documents and byelaws explicitly state that rental values were defined as the interest rate on the capital value of the house (or land): in the late sixteenth century, this was set at 6.25%, and for the 1670s at 5%.<sup>19</sup> Owner-occupants had to submit a recent sales contract that mentioned the price of the house. In 1583 and 1667, tax farmers and real estate agents readjusted old prices to current market prices or corrected them according to the physical condition of the house. Tenants, in contrast, were asked to submit the rental price. Annual rents already equalled the interest rate on the capital value of the house and reflected actual market prices and the condition of the house more closely. Still, real estate agents downsized or upsized some rental prices as well.<sup>20</sup> Although the exact tax rates and thus rental values cannot be determined for 1382, and they differed for 1583 and 1667, this poses no problems for the comparison, since all houses can be positioned in a relative order to each other within each benchmark year. Housing taxes were deemed fair taxes since every household paid according to its status. In practice, however, there was a social correction for poor tenants. In the case of cheap housing, it was almost always the owner who paid the taxes; for middle-class and elite housing the taxes were either paid by the tenant or by both parties together. Sometimes the names of owners or tenants were omitted, depending on who paid the tax. Still, the information in the registers was formulated in such a way that we could deduce whether it concerned an owner-occupied property or a leased house.



Since we want to reconstruct the distribution of housing values and residential patterns mirroring the social topography of Bruges, we omitted all buildings with an exclusively public, religious, economic or social function (e.g. hospitals or social dwellings for the elderly).<sup>21</sup> Also, we split all joint entries into single dwellings. For instance, in 1583, the widow of Jan van Scardenburg owned two clusters of 8 and 11 *cameren* at both sides of the *Tweede Sint-Jansstraatje*, for which she paid 1,200 and 2,200 groats. Each house was entered separately into the database, and the rental values were recalculated accordingly, resulting in 150 and 200 groats per house, respectively.<sup>22</sup>

## Methodology

The data derived from the tax registers were spatially visualised in a GIS-environment (QGIS).<sup>23</sup> An initial difficulty we confronted was the lack of accurate maps for the investigated periods. Thus, a first step was to reconstruct the late medieval and early modern urban landscapes of Bruges. Starting from georectified cadastral maps (the *Primitive Plan* of 1835 and the plan by Christian Popp of 1865), the most important topographical elements (streets, housing blocks and waterways) were vectorized and modified to the sixteenth-century situation by comparing plot structures with the situation depicted in three sixteenth-century maps, i.e. the detailed bird's-eye view by Marcus Gerards (1562), the street plan by Jacob van Deventer (1561) and the so-called *Oldest Painted Plan of Bruges* (circa 1550). This base map was further updated for each of our three benchmark periods by integrating into it geographical information from primary sources and secondary literature.<sup>24</sup>

Next, fiscal data for 1382, 1583 and 1667 were linked to these reconstructed maps. One of the main difficulties we encountered had to do with the level of geographical detail. While the 1583 and 1667 documents are very precise in describing the tax collectors' routes through the city, allowing for virtually every building to be located precisely, the tax register of 1382 was far less detailed in its "textual cartography".<sup>25</sup> For example, the north side of the *Steenstraat* and *Zuidzandstraat*, connecting the central market place with the *Zand* Square, consisted of seven housing blocks. Each of these seven sections is described separately in the 1583 and 1667 registers. The 1382 register, however, only mentions the street name and the direction of the thoroughfare, while neglecting the seven subdivisions. Thus, crucial information needed to differentiate properties was sometimes absent. Furthermore, some (by)streets and alleys were not mentioned at all in 1382, leaving us to question whether these even existed at that point or whether they were covered in the tax register under the heading of a larger nearby street or area. In total the district of Saint James could be

subdivided into 67 geographical entities for 1382. For 1583 and 1667 we could distinguish 205 and 175 block faces with dwellings, respectively. It goes without saying that these distortions affect the level of accuracy; the 1382 reconstruction shows larger geographical entities than the 1583 and 1667 reconstructions. Yet empirical research on early modern towns has shown that social segregation primarily occurred *between* streets (“around the corner”) and less so within streets.<sup>26</sup> As the geographic entities for 1382 mostly represent streets or street sides, they suffice for the purposes of visualising and comparing general patterns in the urban topography.

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On a macro level, a first observation is a pronounced decline in the housing stock in this district over time, as indicated in [TABLE 1](#). The number of houses dropped from 2,208 in 1382 to 1,694 in 1583 (-23%); by 1667 it had further declined to just 1,469 houses (-13%). This evolution is in line with the general demographic trend in Bruges.

**General trends in urban change in the Saint James district**

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We cannot compare the change in rental values between 1382 and 1583, since rental value data are lacking in the registers of 1382, but are available for 1583 and 1667. Between 1583 and 1667, median housing prices increased by a factor 3.5. Between each benchmark year, the coefficient of variation, indicating the dispersion of the frequency distribution, diminished from 1.55 to 0.98 and then to 0.87. Although housing prices increased over time, the inequality in housing conditions diminished considerably. The period between 1382 and 1500 has often been considered the “golden age” of wage labour, a period in which labourers earned substantially higher real wages than before, and it is in line with expectations that inequality would have diminished.<sup>27</sup> On the other hand, it can be assumed that part of the wealthy elite left Bruges after it lost its commercial dominance. Existing upper-class residences did not disappear from the urban landscape, but diminishing demand for this housing category had a negative impact on prices during the early modern period.<sup>28</sup> The evolution between 1583 and 1667, in contrast, is counterintuitive. Housing prices more than tripled and the coefficient of variation declined in a period characterised by high social polarisation. We will come back to that later on.

Since inequality tends to stress the extremes, let us first have a look at the distribution in housing classes. For this, we classified our data for each period in quintiles, from I to V, with quintile I grouping 20% of houses with the lowest tax or rental values, and quintile V the 20% with the highest values. Regarding the distribution of the total tax values over these classes ([TAB. 2](#)), it is apparent that the property market in Saint James was remarkably polarised in 1382 compared to the later periods. The total contribution of the 20% most expensive houses (Q5) declined strongly between 1382 and

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1583, whereas that of cheaper (Q1) and middle-class housing (Q2 and Q3) increased. To get a better understanding of this evolution, we will now turn to a spatial analysis of our data.

For each of our benchmark years, we calculated the median tax/rental values for all the geographical entities and classified these entities according to the quintiles we discerned earlier. The maps presenting this (FIG. 2) reveal that the late fourteenth-century polarisation of the real estate market was accompanied by a spatial segregation very similar to the model described by Sjöberg. The houses within the first city walls were clearly of a higher standing than those in the adjacent suburbs. Notable exceptions were the entrance roads leading from the town gates to the centre, where houses had higher values than those in the intermediate zones. Eighty years after the construction of the second ramparts, the built space still reflected the spontaneous expansion of the city along these entrance roads and the thirteenth-century settlement of poor migrant labourers in the industrial suburbs.<sup>29</sup> Housing patterns adapted but slowly to the changing conditions. By 1583, this segregation had become less extreme. Although the former distinction between the city centre and suburbs is still visible, both zones show a more mixed layout in which middle-class housing became more dominant. These trends continue up to 1667, with the former distinction between different zones becoming even less pronounced. Part of this evolution can be explained by the gradual fading away of the sharp distinction between the old city centre, protected by the first ramparts, and the former suburbs. Since the second ramparts now protected the entire area, wealthy families acquired land to construct new residences with large gardens. The entrance roads gradually developed into commercial streets where the convenient location resulted in higher prices. Another factor was the economic reconversion of Bruges. Since employment in the low-wage textile sector dropped by half in the Late Middle Ages, Bruges was less attractive for low-skilled migrants.<sup>30</sup> Although more research is required to confirm this, we assume that parts of the former (slum) neighbourhoods of arrival, all situated on the urban fringes, were either demolished or the housing there was upgraded. In addition, the city's more diversified economy, with a stronger focus on luxury products, and the so-called "golden age" of labour between 1350 and 1500, must have resulted in a demand for better quality housing.

We should not assume, however, that rising housing values and diminishing inequality in housing conditions meant upward social mobility for lower and middling households generally. While many households in the early modern period lived in better quality and more expensive housing than before, tenancy rates increased, suggesting more people could not afford

	1382	Evolution	1583	Evolution	1667
Number of houses	<b>2,208</b>	-23%	<b>1,694</b>	-13%	<b>1,469</b>
Median value	<b>18</b>		<b>480</b>	*3.5	<b>1,680</b>
Average value	36.59		756.52	*3.28	2,481.34
Standard deviation	56.66		744.06	*2.89	2,151.89
Coefficient of variation	<b>1.55</b>	-36.48%	<b>0.98</b>	-11.83%	<b>0.87</b>

TABLE 1

Evolution of houses and taxes (1382) and rental values (1583-1667) (in groot Flemish).

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	1382	1583	1667
<b>Q1</b>	2%	5%	5%
<b>Q2</b>	4%	8%	8%
<b>Q3</b>	9%	13%	14%
<b>Q4</b>	20%	22%	23%
<b>Q5</b>	64%	51%	49%
top 10%	46%	33%	31%
top 5%	32%	20%	18%
top 1%	11%	6%	4%

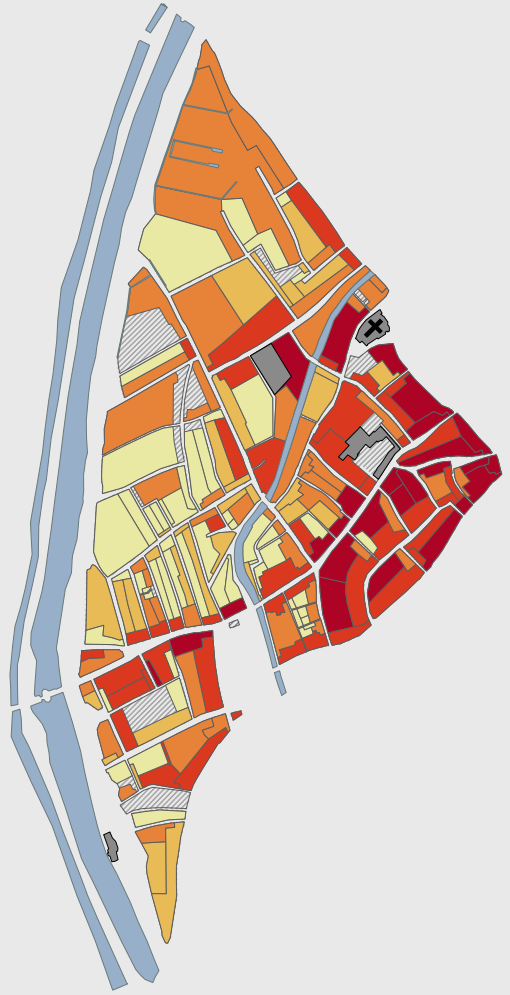
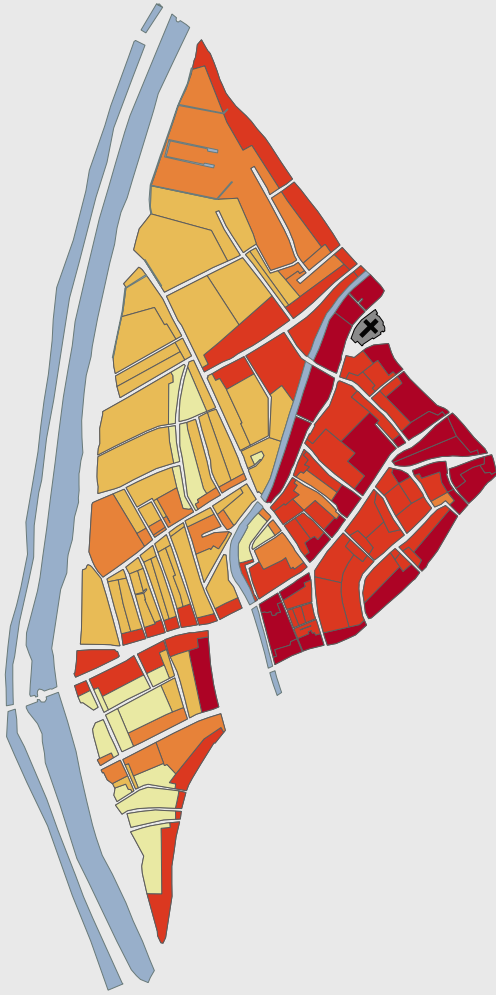
TABLE 2

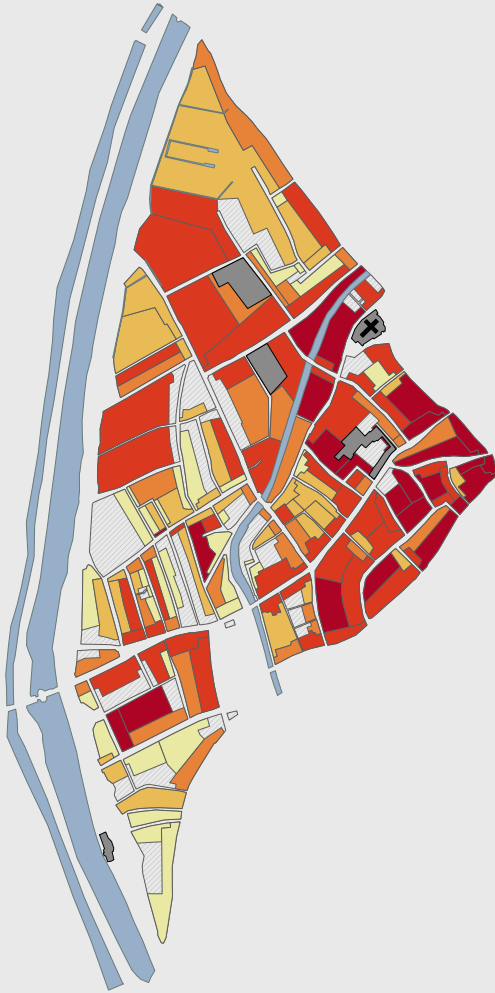
Percentage of total tax value per quintile.

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1382

1583





## Legend

quintiles

Q1

Q2

Q3

Q4

Q5

no private housing

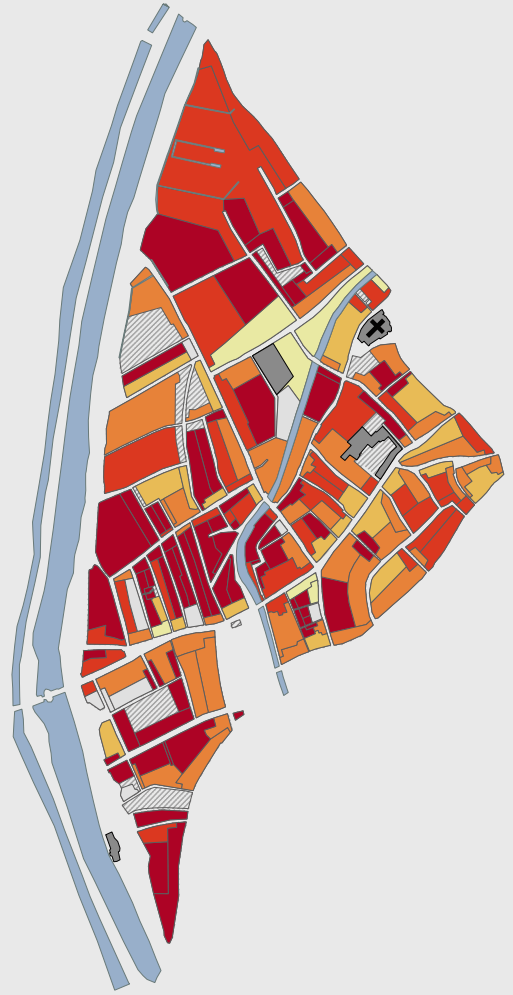
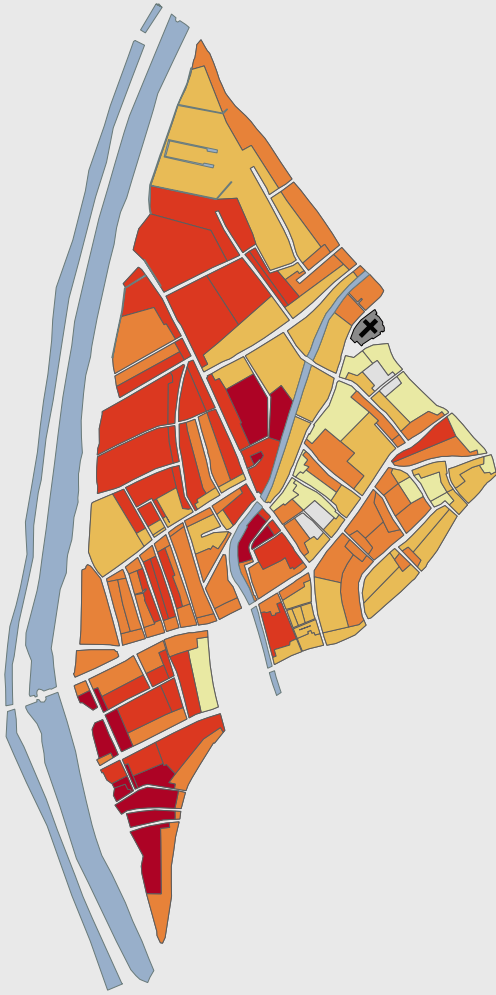
FIGURE 2

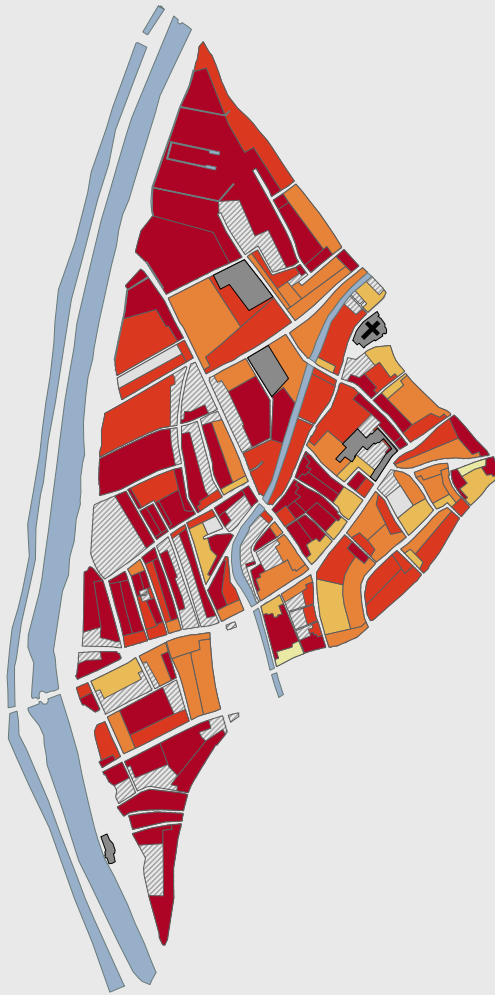
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Median housing values on the level of street (side) [1382] / block face [1583 and 1667] (map by the authors).

1382

1583





## Legend

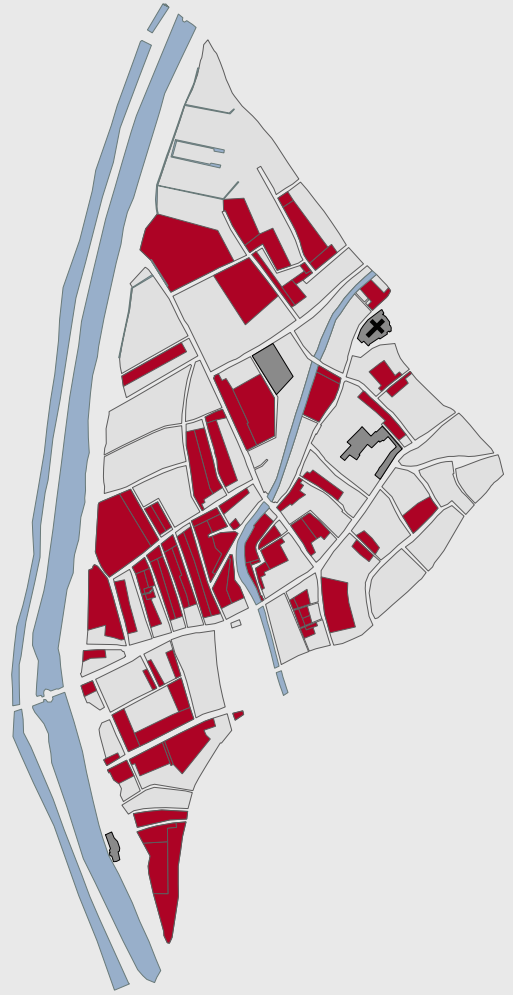
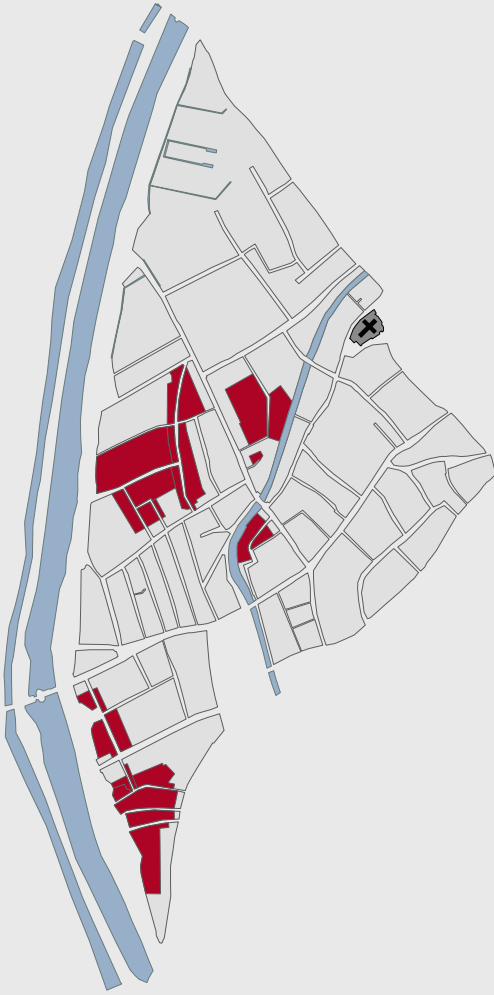
- % rental housing
- no rental housing
  - 1-20
  - 21-40
  - 41-60
  - 61-80
  - 81-100
  - no private housing

FIGURE 3  
Share of rental housing  
(%) per street (side)  
[1382] / block face  
[1583 and 1667]  
(map by the authors).



1382

1583



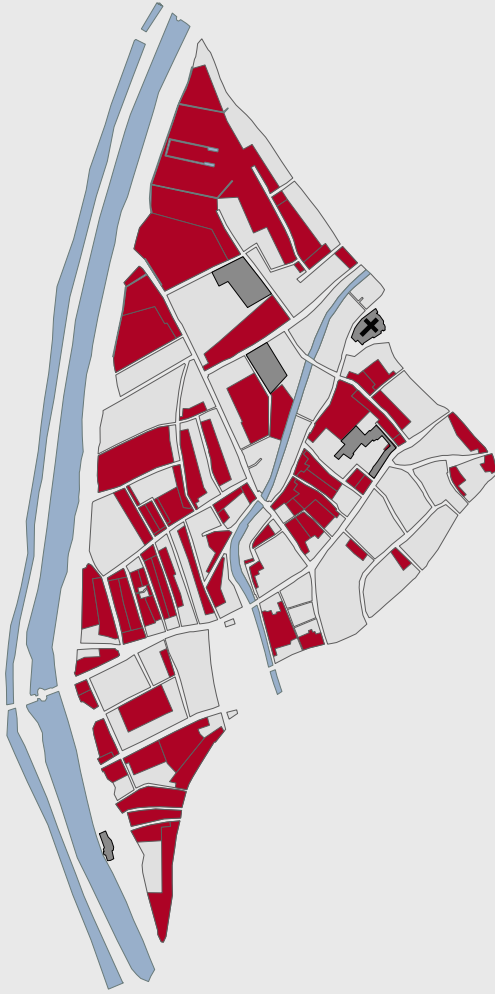


FIGURE 4  
 Street(sides) [1382]  
 / block faces  
 [1583 and 1667]  
 with more than 75%  
 rental housing  
 (map by the authors).

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to own a house anymore.<sup>31</sup> The share of rented houses was 56% in 1382; this rose to 66% in 1583 and a staggering 73% in 1667.

Figure 3 shows the percentage of tenants for each street side. Not surprisingly, the overall picture is the inverse of the maps of rental values. Most tenants lived in areas with low rental values. Moreover, from the late fourteenth to the second half of the seventeenth centuries, tenants continued to be concentrated outside the city centre. Yet, some particular developments across time are also clearly visible. While in 1382, the share of tenants in a street rarely exceeded 75%, by the end of the sixteenth century a major shift had occurred, and many areas both within and outside the first ramparts were “tenant only” (FIG. 4). This pattern seems to continue up to 1667. On the other hand, the share of “tenant-free” streets dropped significantly between 1382 and 1667, notably the area alongside the central market square and the *Moerstraat*.

The impact of rent on household budgets cannot be underestimated. After the prosperous decades under Burgundian rule, sticky wages and high inflation in sixteenth-century Bruges diminished the purchasing power of labourers by 75%. At the same time, many households belonging to the middling groups became highly indebted, sold their houses and became tenants themselves. High rents diminished the savings capacity of these households even further.<sup>32</sup> Moreover, as Hanus rightfully stressed, property ownership was essential for upward social mobility.<sup>33</sup> Real estate could be used as collateral for long-term loans with a high capital value, whereas tenants had no such opportunities and were less able to invest in their businesses. Another important factor from the seventeenth century onwards was speculation in the housing market. After the demographic crisis of the late sixteenth century, owners demolished old rentals on the urban fringes and joined existing houses in better-situated locations to make larger units. The adapted supply of housing resulted in higher rental prices again. Also, wealthy merchant families and entrepreneurs invested in real estate, driving up housing prices.<sup>34</sup>

**Specific trends at the neighbourhood level: number and values of houses**

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The most important added value of GIS is that it enables the detection of specific, and sometimes divergent, trends within a larger district. We examined change in four zones in the study neighbourhood over time (FIG. 5). For this purpose, we combined the maps of rental values (FIG. 2) with the maps that visualise the evolving number of houses per street side (FIG. 6). Considering the inner-city commercial zone (FIG. 5, I) between the Market and *Zand Square*, *Steenstraat* and *Zuidzandstraat*, which linked the squares, had very high rental values in 1382. Its direct connection to the roads leading to Ostend, Courtrai and Ghent made this street an excellent commercial

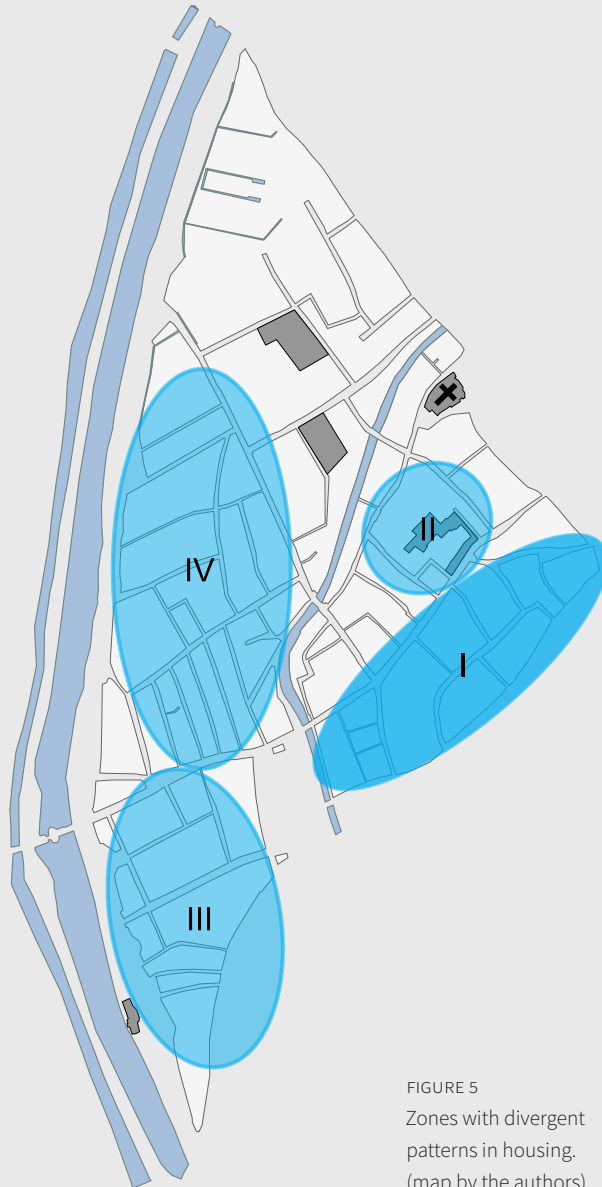
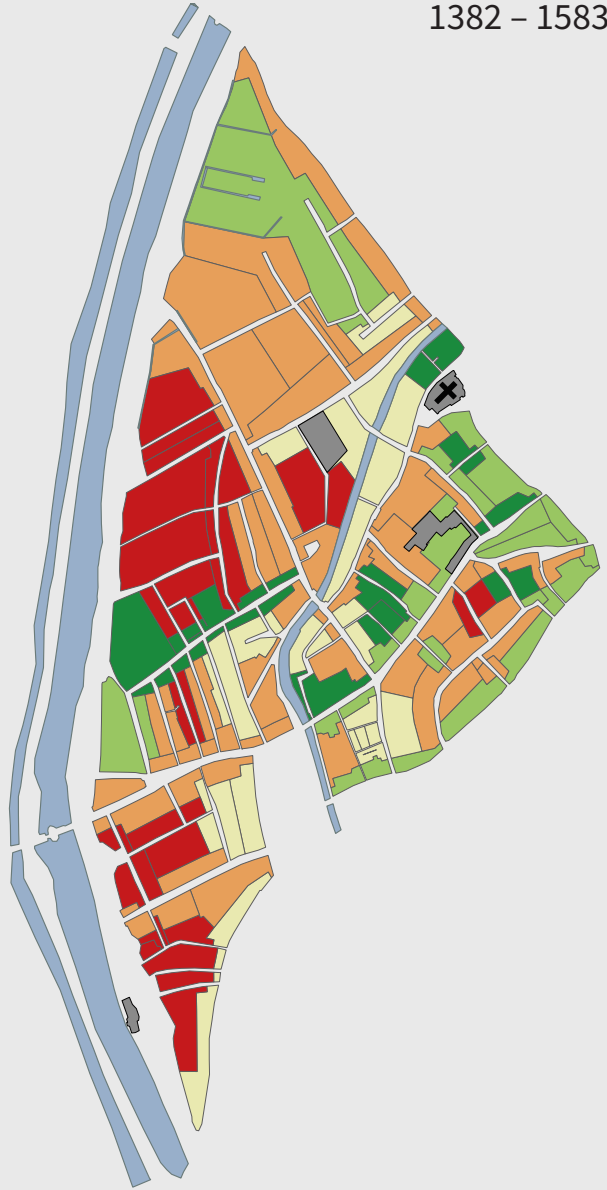


FIGURE 5  
Zones with divergent  
patterns in housing.  
(map by the authors).

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- I.** commercial zone between Market and Zand Square;
- II.** Prinsenhof;
- III.** Boeverie textile area;
- IV.** textile area near Cattevoorde.



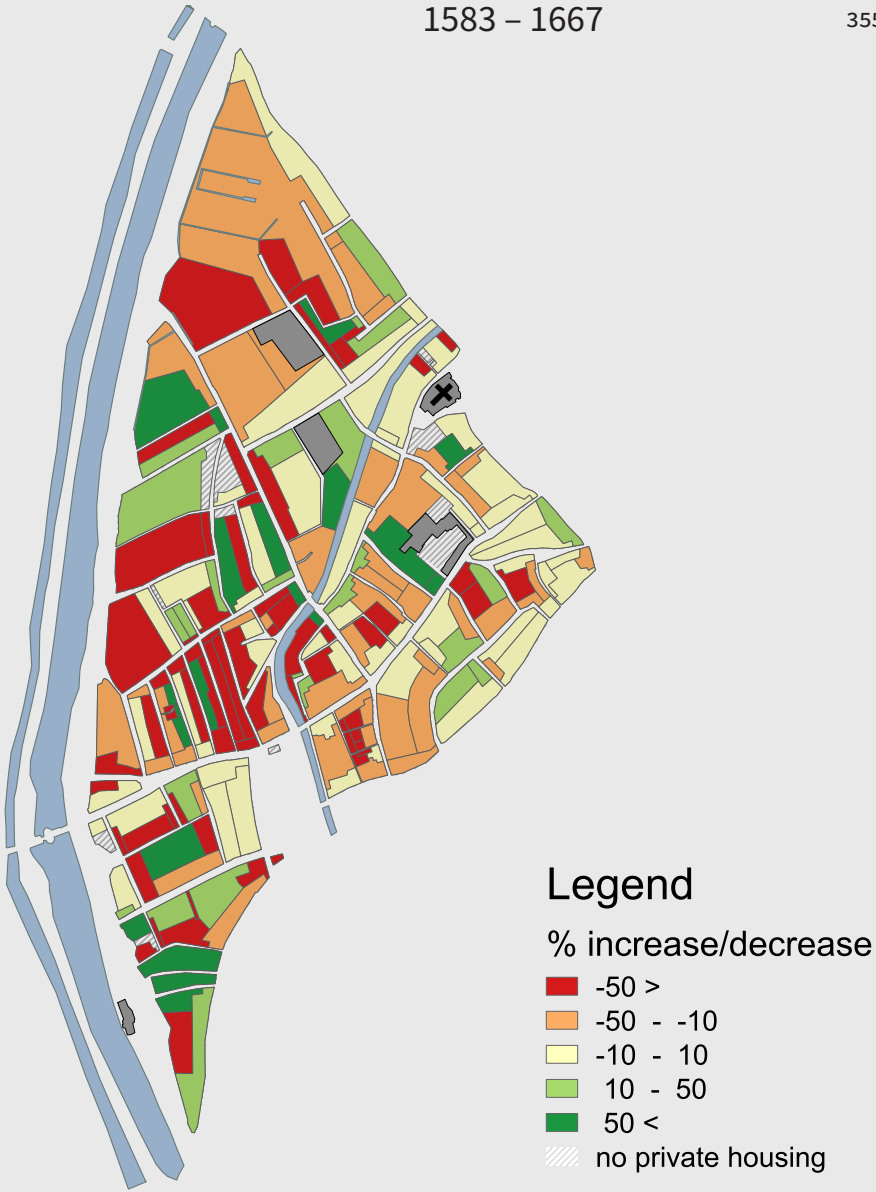


FIGURE 6

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Evolution of the number of houses (%) per street (side) [1382-1583] / block face [1583-1667] (map by the authors).

location. When Bruges lost its gateway function to Antwerp and reoriented its economy toward local and regional trade, Saint James' inner city area gained in importance. Existing houses along this street were split up to meet the demand for commercial locations. Prices of individual units remained high, but the median value declined as an effect of split properties.

In 1382, very high rental values were found in the zone surrounding the *Prinsenhof* as well (FIG. 5, II). Count Guy of Dampierre ordered the construction of a new residence north of the *Geldmuntstraat* in the 1290s, which must have led to the gentrification of the area from this early date. In 1384, Philip the Bold, duke of Burgundy, started building the new *Prinsenhof* that would dominate this neighbourhood for two centuries to come. After 1500, the Habsburg princes only occasionally inhabited the residence and eventually abandoned it in 1576. By then, the surrounding area had lost its appeal to the local elites, hence the middle-class rental values. In 1649, entrepreneur Rogier de Ghelder redeveloped the former *Prinsenhof*. One house became the new residence of the mayor of Bruges; others were destined for the upper middle classes. Remarkably, this was the only private development project of some consequence in seventeenth-century Bruges.<sup>35</sup>

In the suburban part of Saint James, there are two notable, and contrasting patterns. By 1382, houses on the main entrance roads had relatively high rental values, whereas those elsewhere were extremely cheap. Confiscation registers document this disparity very well. The aforementioned linen weaver Willem Rogier paid 12 groats for a house with thatched roof on a secondary street. The house of his fellow rebel, weaver Clays van den Boongaerde, was not much better since it was described as "miserable".<sup>36</sup> Nevertheless, he paid 6 groats more than Willem Rogier. This was probably because Clays lived in the *Ezelstraat*, one of the thoroughfares connecting the city centre with the countryside, confirming the impact of location on house values.<sup>37</sup>

Comparing the values of houses in 1382, 1583 and 1667, it is remarkable that the initial contrast between the entrance roads and peripheral blocks gradually disappeared. It was mainly due to the structural shift in the textile industry, which caused unemployment and emigration among textile workers until the sixteenth century. Zones III and IV (FIG. 5) were textile areas in 1382, near the tenter-fields of *Cattevoorde* in the north and the *Boeveriestraat* in the south. By 1583, the former occupied a much smaller area than before, and the latter was abandoned. The number of textile workers living here had declined considerably, and many cheap rentals in these former neighbourhoods of arrival were demolished, which explains the sharp decline in number of houses there. During the seventeenth century, immigration by lower-skilled linen workers pushed up demand

for rental housing again. The tax registers of 1667 mention the construction of several new houses in zones III and IV. 357

In this contribution, we have explored the use of a GIS, drawing on pre-industrial cadastral sources, to shed new light on the interplay of economic development, social change and social topography, and this from a *longue durée* point of view. First, a GIS allowed us to reconstruct the layout of sixteenth-century Bruges, and its dynamic functionality made it possible to reproduce and adjust this base-map for different points in time. Second, this technology not only illuminates some distinct geographic patterns hidden in the rather monotonous lists of names and numbers in the tax registers, it also allowed us to explore and visualise spatial patterns on a more detailed level than the sources offered us at first sight. The visual comparison of rental values, residential patterns and numbers of houses over time contributes importantly to an understanding urban development and social change. Once a GIS environment is set up, its strength is exactly the ease with which different data can be presented, combined and compared. Yet the possibilities go further. Our maps show the data on an aggregate level, losing some of the nuances in urban social topography. By integrating other sources, it will be possible to visualise the social topography of Bruges on the level of the individual plots and households, allowing for a very thorough analysis. Although the focus in this contribution has been on testing the methodology and the comparability of available source materials, future research will involve finding explanations for the diverging patterns and evolutions our analysis uncovered. Within the limited scope of this article, we have tried to establish some tentative links between economic reconversion, population decline and standards of living, yet many questions remain unanswered or require further historical research.

First, the 1382 tax list data indicate a very strong Sjobergean core-periphery division in the later medieval period. We would like to dig into the relationship between residential segregation on the one hand, and patterns and evolutions in occupational topography (about which we now have only a limited view) on the other. Was there also a core-periphery segregation among occupations? How did this change over time?

Second, we need to establish more firmly whether the evolution towards a more diversified layout of the Saint James district in early modern times reflects a general increase in welfare for the entire population of the city. The falling rate of home ownership throughout the early modern period suggests at least that we need to be alert to more hidden processes of proletarianisation and social division. Research by Deneweth has shown that when studying residential segregation we need to take into account not

Points of discussion



only economic developments, but also other variables such as intra-urban migration, changes in building materials, the interaction of housing and household budgets, and real estate speculation by urban elites, including the demolishing and rebuilding of entire housing blocks (so-called “creative destruction”) and the joining or splitting of existing housing units in order to accommodate ever-changing market conditions (and of course, to increase profit margins). Moreover, the real estate market was not only in the hands of buyers and sellers. Urban governments continuously intervened and steered the market in certain directions through legislation and active planning.<sup>38</sup> While we know a good deal about these factors for the sixteenth and seventeenth centuries, the late medieval situation is rather unclear for now. Finally, rental values of private houses are believed to be indicative of the wealth of occupants, either resident owners or tenants, with the limitation, however, that the percentage of a household budget spent on housing is inversely proportional to household income. Since they are believed to be comparable across time and space, fiscal sources detailing the (rental) values of houses have been widely used as a proxy for economic inequality in the pre-industrial period.<sup>39</sup> Given the interplay of housing values and residential patterns, one might wonder whether the accuracy of (rental) values as indicators of economic inequality depends on the specific point in time because rents weigh much heavier on household budgets in some periods. Therefore, one should always combine housing values and residential patterns to capture the social reality of a city over time.

## Notes

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# From guessing to “gissing”: HisGIS analysis for mapping urban transformation and military reuse of suppressed convents in Brussels, Antwerp and Bruges (1773-1860)

Reinout Klaarenbeek  
Thomas Coomans

The secularisation of all monastic properties at the end of the 18th century caused a remarkable metamorphosis of urban space in Belgium. Large numbers of monastic complexes, material witnesses of a society entrenched by the Catholic religion for centuries, were erased from the townscape and replaced by new urban fabric. This process, however, was gradual and far from complete. Many former monasteries survived to a certain extent, as they were reused by state and urban institutions (e.g. charities, schools, prisons, hospitals, barracks, etc.) as well as private actors (industries and housing). Taking the case of military reuse as an example, this article describes how this transformation process can be mapped using historical GIS.

Historical GIS, or HisGIS, is the application of geographic information science in the field of history. Although this marriage between GIS and history has sometimes been received with scepticism,<sup>1</sup> a large and growing number of studies in the field of urban history have shown its value: most importantly, HisGIS is able to *map* historical sources, thereby adding a hitherto neglected geographical dimension to historical explanations.<sup>2</sup> Furthermore, HisGIS makes it possible to use location as a central means of collecting, storing and combining a wide range of historical sources.<sup>3</sup> In this contribution, the design and application of HisGIS are described for a problem at the interface of urban history, architectural history, and historical geography: the urban transformation that occurred after the suppression of convents in the late 18th-century Belgian cities.

From the late 18th century, Enlightenment ideas disseminated by the Austrian (1773-1794) and French rulers (1794-1815) throughout current-day Belgium transformed the relationship between church and state.<sup>4</sup> Eventually, between 1773 and 1796, a series of decrees suppressed all religious houses, not only sending shockwaves through society but also triggering urban reconfiguration: former religious houses were converted to receive profane functions or, more often, they were partially or totally demolished to give way to new urban tissue. Given the large number of convents, which could take up no less than one seventh of the towns' overall surface, their post-suppression development should be considered as a major factor in explaining late 18th- and early 19th-century urban development.

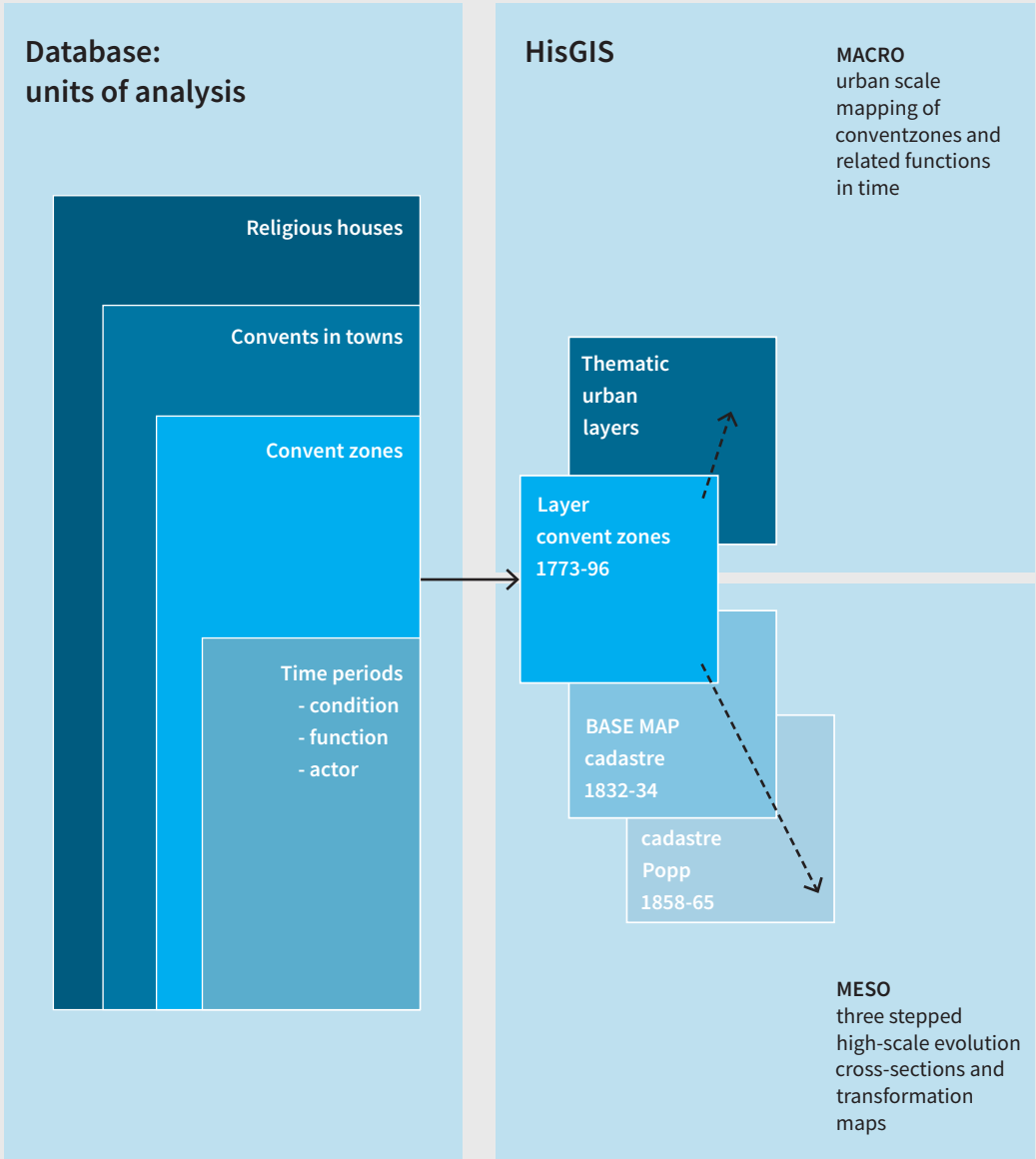
The study at hand aims to describe, visualise and explain the material urban transformation after the suppression of the convents.<sup>5</sup> It departs from the monographic approach, which scrutinises only one or a few convents, and instead explores mechanisms of transformation by including a large number of cases and applying an interurban comparative approach. A HisGIS is likely to suit the needs for such a multidisciplinary and comparative approach. Its practical application, however, evokes many questions: (1) How to position

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n.  
1-5





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FIGURE 1  
Scheme: methodological framework  
(drawing by R. Klaarenbeek).

the HisGIS in the overall research strategy? (2) How to define meaningful and comparative research units? (3) How to handle temporal aspects, both in data gathering and in mapping? (4) How to retain integrity and deal with inequality with regard to the historical sources? After having discussed the overall methodologic framework, we will focus on the case of the reuse of former convents for military purposes.

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This study focuses on three major Belgian towns, namely: Brussels, Antwerp and Bruges. Preceding the urban extensions that would follow in the late 19th century,<sup>6</sup> their 18th- and 19th-century layout was still confined by the late medieval town walls. Within these towns, a group of hundred convents was identified. This sample was subjected to an analysis at three-levels. At the micro-level of the buildings, an in-depth study was conducted for seven representative cases. A comprehensive archival research allowed for analysis of architectural interventions at the level of the selected monastic buildings. At the meso-level of the neighbourhood, the analysis moves away from the idiosyncratic micro-level. A selection of cartographic sources allowed for the reconstruction of the convents and traced their evolution in the neighbourhoods. The macro-level, the level of the town, entails a positioning of the convents on the level of urban networks. The analysis of these three levels all to a different degree used the HisGIS.

**Methodologic framework**

Every HisGIS requires, for the matter of topographic coherence, a historical, topographical reference map to which all other layers adjust, referred to as the “base map”. The base map for this study is the modern cadastre, which was initiated by French rulers from 1811. Very much in line with the middle part of their famous credo *liberté, égalité, fraternité*, the modern cadastre aimed to create a fair and uniform system for land tax.<sup>7</sup> The massive enterprise of surveying, recording and evaluating an entire country had survived two regimes when it was finally completed in the young Belgian Kingdom in 1834. The cadastral maps surpassed their *ancien régime* predecessors by far, providing the research with a “complete”, detailed and highly comparative base map that used the uniformed metric system. Importing the cadastral maps in HisGIS is usually a time-consuming exercise that comprises scanning, “geo-referencing” and vectorising. This effort could, however, partly be avoided by using georeferenced or even vectorised plans of existing infrastructure projects.<sup>8</sup>

*HisGIS structure*

The base map was complemented by a series of layers (FIG. 1). At the macro-level, the layers were formed by distracting the locations of main roads, main waterways, town walls and gates and urban nodes from historical maps. These layers enable us to relate convents and their development

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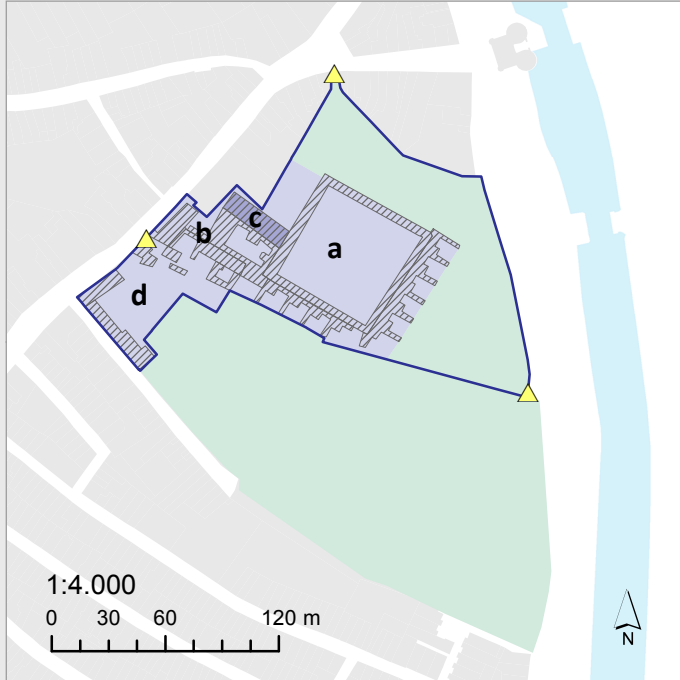
n. 6-8

# Legend

- convent
- church
- church square
- built zone
- garden
- adjacent properties
- entrance

## background

- blocks
- water
- streets



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FIGURE 2

Charterhouse in Bruges.

Reconstruction (above), cross-sections (A, 1783; B, 1832; C, 1865; middle) and transformation maps (AB and BC; bottom) (maps by R. Klaarenbeek).

**a**

*Claustum major*: large cloister gallery with small individual houses, which facilitated the strict isolation according to the eremite tradition.

**b**

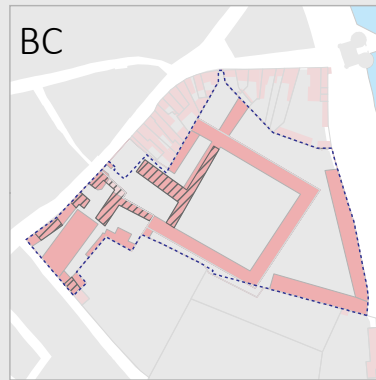
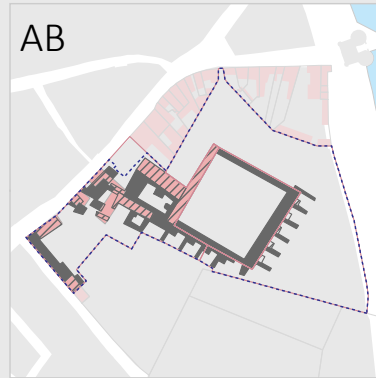
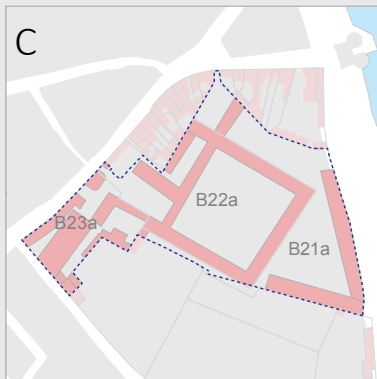
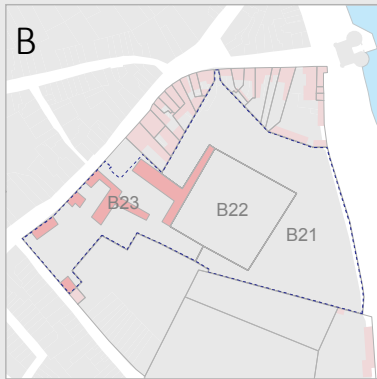
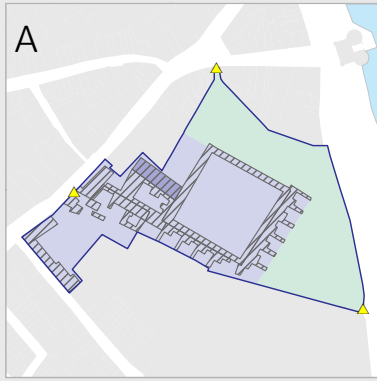
*Claustum minor*: small cloister with communal functions of refectory and chapterhouse.

**c**

Baroque church.





**d**

Parlours, visitor rooms, brewery and other profane functions.



### small maps: A, B, C, AB and BC:

Scale 1:4.000

-  former convent
-  buildings (for AB and BC: new buildings)
-  existing buildings
-  demolished buildings

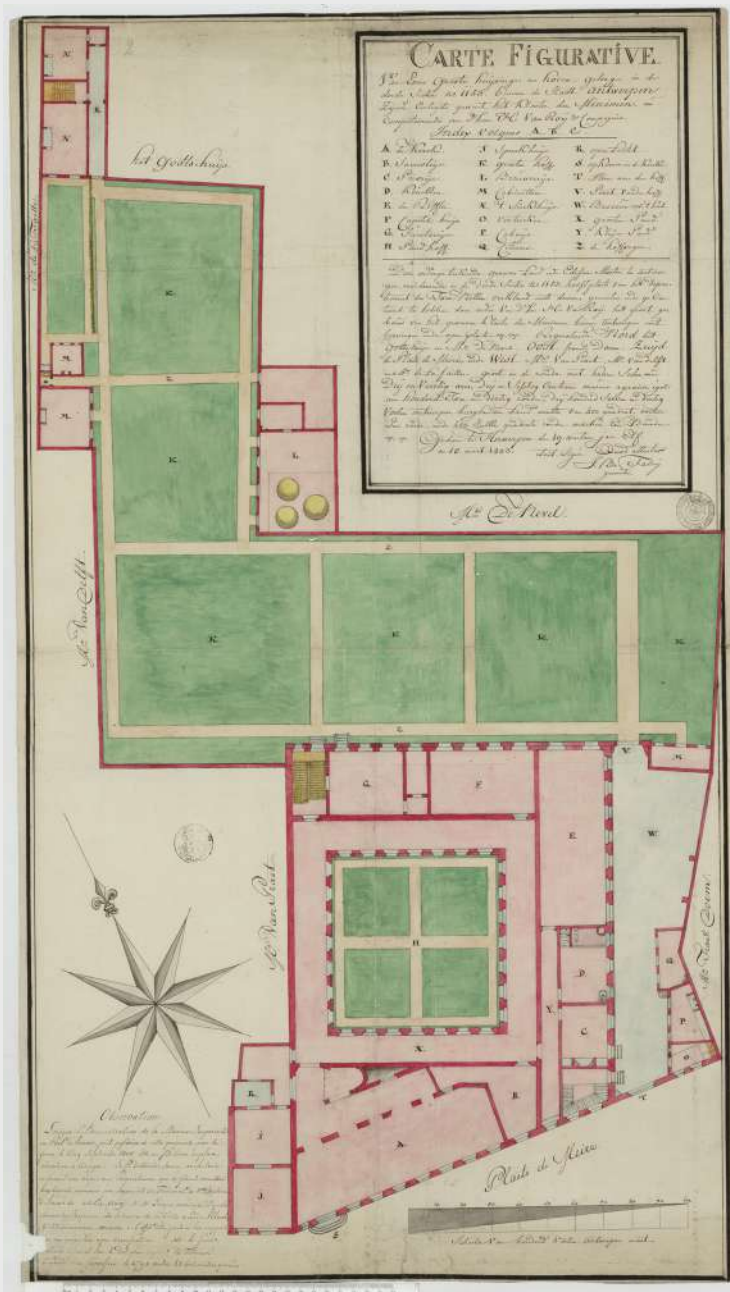
(see spatial-temporal database, below) to structural elements in the urban fabric. At the meso-level, a sequence of three high-scale cross-sections was applied: (A) vectorised ground plans of the former convents in 1773-1796; (B) the original cadastral maps, from 1832-1834 (base map), and (C) cadastral maps by J.C. Popp around 1858-1865 (FIG. 2).<sup>9</sup> By comparing one cross-section with the preceding one, the evolution of the parcels and buildings could be explored. To enhance the legibility, pairs of subsequent cross-sections were combined into a single “transformation map”. These maps visualise demolitions, new buildings and continuity of built surface between two phases (A>B and B>C), at a single glance.

Comparisons of the maps that originate in different times and different cities needed to be done cautiously. Overall, the sources allowed for a fairly equal distribution of the cross-sections over the researched period. However, as a result of varying moments of suppression and the availability of cadastral maps, the timespan A>B and B>C could fluctuate among convents. Furthermore, caution was needed with regard to the sources. While layers B and C were based on uniform and highly comparable cadastral plans, we should bear in mind that the sources that formed the foundation of layer A comprise a heterogeneous cartographical and iconographical body. In fact, the degree of inference and reliability of reconstructions varied from one convent to the other, as will be elaborated below.

#### *Convent-reconstructions*

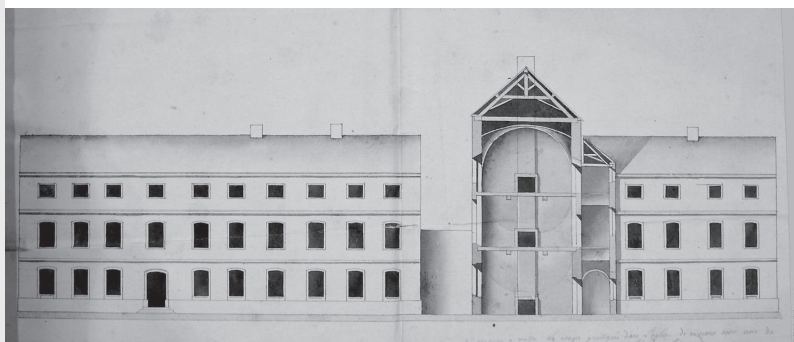
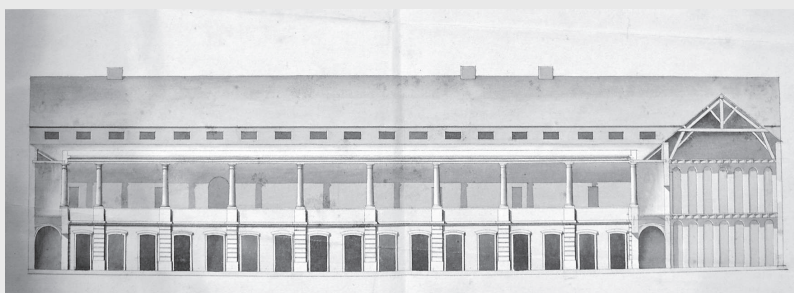
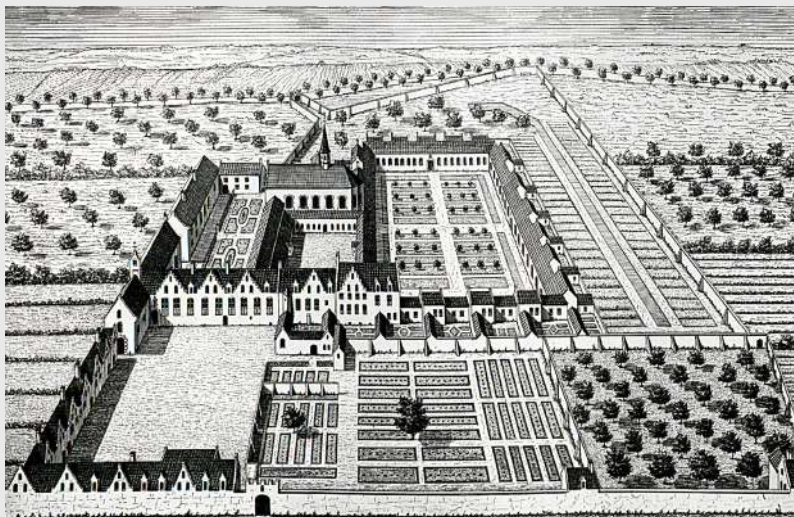
Of crucial importance in the HisGIS were the reconstructions of the ground plans: the delineations of the surface and the buildings of the convent. These reconstructions can be considered a sort of “zero-measurement”, reflecting the convent before alterations for new functions. With regard to the sources; there was no uniform cadastre at hand in the late 18th-century and town plans generally employed too small a scale for a detailed analysis. Therefore, the cartographic evidence that was generated for countries or towns had to be left aside in favour of the more specific plans and drawings of individual convents. Unfortunately, such plans were not available for every convent; the technique of retrogressive mapping was applied to obtain a good idea of these monastic complexes. Based on the (best) sources available, the reconstructions can be grouped in four categories with a decreasing degree of reliability:

1. **Sales plans** (66 %). A considerable number of the secularised convents was displayed for sale shortly after their suppression in the late 18th or first decennium of the 19th century. To evaluate properties of the convents, estimate prices and inform future buyers, governments appointed architects and surveyors to draw ground plans of the convents (FIG. 3). These plans, which usually came with a comprehensive legend, offer an exceptional



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FIGURE 3  
 Minimes friars convent in Antwerp, 1803  
 (Municipal Archives Antwerp, Topographical Atlas, 12#4192). Large scale sales plans offer an exceptional insight into the convents' spatial organisation.



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FIGURE 4

Bird-eye view of the Charterhouse in Bruges, a copy of Sanderus' image in *Flandria Illustrata* (anonymous, *Maison de l'Ordre des Chartreux: Vues et Notices*, volume 2, item 8, p. 197). Remarkably, as a result of omitting the urban context, a rural convent is falsely suggested.

FIGURE 5

Frontal view of the north and west wing of the projected barracks on the site of the Charterhouse in Bruges, 1789 (Municipal Archives Bruges, Old Archives, 289). New barrack wings were skillfully integrated with the existing convent architecture. The new architecture had a distinctive neoclassical appearance.

insight into the convents' spatial organisation. Although the beauty of these coloured plans might in some cases not seem to be in line with archival sources that speak of considerable degradation after suppression caused by plundering,<sup>10</sup> the sales plans are generally supposed to provide a reliable images of the convents. Additionally, for Brussels, the exceptional town plan of d'Archambault reaches the level of detail of sales plans and is entitled to fall in this category.<sup>11</sup>

2. **Bird-eye views (10 %)**. Some convents were depicted on so-called bird-eye views: gravures from a real or an imagined high standing point, overlooking the convent as a whole, often with a legend specifying its main functions (FIG. 4). Applying a 17th-century source to represent the situation at the end of the 18th century, is considered suitable since most urban convents were to a large extent finalised by then. Confronting the bird-eye views with the cadastral plans helps us to determine the reliability of the bird-eye views. In addition, the various three-dimensional buildings had to be converted to the flat surface and rectified for potential perspective distortions.
3. **Retrogressive mapping, rich cadastral information (18%)**. When individual sales plans or bird-eye views are lacking, the early cadastral map (1832-1834) was the main source at our disposal. The cadastral map clearly depicts the church and the convent when not demolished. Since no better sources were available, these buildings on the cadastral maps were projected back in time, a method that is called "retrogressive mapping". Furthermore, large size parcels were often instructive in delineating the convent area. However, bridging a period of ca. 34 up until 47 years has the drawback of a decreasing reliability compared with the abovementioned sources. This is especially true for additional buildings, delineation of the borders of gardens, the convent as a whole, and the entrances.
4. **Retrogressive mapping, poor cadastral information (6%)**. When the convent had been demolished, even the cadastral situation does not give direct indications about its layout. However, the cadastral information often offers more indirect indications: both the boundaries of the parcels and the registers are in general very instructive in delineating the surfaces of demolished churches, convents, and gardens. Furthermore, irregularities in parcel boundaries facing the street can hint at entrance buildings. Finally, iconographic sources such as drawings, paintings, and photographs (from the 1850s) can help positioning the buildings.

To properly assess the aggregated character of convents, a layer "convent clusters" was created. Monastic architecture is characterised by its composition of functional clusters accommodating communal life dedicated to God. The actual configuration of these clusters relied on many factors – such as the century in which it was built, the apostolate, the gender and site-specific

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10-11



topography – resulting in very different urban outcomes.<sup>12</sup> The most basic functional clusters, however, were shared by all convents. Within the layer “convent zones” polygons are drawn that represent: (1) church, (2) convent, and (3) gardens. In addition, depending on the sources, (4) adjacent rented houses, (5) adjacent rented gardens, and (6) church squares could be defined. Since these functional clusters set the basic conditions for post-suppression adaptations, this layer offers a crucial refining of the cartographic analysis.

A  
*spatial-temporal  
database*

The morphologic cartographic aspect dealt with so far was complemented by a functional analysis through the use of a spatial temporal database. The input for the spatial temporal database could derive from a wide range of archival material. Since a full archival research for all convents of the sample (100) was not feasible, four sources were selected: (1) textual information on town plans; (2) works by 19th-century urban historians; (3) owner registers from the original cadastre (1832–1834) and the Popp-maps (1856–1865); (4) heritage repositories, if available. Unavoidably, the availability and quality of the sources diverged, to a certain extent, between towns and convents. Whereas information about the large former convents which were state property was plentiful, some smaller convents that passed into private hands were less well documented. Additionally, with the progressing of time, the documentation increased.

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The database provides a (hierarchical) structure that allows information to be recorded on the most appropriate level. This structure comprised larger and smaller elements: religious houses, urban convents and convent zones (FIG. 1). The last, the level of the convent zones, served for recording the functional development. Each convent zone (church, convent, gardens) was attributed a single or, more usually a number of “periods” – which were confined by a begin and an end year – to form a closed timeline. Next, every period was coded on three elements: (a) urban condition (reused, demolished, new buildings or fragmented); (b) function in seven main categories (military, government, convent, parish church, private industry, municipal charity and fragmentation); (c) urban actors (state, municipality, private individuals and religious). The resulting database allows formulating queries, which are both fine-grained and “mappable” through corresponding ID’s the convent zones layer.

Transferring historical information into a database logic can imply a loss of historical complexity. Some cases did not easily fit into one of the predefined categories. Only a deliberate, consistent processing combined with fields for open remarks and reference could safeguard a maximum degree of transparency and reducibility. Furthermore, lack of information resulted in gaps of time periods. While some of these gaps cannot be prevented

and must be processed as such, other gaps can be complemented by “educated guesses”. An example of such “educate guessing” could be the presumption of continuity in state ownership (actor) in a period that is both preceded and followed by state ownership. Obviously, this kind of presumptions is registered. 375

The second part of this paper presents a further exploration of the methodology by assessing the particular case of military reuse. Reuse by the army, as the database indicates, has the highest proportion and frequency of convent reuses. This finding can be related to the highly unstable late 18th and early 19th-century geo-political situation of the region. Indeed, in the period preceding Belgian independence in 1830, the territory belonged to the Austrian Empire (1730–1793), the French Republic and Empire (1794–1815), and the United Kingdom of the Netherlands (1815–1830).<sup>13</sup> Consequently, defence was of utmost priority and the key towns permanently hosted army corps. Given the uncomfortable situation of accommodating these troops in civilian houses, the availability of urban convents provided a good alternative. Convents were thus transformed into barracks, cavalry stables, military hospitals, arsenals, etc.

In exploring the military reuse, the previously proposed three-level approach will be applied. The micro-analysis will focus on the former Charterhouse in Bruges. This convent is a rare example of a reused convent by the army that is still present in the current town. Moreover, it is characterised by a long military reuse, and several interesting plans are at hand. At the meso-level, making use of the transformation maps, the morphologic development of the Charterhouse in Bruges is compared with other army reused convents. At the macro-level, finally, the military reuses are situated in a broader time-space frame.

The *Chartreuse Val-de-Grâce* was built from 1610 within the Bruges town walls, in the close vicinity of the Kruispoort. A bird-eye view (FIG. 4) and an 18th-century survey allow reconstructing the monastic ground plan.<sup>14</sup> The general layout is characterised by the distinctive Carthusian architecture organised around two cloisters, the *claustrum major* and the *claustrum minor* (FIG. 2).<sup>15</sup> The former comprised a large cloister with galleries and small individual houses, which facilitated the strict isolation according to the eremite tradition (a on fig. 2). The latter formed a smaller courtyard with communal functions of refectory and chapterhouse (b). The baroque church (c) connected both elements. Parlours, visitor rooms, a brewery and other profane functions were located in the courts along the side street (d). After its suppression in 1783, the complex was ceded to the army.

## Military reuse

Micro-level:  
Caserne  
dit les  
Chartreux  
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n.  
12-15

A remarkable but never realised plan from 1789 envisioned a conversion of the former Charterhouse into a military barrack.<sup>16</sup> In essence, the design proposed two new barrack wings that were skilfully integrated with the existing convent architecture. The wings were projected on the west and north of the *claustrum major*, thereby continuing the use of the cloister gallery as the central means of distribution. An elevation shows the projected north wing, a two stories high building with an attic under a saddle roof (FIG. 5). Every pair of bays of the gallery, extended to the ground to form entrances, was separated by a blocked pilaster. On top of it was an open gallery with parapet and Tuscan columns, which gave entrance to the soldiers' dormitories on the upper floor. The west wing was attached to the church, which was divided into three levels. The dormitories in the former church were accessed from the adjacent gallery of the *claustrum minor* along its long (south) side, which was provided with an additional level as well. In 1834, the former Charterhouse was appointed to permanently accommodate a cavalry regiment, including 300 horses and 300 men.<sup>17</sup> The years preceding 1834 had seen a demolition of many parts of the original Charterhouse: the individual monk cells and the small cloister galleries disappeared for the greatest part, as well as the large cloister galleries, except for the west wing (FIG. 2, AB). The preserved church and west wing gallery were integrated into the main, three-story high edifice, as is depicted on the ground plan from 1888 (FIG. 6). By opening entrances in the apse, three levels of the church were connected with the main buildings' central staircase, located directly behind the church. The location of the main stables followed the layout of the large cloister and reused existing foundations. In the years that followed, the cavalry complex was progressively expanded to include a riding school and additional buildings for horses, lads, riders, and officers.

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Meso-level:  
military reuse

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The morphological development of the Charterhouse from Bruges can, with the help of transformation maps, be compared to other army used convents in Belgian towns. Army reuse, as these maps show, was likely to preserve the (large) scale of the complexes and to prevent fragmentation (FIGS 7 AND 8). This may to a large extent be explained by the enclosure and seclusion that were characteristics of both convent and barrack architecture. Former urban convent sites not only separated the troops from civilians but also concentrated army functions in an efficient and economical way. One of the major differences in the use of these buildings after their conversion was their capacity: while convent buildings were used by communities of usually 20 to 35 religious men or women, a number of soldiers that needed to be housed in the complexes could rise over 300.

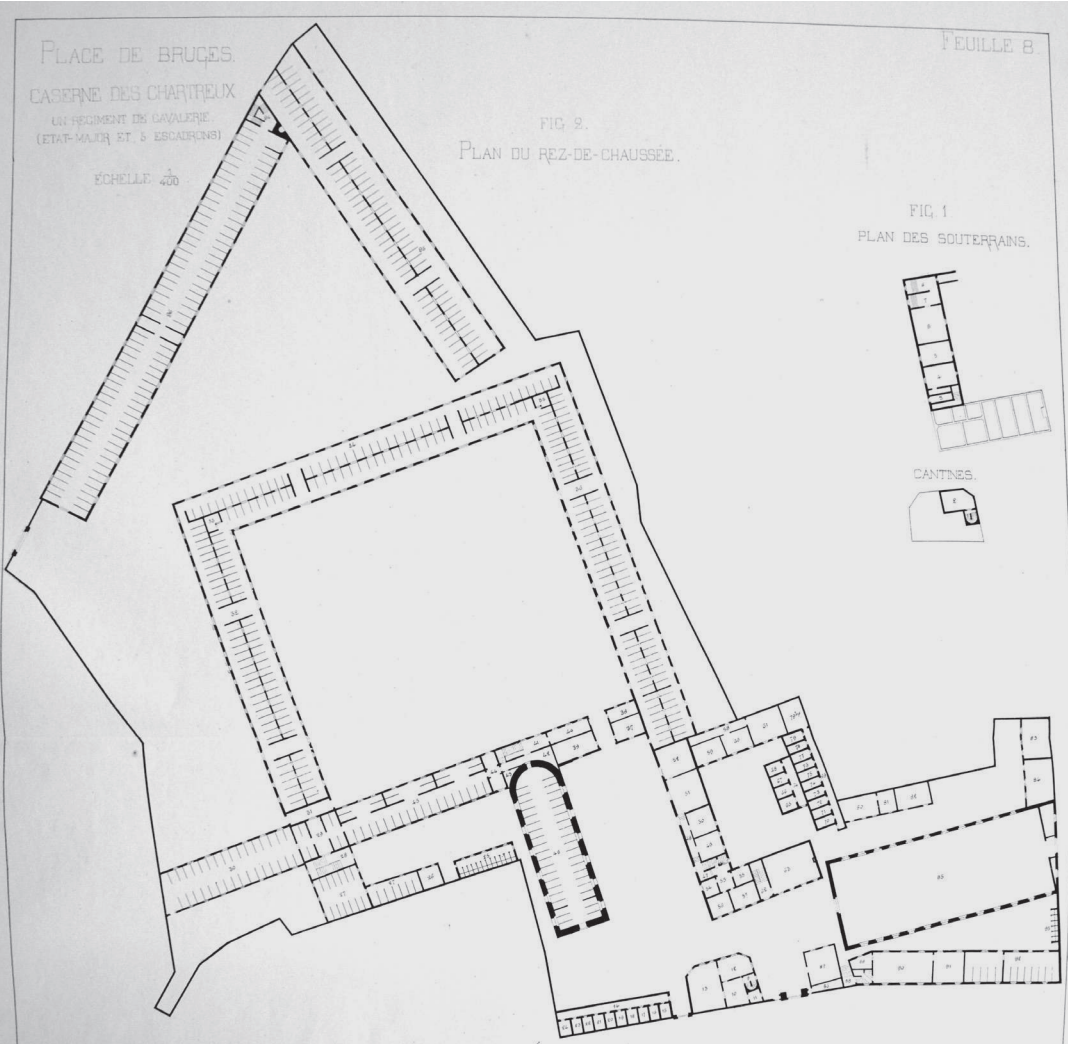


FIGURE 6

Ground plan of the “Carthusian barracks”, 1888 (Royal Military Museum, Collection Maps and Plans, 1, *Atlas Bâtiments Militaires*, sheet 8).

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




From guessing to “gissing”: HisGIS analysis for mapping urban transformation and military reuse of suppressed convents in Brussels, Antwerp and Bruges (1773-1860)

n. 16-17





## Legend

All maps are in scale 1:5.000,  
except for norbertines in Antwerp 1:9.000



### maps A, zones:

-  convent
-  church
-  church square
-  built zone
-  garden
-  adjacent properties
-  entrance

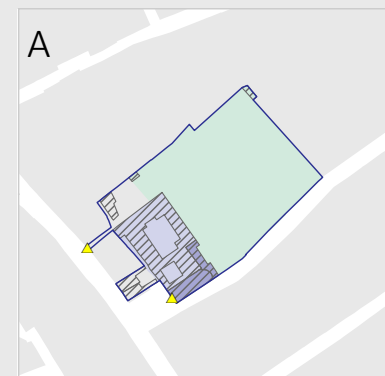
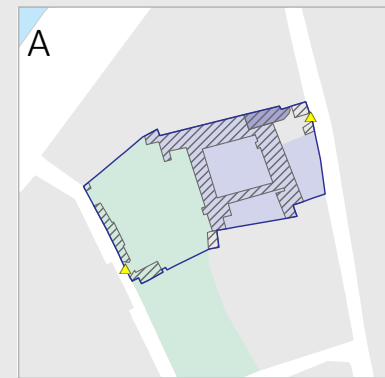
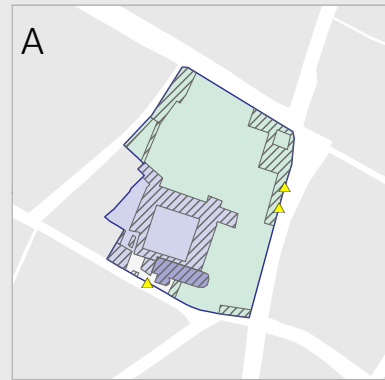
### maps AB and BC:

-  former convent
-  new buildings
-  existing buildings
-  demolished buildings

### background

-  blocks
-  water
-  streets

1:5.000 (Norbertines: 1:7.500)



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FIGURE 7

Transformation maps of convents used by the army (maps by R. Klaarenbeek).

#### 7-1

Brussel: nuns of the Order of Annunciation, cavalry barracks.

#### 7-2

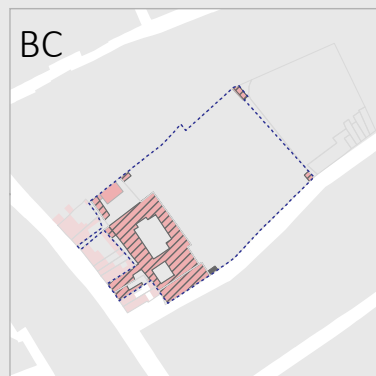
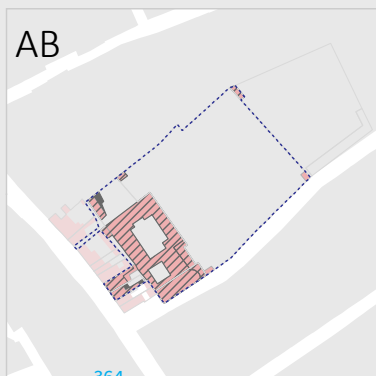
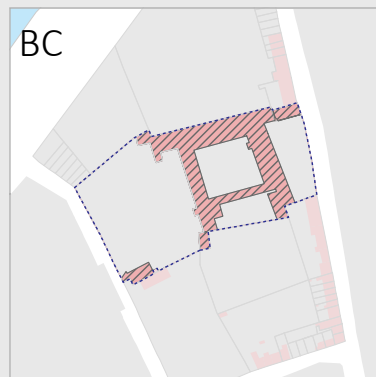
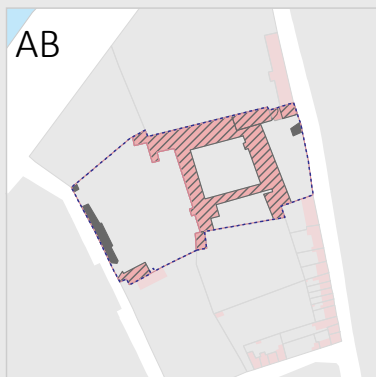
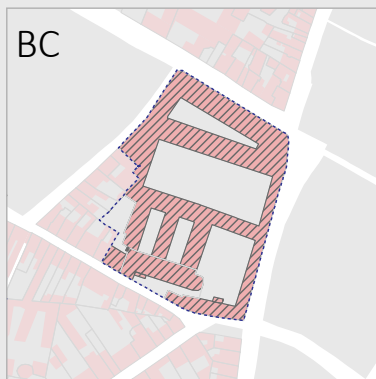
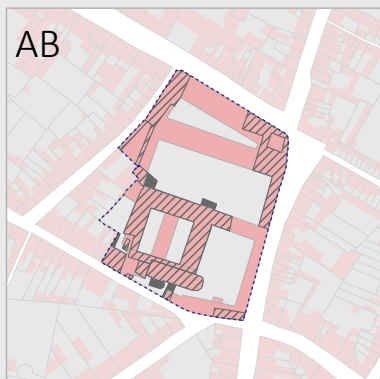
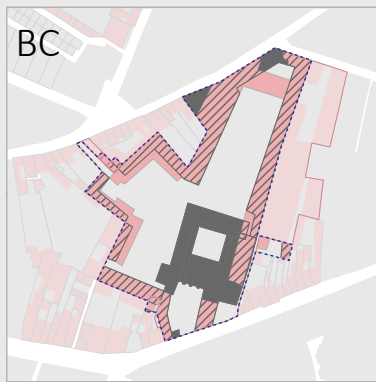
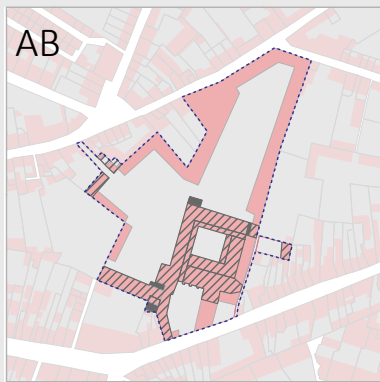
Brussel: hospital nuns of St Elisabeth, cavalry barracks.

#### 7-3

Bruges: Carmelite sisters, convent of Sion, infantry barracks and military hospital.

#### 7-4

Bruges: Carmelite sisters, Theresians, infantry barracks and military hospital.










364  
-389







## Legend

All maps are in scale 1:5.000,  
except for norbertines in Antwerp 1:9.000



### maps A, zones:

-  convent
-  church
-  church square
-  built zone
-  garden
-  adjacent properties
-  entrance

### maps AB and BC:

-  former convent
-  new buildings
-  existing buildings
-  demolished buildings

### background

- blocks
-  water
-  streets

1:5.000 (Norbertines: 1:7.500)

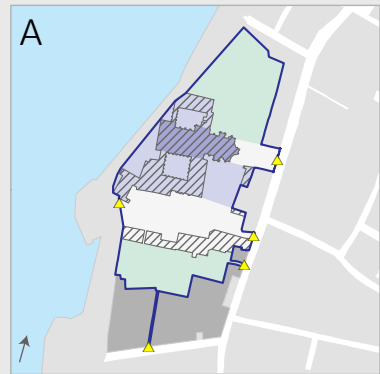
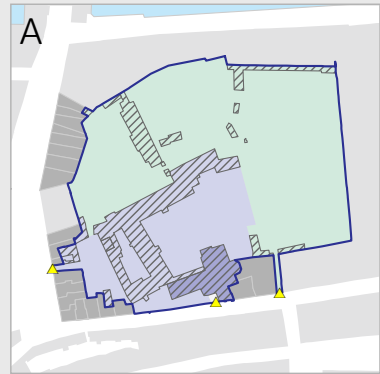
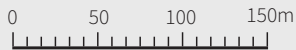


FIGURE 8

Transformation maps of convents used  
by the army (maps by R. Klaarenbeek).

#### 8-1

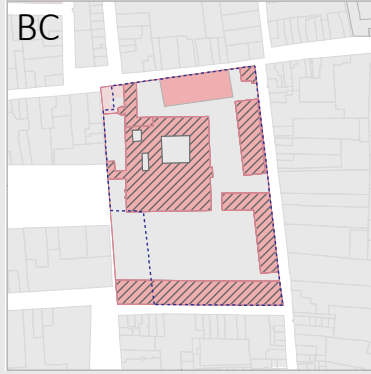
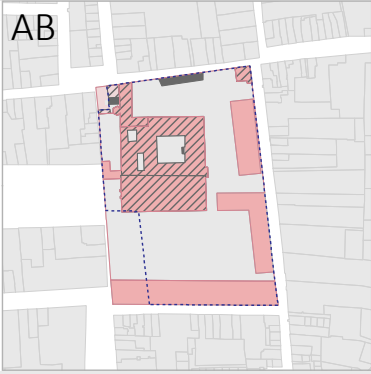
Antwerp: discaled Carmelites, arsenal.

#### 8-2

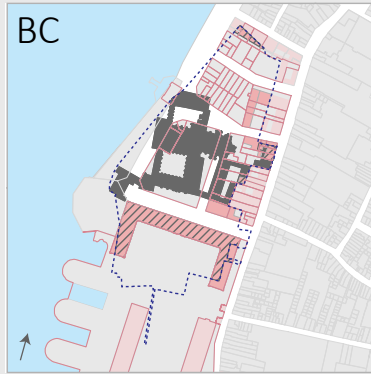
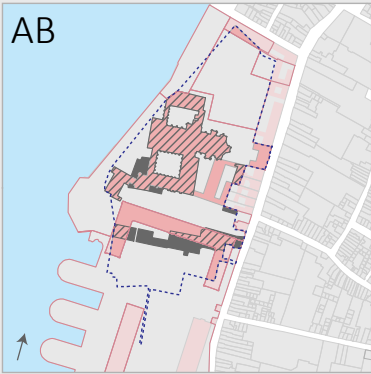
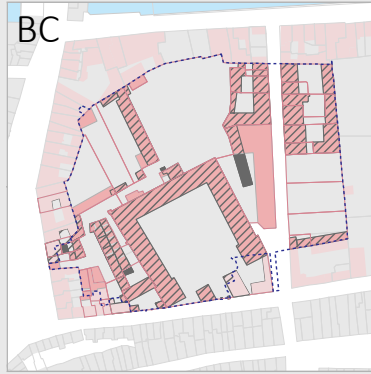
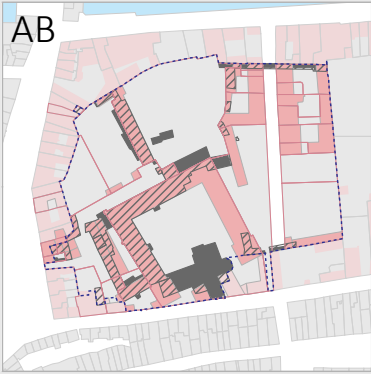
Antwerp: Falentine sisters, infantry  
barracks.

#### 8-3

Antwerp: Norbertines, military ship  
building yard.



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Preservation of the scale of former Belgian convents and demands related to the capacity of their new military use often implied the preservation of the large open spaces of the monastic complexes. Indeed, gardens were transformed into courts and served as valuable assets that were used for manoeuvres, preparation, and in the case of cavalries, the packing and saddling of horses. Furthermore, former convent gardens provided the space for new buildings (FIG. 7 AND 8). Whereas infantry barracks show little building activities, cavalries and arsenals were expanded by stables, workhouses, and sheds. Such new constructions were typically constructed alongside the outer limits of the convents and oriented towards the inner courtyard. As such, the positioning of the new constructions materialised the convent borders and reinforced the complexes' seclusive character, despite the radical change in function of the buildings.

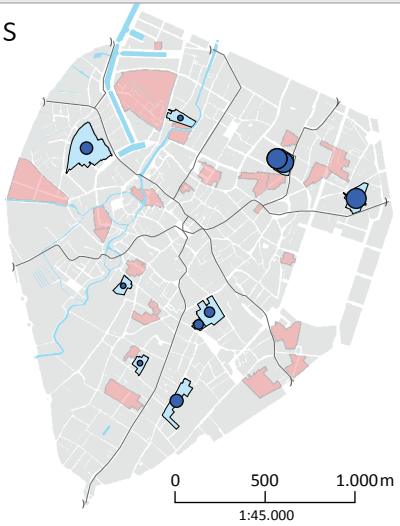
The army's search for economical solutions resulted in preservation, at least temporary, of most convent buildings that were reused for military purposes. Courtyards and long convent wings allowed for a rational organisation and could be adapted to serve specific army corps, such as cavalry, infantry, artillery and logistics (arsenal). Furthermore, the buildings facilitated social differentiation between troops and lower and higher ranked officers. Often these adaptations resulted in an upscaling of room sizes: the demolition of walls of for example the monk cells to create communal soldiers dormitories. Interestingly, similar to the case of the Charterhouse in Bruges, the new "Falconines barracks" in Antwerp were built on the foundations of the former convent. This implied not only a practical use of the foundations but also a continuation of the usefulness of the organisational arrangement around a central court.

Monastic churches were also integrated into military complexes that were housed in former convents. Often, capacity densification implied the division of the high church's spaces into three or four levels of usable surface. Depending on the specific function, the ground floors of these former churches were used for stables or ateliers, whereas the upper level usually served as soldiers' dorms or warehouses. The choice of material in these constructions and the management of the vertical circulation by building staircases show a broad range of solutions that were related to the church at stake. These church adaptations are often relatively well documented and offer a sample-card of how cubic meters of sacred space were turned into a maximum of square meters to be used by the military.

*Macro-level:  
chronology and  
locations*

The nominations of the convents preceded any urban or architectural interventions. Precise locational motivations in the process of reuse differed from one army feature to another and were part of an intricate process of

# Brussels



# Legend

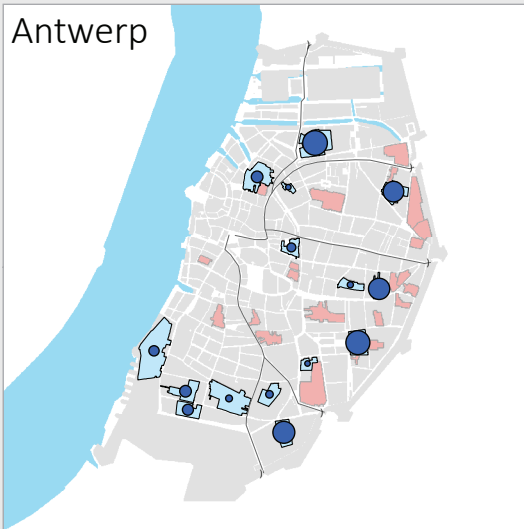
383

period (years)

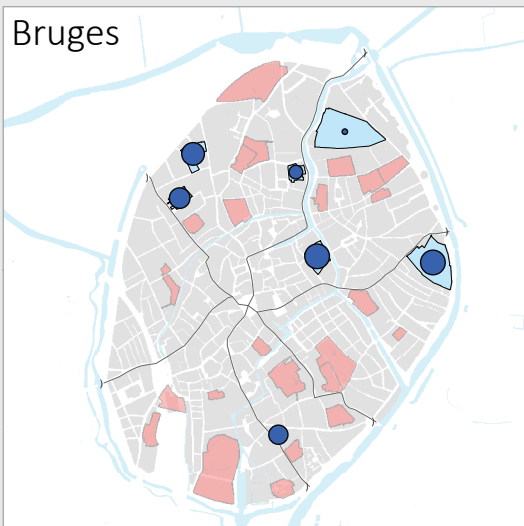
- 10
- 50
- 100

- convent
- infrastructure
- ) gates
- buildingblocks 1834
- water 1834

# Antwerp



# Bruges



From guessing to "gissing": HisGIS analysis for mapping urban transformation and military reuse of suppressed convents in Brussels, Antwerp and Bruges (1773-1860)

FIGURE 9

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Urban maps: duration of military functions (maps by R. Klaarenbeek).



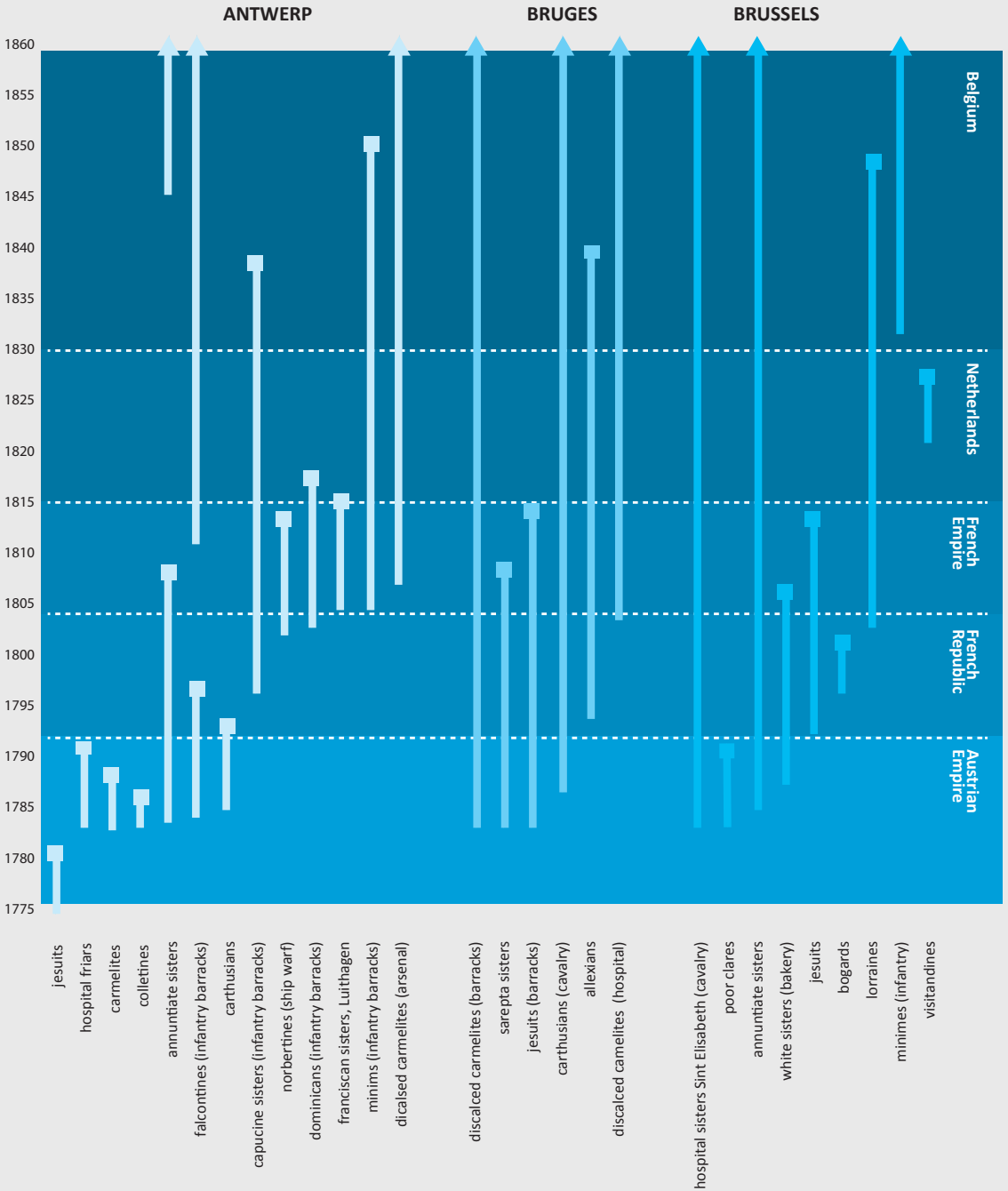


FIGURE 10 Scheme: chronology of the military function in three cities (maps by R. Klaarenbeek).

decision making. By mapping the convents with an army function, however, some general locational aspects can be deduced (FIG. 9). The maps reveal a clear preference for locations in the periphery rather than the centre of the Belgian towns. This finding corresponds to the (cavalry) troops' needs to manoeuvre outside the town, without the need for crossing the town. More locally specific aspects include the temporary "marine cluster" in the south-west of Antwerp, as well as an inclination to locate army facilities to the eastern part of Brussels, in the vicinity of the administrative and royal quarters. Additional research in correspondences between actors such as the ministry of defence and the town administrations can reveal direct motivations and enrich the analysis with specific and local considerations. The year of attribution of army functions and the duration of military use are indicated in a graph which is based on the database (FIG. 10). The graph only includes convents that were used by the army for substantial periods, longer than three years. The graph shows that there has been a sharp decline of army conversions from the Dutch era (1815–1830) onwards. This decline can be explained by the reduction of available convents of the domains in this period, as they were increasingly sold or equipped to fulfil other uses.<sup>18</sup> The wave of convent conversions in Antwerp during the French Empire already required reselling of properties of private individuals on a great scale. Only a unyielding hand, Napoleon himself, gave the orders and urgency – Antwerp's prime importance as a marine basis, the "gun pointed to England"<sup>19</sup> – seems to have made this possible. Furthermore, as the 19th century progressed, a new architecture was progressively preferred for reuse.<sup>20</sup>

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p. 384

This study set out to construct a HisGIS in order to describe, visualise and explain urban transformation in three Belgian towns after the suppression of convents. Three levels of analysis allowed us to make optimal use of the available sources and to provide insights on different scales of transformation; at micro-, meso- and macro-level. The selection of the most appropriate sources was of crucial importance in fulfilling the comparative aim. The modern cadastre (1832–1834) – radiating both forward (Popp, 1858–1865) and backwards (retrogressive analysis) in time – provided the study with a highly comparable body of cartography, allowing for high-scale reconstructions. With regard to the functional analysis, a combination of written and archival sources, allowed to reconstruct functions on a detailed level. Despite its exploratory nature, the cases of military reuse offer insight into the results this method may yield. By the elaboration of (projected) constructions at the site of the Charterhouse in Bruges, the richness of the sources and materials at the micro-level was demonstrated. A key strength

## Conclusion

From guessing to "gissing": HisGIS analysis for mapping urban transformation and military reuse of suppressed convents in Brussels, Antwerp and Bruges (1773-1860)

n.  
18-20

of the present study lies in the HisGIS for urban-comparative research at the meso-level, as it allowed to compare the morphological evolution of the army reused convents in three towns. At the macro-level, finally, the mapping yielded relations between location and functional or urban development. The transformation of quiet places of worship into noisy, smelly and lively places of the barracks, was accompanied by a remarkable continuity in the morphology of the former convent complexes.

## Notes

- 1 Sam Griffiths, "GIS and Research Into Historical 'Spaces of Practice': Overcoming the Epistemological Barriers," in *History and GIS. Epistemologies, Considerations and Reflections*, ed. Alexander von Lünen et al. (Dordrecht: Springer, 2013), 153-171.
- 2 To name just a couple: Boris Bove, Hélène Noizet, and Laurent Costa, eds., *Paris, de Parcelles En Pixels. Analyse Géomatique de L'espace Parisien Médiéval et Modern* (Paris: Presses Universitaires de Vincennes et Comité d'Histoire de la Ville de Paris, 2013); Paulo Pinho and Vitor Oliveira, "Cartographic Analysis in Urban Morphology," *Environment and Planning B: Planning and Design* 36/1 (2009): 107-127; Garry Keyes and Jens Toftgaard Jensen, "Mapping Urban History: GIS and the Analysis of the Urban Space of Nineteenth-Century Aarhus," International Association for History and Computing XVth Conference in Tromso, 2003, available at: [http://www.rhd.uit.no/ahc/paper/jtj\\_gk\\_mapping\\_urban\\_history.pdf](http://www.rhd.uit.no/ahc/paper/jtj_gk_mapping_urban_history.pdf).
- 3 Anne Kelly Knowles and Amy Hillier, eds., *Placing History: How Maps, Spatial Data, and GIS Are Changing Historical Scholarship* (Redlands, Calif.: ESRI Press, 2008).
- 4 Gratianus De Schepper, "Marie Thérèse et Joseph II: leur politique à l'égard des maisons religieuses dans les Pays-Bas," *Revue d'Histoire ecclésiastique* XXXV (1939): 509-529.
- 5 The article is part of the ongoing research project *Redeveloping the City: urban transformation and 'heritization' after the secularization of religious houses in Belgian towns at the dawn of the modern age (1773/1796-1860)*, which is financed by the Research Foundation – Flanders (FWO, G.0B0912N). The promoters of this project are: Prof. Thomas Coomans (KU Leuven, department Architecture), Prof. Jan De Maeyer (KU Leuven, KADOC), Prof. Inge Bertels (Vrije Universiteit Brussel), and Prof. Tom Verschaffel (KU Leuven, KULAK). See for an introduction: Thomas Coomans and Reinout Klaarenbeek, "De Ruimtelijke Metamorfose van Steden Na de Secularisatie van de Kloosters in België Vanaf 1773 Tot 1860," *Stadsgeschiedenis* 9/2 (2014): 149-165.
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Ottoman Jaffa:  
From pilgrims' anchorage  
to regional center  
*Yoav Arbel*

Bedford Park:  
Ruralism and the  
construction  
of heterotopic space  
in London's suburban  
margin  
*Simon Knowles*

Trogir i njegova  
predgrađa  
*Dunja Babić*

Dvije „polovice”  
Novog Zagreba  
*Melita Čavlović*  
*Lana Lovrenčić*  
*Antun Sevšek*

# Integrated sources for urban development research



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# Ottoman Jaffa: From pilgrims' anchorage to regional center

Yoav Arbel

A city is a human creation that answers to various spatial, social, economic and political demands. When attempting to visualize and truly understand its formation process, the mere analysis of demographic fluctuations and geographical patterns may not suffice. Before anything else, focus should be placed on the two most basic motivators in the establishment of settlements – *need* and *culture*. These same motivators, in diverse forms, are also instrumental in boosting and guiding the development of settlements into fully-fledged cities.

Most cities are not planned entities but conglomerates that have evolved from camps, villages, cult centers and military bases. The original settlers chose locations that offered water, pasture and arable land, and in many cases also trade routes and defensible positions. Successful settlements grow and expand. A larger population – native and immigrant – entails more buildings, land and exchange, with consequent regulatory systems, hierarchy and institutions. The developing entity, being home to human beings, would aim for more than the means for production and survival as dictated by need. Cultural elements, too, reflecting the population’s world-views, faiths, fears, habits and morals, would appear in local architecture, lifestyle, language, and aesthetics. The development process involves inevitable tensions, some disruptive and harmful, others constructive and invigorating. They are a byproduct of the need and culture at the foundations of a city and may often be traced in its urban fabric.

According to Nahoum Cohen the structure of a city “is not difficult to understand once the principles governing it become familiar . . . We always start from a general plan, finding major and minor features as we close in”.<sup>1</sup> That code is evident in the ancient harbor city of Jaffa<sup>2</sup>, on the central coast of present day Israel (FIGS. 1-2). Over the last two centuries of Ottoman rule, Jaffa experienced unprecedented changes of fortune and subsequent alterations. Recovering from several destructive sieges and conquests during the late eighteenth century, it restored its ancient role as a bustling cosmopolitan center, reflecting need and culture in various manifestations. Some of the keys to understanding this progress are recorded in the texts and images left by actual witnesses; many are visible in Jaffa’s present architecture and street plan, while others are embedded in its soil, subject to archaeological exposure. This article, in essence, is an interdisciplinary attempt to view those unprecedented times of change from a perspective encompassing these diverse types of sources.

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Archaeology is widely recognized even by researchers outside the discipline as a valuable additional tool by which cities may be observed and studied.<sup>3</sup> The archaeological research on Jaffa, as on other historical cities in Israel,

Salvage  
Archaeology  
in Jaffa

has benefitted from numerous salvage excavations preceding construction and infrastructure renovation projects, as demanded by the Israeli Antiquities Law.<sup>4</sup> In the last two decades Jaffa has experienced a surge in such excavations, most of which have been conducted by the Israel Antiquities Authority (IAA). Excavations have taken place under streets, alleys, markets and the floors of standing buildings, involving constant logistic and safety challenges, as well as coordination with developers, residents and the general public. The results have justified the effort; in addition to innovative data on earlier periods, significant new information has come to light on late Ottoman Jaffa, enriching the wider textual, architectural, cartographic, artistic and photographic contexts.

### Jaffa until the nineteenth century

Jaffa's urban genesis dates to the early second millennium BCE.<sup>5</sup> The origins and meaning of the name are obscure,<sup>6</sup> in itself a reflection of the settlement's antiquity. Coveted for its harbor, trade routes, farming soil<sup>7</sup> and strategic location, Jaffa remained settled almost continuously over the millennia, submitting to Canaanite, Egyptian, Phoenician, Hellenistic, Hasmonean, Roman, Byzantine, Arab, Crusader, Mamluk, Ottoman, British and lastly Israeli rule. The more recent of these regimes have left their marks in the present urban scene; remains of the earlier are sealed in its ground. As is commonly found in the ancient mounds of the Levant since the Bronze Age, Jaffa's fortified hill held the homes of the elite as well as palaces, temples and government institutions. Most of the common population occupied its lower margins, or lived in farms, hamlets and residences in the surroundings. Archaeological excavations have shown that in times when political and economic conditions allowed, the urban sphere spread into the lower grounds (TAB. 1). At other times, those grounds were used for farming and burial. Such fluctuations were unusual; in other coastal cities of the Holy Land, such as Ascalon, Caesarea and Acre, once expansion had taken place only violent destruction could reverse it.

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Jaffa experienced its only prolonged abandonment between the mid-fourteenth and the mid-seventeenth centuries CE, after systematic destruction following the Mamluk conquest. Only the harbor remained in operation, despite its many hazards and deficiencies, thanks to profits from trade and pilgrim traffic.<sup>8</sup> Jaffa's harbor, in fact, barely merited its title. A string of rock ledges in the waters facing the town initially forced ships to anchor at sea, and goods and passengers were ferried in by rowboats. This situation remained fairly unchanged well into the nineteenth century.<sup>9</sup>

Gradual reconstruction began ca. 1650, as harbor-side Franciscan, Greek and Armenian pilgrims' hostels and monasteries were erected. Parts of the original Armenian hostel complex (FIGS. 3, 2.9), including a founding

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Period	Mound	Lower Grounds
Bronze Age – Iron Age (second millennium BCE – 538 BCE)	Settled	Unoccupied (few structures in the late Iron Age)
Persian (538 – 332 BCE)	Settled	Few structures
Hellenistic (332 – 142 BCE)	Settled	Domestic occupation
Hasmonean (142 – 63 BCE)	Settled	Unoccupied
Roman (63BCE – fourth century CE)	Settled	Unoccupied
Byzantine (fourth century CE – 636)	Settled	Public, domestic and industrial occupation
Early Islamic (636 – 1099)	Settled	Limited industry
Crusader (1099 – 1268)	Settled	Domestic occupation, fortifications
Mamluk – Early Ottoman (1268 – ca. 1650)	Only Harbor and watchtowers	Unoccupied
Middle – Late Ottoman (Ca. 1650 – 1840)	Settled	Few caravanserais during the later phase
Late Ottoman (Ca. 1840 – 1917)	Settled	Fast urban expansion

Ottoman Jaffa: From pilgrims' anchorage to regional center

TABLE 1  
Jaffa – Occupation sequence.

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FIGURE 1  
The hill of Jaffa, looking south  
(photograph by the author).

inscription, have been exposed under one of the buildings facing the harbor.<sup>10</sup> Muslim, Christian and later Jewish settlers soon followed. 397

By the mid-eighteenth century, Jaffa was significant enough to be fought over by foreign invaders and local strongmen. Two short-lived conquests, one in 1775 by the Egyptian officer Abu Dahab and another in 1799 by Napoleon, are notorious for their ensuing destruction and bloodshed. The devastation and later reconstruction left few discernible architectural testimonies to that turbulent period. The late eighteenth century fortifications appear on a map drawn by Pierre Jacotin, a French surveyor serving with Napoleon's forces.<sup>11</sup> Two towers and wall segments from these ramparts have been exposed at the northern and southern corners of Jaffa's eastern fortifications, later sites of the Ottoman barracks and police compound and the French Hospital, respectively.<sup>12</sup> Possible remains of the rough core of the walls have been preserved at Louis Pasteur Street, on the southern margins of Jaffa's hill (FIG. 2.14). The harbor was only lightly fortified, if at all, during this unstable period, as the natural shoals and rock ledges blocking it from the sea were apparently trusted as adequate protection. A sea wall was built later in the nineteenth century, on the foundations of Crusader fortifications.<sup>13</sup> Artifacts from various Jaffa sites associated with the two eighteenth century conquests and lesser incidents include several cannons, numerous cannon balls, musket spark flints and lead balls. p. 399

Peace and stability returned to Jaffa in 1807, with the rise of Muhammad Agha a-Shami, also known as "Abu Nabbut" ("father of the mace"), to the post of Ottoman governor. Abu Nabbut invested considerable effort and funds in reconstruction, focusing on the public sphere (FIG. 4). In addition, several new markets, baths and fountains were erected, most of them at the northeastern part of the city, near the government *saray* and the main gate. Among his more ambitious projects was the central mosque, which was accompanied by a madrasa, two sabils and affiliated shops and caravanseray.<sup>14</sup> The mosque (FIG. 2.5) remains Jaffa's chief Muslim center up to the present.<sup>15</sup> **Jaffa between 1800 and 1870: Recovery and Reconstruction** p. 402

Prior to Abu Nabbut's efforts and immediately following Napoleon's withdrawal, British Admiral Sir Sidney Smith assisted the Ottomans in refurbishing, reinforcing and partly reconstructing Jaffa's badly damaged ramparts. These reconstructed walls were later dismantled (see below), while a few parts of the popularly named Jerusalem gate, the main entranceway to the city, still stand (FIG. 2.6). The gate occupied the same spot in the eastern wall as its eighteenth century predecessor and probably incorporated segments of it. The gate is depicted on British Admiralty maps from 1841 (by Major Robe) and 1842 (by Lieutenant Skyring)<sup>16</sup> and p. 399



on various panoramic illustrations. Photographs by Louis Vignes and Félix Bonfils show the gate and its surroundings in 1860 and 1878 respectively.<sup>17</sup> These visual records, standing remains and archaeological discoveries allow a detailed reconstruction of the complex.

Incomers from the open market outside the walls crossed a bridge built over a defensive moat, reaching a small enclosed courtyard. The gate, topped by a tower, was to the south of the courtyard, opposite an ornate fountain.<sup>18</sup> To enter the city one had to turn 90-degrees southwards. This ancient precaution, intended to break the momentum of attacking forces, appears in the Holy Land as far back as in Iron Age sites such as Megiddo<sup>19</sup> and Timnah;<sup>20</sup> examples can also be seen in Crusader Caesarea<sup>21</sup> and in Ottoman gates in Jerusalem and Acre. In the case under discussion, all that remains visible of the entrance complex are the arched entrance, the inner gate courtyard, the fountain and parts of three of the tower's buttresses, embedded in late nineteenth century buildings.

Four elements have been brought to light in recent excavations.<sup>22</sup> The most impressive is a double-arched bridge stretched across the moat, having survived under the modern street with only its flagstones missing. Such preservation of the two-century-old bridge is a tribute to the Ottoman builders, who could not have envisioned the heavy mechanized traffic the structure has been sustaining over the last nine decades. The foundations of the western wall of the courtyard, of a flanking frontal bastion and the channel that drained the fountain have also recently been exposed.

A short distance away, to the north of the gate, stood a multi-angled bastion clearly depicted in a panoramic illustration by Joseph Mallord Turner from 1837 and on maps from 1841, 1842, 1863 and 1878.<sup>23</sup> On the latest, the highly detailed map by the German architect Theodor Sandel, the bastion is shown even after most other parts of the ramparts had already been demolished (FIG. 5). It disappeared shortly afterwards, with the construction in the late 1880's of the *Qishle* (FIG. 2.4), the Ottoman military and police compound.<sup>24</sup>

Excavations have revealed segments of its foundations (FIG. 6) under three incarceration cells and a small courtyard.<sup>25</sup> The southeastern bastion, Jaffa's most prominent fortification, appears in all of these maps but Sandel's. It was mostly demolished prior to the construction in 1879 of the French hospital (by the Order of St. Joseph of the Revelation, FIG. 2.10). Remains of the bastion have been discovered in excavations in the hospital grounds.<sup>26</sup> While still effective against Bedouins, peasant riots and other local threats, by the nineteenth century ramparts such as Jaffa's were a military anachronism. They maintained symbolic value, however, as a representation of the government's power, resources and organization skills.<sup>27</sup> It is an ancient dual role, associated with ramparts in the Holy Land from as early

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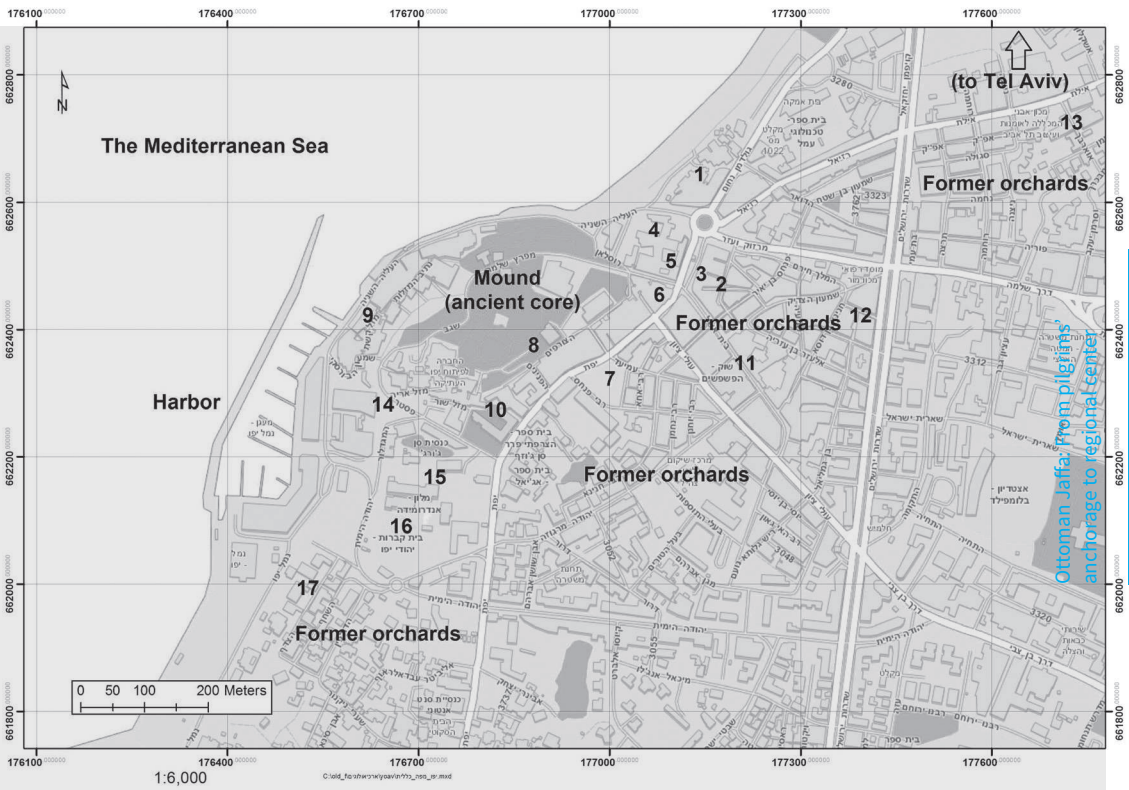


FIGURE 2  
Map of modern Jaffa and main sites  
mentioned in the article  
(map by Anjelina Dagot and Chen Ben-Ari,  
Israel Antiquities Authority)

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- 2.1.** Former municipal Muslim cemetery,
- 2.2.** Greek Market,
- 2.3.** Clock Tower Square,

- 2.4.** The Qishle – Ottoman police and army base,
- 2.5.** Central (“Mahmoudi”) Mosque,
- 2.6.** Ottoman city gate (“Jerusalem Gate”),

- 2.7.** Yefet Street,
- 2.8.** HaZorfim (“Jewelers”) Street,
- 2.9.** Armenian convent,
- 2.10.** French Hospital,
- 2.11.** Flea Market,

- 2.12.** Jerusalem Boulevard,
- 2.13.** German (formerly American) Colony,
- 2.14.** Louis Pasteur Street,
- 2.15.** Andromeda Hill,

- 2.16.** Old Jewish Cemetery,
- 2.17.** ‘Ajami quarter.

as the Middle Bronze Age.<sup>28</sup> After decades of continuous instability and occasional destruction, such image-building symbolism would have been useful to Jaffa's Ottoman government in its efforts to reestablish authority. The walls also included vacant grounds, reflecting their builders' vision of Jaffa's appropriate future urban expansion.

In 1831 Jaffa was conquered without a fight by the forces of Ibrāhīm, son of Muhammad Ali, Pasha of Egypt. Ibrāhīm implemented reforms that generally benefitted Jaffa, particularly the local Christian and Jewish communities.<sup>29</sup> The settling of Egyptian veterans and peasants in new villages around the city boosted local farming, and consequently trade and harbor activity. In 1840 the Ottomans returned to Jaffa, with the assistance of European powers. Jaffa's lush orchards, of which little remains today, flourished from the eighteenth century until the 1930's. Dense enough to serve as cover for Napoleon's artillery batteries, they were famous for their citrus, although dates, pistachios, apricots, almonds, mulberries, plums, pomegranates, olives, figs, bananas and potatoes were also cultivated.<sup>30</sup> Excavations under present streets, buildings and markets have uncovered conduits, wells and cisterns that were part of the irrigation system illustrated in contemporaneous art, texts and photographs.<sup>31</sup> Only short segments could be exposed in the crowded urban setting, but similar channels discovered in an open field near Nes Ziyona,<sup>32</sup> ca. 16 km southeast of Jaffa, were over 80 meters long. Iron fixings in the wells attest to imported pumping engines that replaced the older animal-powered antylia devices.<sup>33</sup> Mechanized innovations would revolutionize life in Jaffa and elsewhere in the Holy Land,<sup>34</sup> enhancing the process of urban expansion that would eventually eliminate Jaffa's agricultural sphere.

#### **1870-1917: Growth and Modernization**

The growing political influence of European powers and the impact of foreign consuls in Ottoman political affairs increased significantly during the second half of the nineteenth century.<sup>35</sup> They were clearly felt in cities such as Jaffa, home to Christian and Jewish minorities protected by the consuls. Members of these communities were regularly drafted as consular staff members and collaborators. The uneasy cooperation between Ottomans and Europeans led to profound changes in Jaffa during the closing decades of the nineteenth century. New schools and hospitals were established and managed by European Christian orders, a railway to Jerusalem was laid, and mail services improved. The anchorage retained many of its deficiencies until the end of Ottoman rule, yet it lost part of its age-old menace with the blasting of some of the reefs and the construction of a lighthouse, along with large storage facilities and a customs house.<sup>36</sup> European and Russian shipping companies regularly served Jaffa,<sup>37</sup> carrying home agricultural

products, notably citrus, and bringing in pilgrims, tourists and manufactured goods, from engines and construction materials to sewing machines and fine tableware. 401

Jaffa's first municipality, established in 1871, considered the installment of modern infrastructure as one of its main goals. By the turn of the twentieth century the city had stone-paved streets, partial street lighting, and a drainage and sewer system. A population of up to 3000, in the early nineteenth century, surged to seven times that number by the century's conclusion,<sup>38</sup> including a small but influential European community. Expansion beyond the traditional boundaries of the mound became inevitable.

The Ottoman *firman* issued in 1888, permitting the dismantling of Jaffa's walls, was official recognition of a de-facto situation. Militarily ineffective and a hindrance to development, the walls had already been taken apart to a large extent, and the stones used for new construction along their former lines (FIG. 7). Buildings and streets now occupied grounds last settled on by the Crusaders, and some that had never been built on before. Large Muslim neighborhoods evolved, such as Manshiyeh in the north and 'Ajami (FIG. 2.17) in the south.<sup>39</sup> The Jewish neighborhoods of Neveh Tsedek and Neveh Shalom were also established in this period, and in 1909 Tel Aviv was founded on the dunes further north. German colonies thrived to the northeast of Jaffa, in one case replacing an ill-fated American settlement (FIG. 2.13).<sup>40</sup> In a practical as well as symbolic act, a neo-classic government building and a military base were constructed around a new square outside the old city gate, where an open market had been. Jaffa's chief mosque was enlarged and a clock tower was inaugurated in the square in 1904 (FIG. 2.3) in honor of the sultan and as a symbol of modernity. p. 406 p. 399 p. 399 p. 399

By the turn of the twentieth century urban construction was gradually replacing the farmland east of Jaffa. In the 1890's The Brotherhood of the Holy Sepulcher, an arm of the Greek Orthodox Church charged with the acquisition, maintenance and leasing of real estate, purchased plots to the east of the new government square (FIG. 2.2). They established there a new commercial district popularly known as the "Greek Market", consisting of a well-planned network of broad streets lined with uniform, spacious shops, and accommodating cart movement and later also mechanized traffic. Waste pits outside the shops contained material testimony to the various wares that were being sold. Wine and soda glass bottles, stoneware, porcelain and pseudo-porcelain dishes, roof tiles, horseshoes, glass and metal jewelry, pharmaceutical vials, inkwells, dice and domino game pieces, and even pocket watches have all been found, along with coins from the Ottoman realms and Europe.<sup>41</sup> The orchards and gardens between the main travel routes eastwards, along which khans, shops and homes already stood, also p. 399



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FIGURE 3  
The Armenian convent  
(photograph by the author).

FIGURE 4  
Jaffa in the 1840's, looking south.  
Illustration by W.H. Bartlett. Courtesy of  
Zvi Shacham.



Ottoman Jaffa - *tsiliasagiv*  
anchorage to regional center



FIGURE 5  
T. Sandel's detailed map of Jaffa, 1878. The numbers mark diplomatic, religious and government institutions and the homes of leading residents. Top right: the northeastern Ottoman bastion (circled).  
Courtesy of Zvi Shacham.

FIGURE 6  
Foundations of the northeastern bastion, the Qishle excavations (photograph by Tsila Sagiv, Israel Antiquities Authority).

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gave way to new buildings. Derelict agricultural irrigation channels sealed under streets and structures of the above-mentioned "Greek Market" reflect this dynamic time of change (FIG. 8).

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Further east, between the present Flea Market (FIG. 2.11) and Jerusalem Boulevard (FIG. 2.12), cultivation proceeded under British rule (1917-1947) as evidenced by wells and channels discovered under buildings from the 1920's and 1930's. The only reminders of these once world-famed orchards are small clusters of fruit trees in the walled yards of residential compounds, and the Jaffa Oranges brand.

Although the "very narrow, uneven and dirty streets"<sup>42</sup> and the "curious profile of flat-roofed houses, rising step by step one above the other"<sup>43</sup> of Jaffa's inner core would remain fairly unaltered into the 1930's, vacant areas in the eastern part of the formerly walled perimeter underwent significant development in the late nineteenth century. This area, bare of structures on the 1842 Skyring map, appears densely built-up on the Bedford map, only 21 years later.<sup>44</sup> A long street crossing it from north to south is shown in detail on the Sandel map of 1878.<sup>45</sup> Presently named HaZorfim (The Jewelers)

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Street (FIG. 2.8), it is lined with homes, workshops, cafes and galleries, many of which were formerly the elegant two-story residences of some of late Ottoman Jaffa's wealthiest citizens (FIG. 9). Archaeological excavations have encountered segments of the sanitary system that drained the residences into a central conduit running under the street toward the sea.<sup>46</sup> While technologically similar to Roman examples, in a town that had for centuries depended on cesspits and open sewer ditches for the draining of waste this was a welcome innovation. Above all, it helped to curtail the recurrent lethal epidemics.<sup>47</sup> The constant threat of such epidemics compelled local authorities to build and maintain a large quarantine station to the south of the walls – presently Andromeda Hill housing complex (FIG. 2.15) – to which many incomers were confined upon their landing at the harbor.

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Demographic growth and urban expansion in late Ottoman Jaffa may also be followed through developments in its funerary sites.<sup>48</sup> Until the early twentieth century, each of Jaffa's religious groups buried its dead in designated communal graveyards. The Muslims had cemeteries to the north and south of the city (see FIG. 4, above). Also to the south of Jaffa were the Jewish and Christian burial grounds, except the Protestant graveyard, which was located to the east of the walls. Constant urban expansion resulted in the cemeteries being gradually surrounded by new streets and buildings. In the aftermath of the cholera outbreak of 1902, the local authorities decided to prohibit burials within the city, and allocated new communal plots in the (then) open dunes further to the north and south for this purpose. In later decades, the grounds of most disused cemeteries

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were made available for new construction, subsequently linking previously detached neighborhoods to the historical city core. 405

The main Muslim cemetery (FIG. 2.1), situated in late eighteenth and nineteenth century maps at a considerable distance from the northern walls, abuts the Clock Tower Square in an early twentieth century photograph.<sup>49</sup> p. 399  
An Ottoman edict to close the cemetery was issued in 1915,<sup>50</sup> but while the tombstones were removed, most of the actual burials remained. Hundreds have been uncovered in recent salvage excavations.<sup>51</sup> A monument outside the Church of St George in the south of modern Jaffa marks a mass grave of Greek Orthodox residents who died between 1843 and 1916 and were originally interred in the communal cemetery near the church. A few marked graves in a small plot are all that is left of the Protestant cemetery, which on Sandel's 1878 map reached the Gaza Road – now Yefet Street (FIG. 2.7). Houses and courtyards occupy much of the cemetery's former grounds. The Jewish cemetery (FIG. 2.16) remained in place even after burial there was formally banned.<sup>52</sup> Intensive efforts by leading rabbinical figures saved it from the destruction the other burial grounds were subjected to (FIG. 10). Still, only 805 out of over 2000 original graves may still be found.<sup>53</sup> The discrepancy reflects the loss of graves to flooding episodes and adjacent road construction. p. 399  
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As the nineteenth century drew to a close, Jaffa was still a pilgrims' anchorage in the Ottoman realm, yet at the same time a cosmopolitan regional center. Foreign impact was reflected in the form and character of public squares, government buildings, schools and hospitals, as well as in planned markets, a train station and a refurbished dock. The European effect did not overshadow the Ottoman dominance. The fading empire, its sultans and its culture were still apparent in Jaffa, from the royal *tughras* over public institutions to prominent architectural features in private and public buildings. In late Ottoman Jaffa one could wander from centuries-old narrow passages, serpentine lanes and colorful bazaars into modern squares, streets and markets. Elegant residences could be seen a few dozen meters from crumbling stone hovels; oriental baths next to neo-classic government structures; imposing mosques near solid churches. Change also meant replacement. Farmland and open fields around the city were giving way to new neighborhoods; narrow dirt tracks widened into paved broad roads, and old cemeteries were closed or destroyed. Evidence of this manifestation of need and culture abounds under the present city. Material assemblages recovered in archaeological excavations have included Turkish pipes and coffee cups, roof and floor tiles from Marseilles, wine bottles from vineyards in Bordeaux, soda bottles from

## Conclusions



p. 401 FIGURE 7  
Late Ottoman  
buildings along Yefet  
Street, on the former  
city wall line  
(photograph by  
the author).



p. 404 FIGURE 8  
Greek Market  
structures over the  
foundations of older  
buildings and  
irrigation channels  
(photograph by  
the author).





FIGURE 9 p. 404  
The Kandinov residence,  
HaZorfim Street  
12-16, built 1890's  
(photograph by  
the author).



FIGURE 10 p. 405  
Jaffa's old  
Jewish cemetery  
(photograph by  
the author).

England, Russian silver cups, German and British rifles and ammunition, and shards of fine tableware from an array of Ottoman and European producers, along with hundreds of Ottoman, Egyptian, Austrian, Russian, French, north African and other coins.

People may live their lives as their forefathers did, yet still adapt to some extent by choosing changes that suit them best. This is what the people of Jaffa appear to have done. Tensions were nonetheless inevitable, especially where diverse ethnic groups adhering to different religions shared a crowded common sphere. Jaffa's Christians and Jews welcomed the increasing European influence and its architectural expression as a source of hope for better opportunities and a brighter future. Many in the Muslim majority saw things differently. The Ottomans, albeit hardly benevolent rulers, were still a regional Muslim power that relied on its Muslim citizens. To some of these citizens the changing city-scape, despite all its advantages, was a tangible representation of a growing concern.

Historically, Jaffa has always been a place where Europe and the Levant have met in a plethora of economic, material and spiritual aspects. They continue to meet and exchange there at present, although the city has long lost its important position at the Holy Land stage. Textual and illustrated sources are essential in the reconstruction of its dynamic history, as are archaeological remains, yet much may be learned from what is plainly visible along the streets of the present town and its margins. Students should start their quests by simply walking through the alleys and observing – and conclude their study by doing the same

## Notes

- 1 Nahoum Cohen, *Urban Conservation* (Cambridge, Mass.: The MIT Press, 1999), 41.
- 2 See, for example, biblical references to Jaffa's harbor: Jonah 1:3, Ezra 3:7, 2 Chronicles 2:16.
- 3 Cohen, *Urban Conservation*, 99.
- 4 Martin Peilstöcker, "The History of Archaeological Research in Jaffa, 1948–2009," in *The History and Archaeology of Jaffa 1*, eds. Martin Peilstöcker and Aaron A. Burke. (Los Angeles: Cotsen Institute of Archaeology Press, 2011), 21.
- 5 Jacob Kaplan, "The Archaeology and History of Tel Aviv–Jaffa," *The Biblical Archaeologist* 35.3 (1972): 75.
- 6 Samuel Tolkowsky, *The Gateway of Palestine* (London: George Routledge & Sons, 1924), 1.
- 7 Jaffa's gardens and fertile grounds are praised as early as in the Papyrus Anastasi (I, XIX) from the late thirteenth century BCE.
- 8 Tolkowsky, *The Gateway of Palestine*, 129–135; Elie Haddad, "The Ascendance and Decline of the Jaffa Sea Port from the

- Time of the Crusaders Period to the Beginning of the First World War,” PhD Diss. University of Haifa (Hebrew), 2013, 87–90.
- 9 See for example, Wittman’s description of the harbor as “very bad, owing to the extreme unevenness of the ground, which abounds in rocks and shoals for a considerable extent of coast”. William Wittman, *Travels in Turkey, Asia-Minor, Syria and across the Desert into Egypt, during the years 1799, 1800, 1801* (London: T. Gillet, 1803), 129. Wittman’s testimony is representative of numerous others’.
- 10 Alexander Glick et al., “An Armenian Inscription from Jaffa,” *Israel Exploration Journal* 64.1 (2014): 103–118.
- 11 Zvi Shacham, “Jaffa in Historical Maps,” in *The History and Archaeology of Jaffa 1*, ed. Martin Peilstöcker and Aaron A. Burke. (Los Angeles: Cotsen Institute of Archaeology Press, 2011), 137–174, fig. 13.8.
- 12 Yoav Arbel, “Yafo, the Qishle, Preliminary Report,” *Excavations and Surveys in Israel* 121 (2009), accessed December 24, 2016; Yoav Arbel, “Excavations at the Police Compound (Qishle) in Jaffa,” in *The History and Archaeology of Jaffa*, ed. Martin Peilstöcker and Aaron A. Burke. *Ägypten und Altes Testament*, eds. S. Wimmer & W. Zwickel (Münster, Germany: Ugarit Verlag), forthcoming; Amit Re’em, “Yafo, the French Hospital, 2007–2008. Preliminary Report,” *Excavations and Surveys in Israel* 122 (2010), accessed December 24, 2016.
- 13 Elie Haddad, “Yafo Harbor, Preliminary Report,” *Excavations and Surveys in Israel* 121 (2009), accessed December 24, 2016; Haddad, “The Ascendance and Decline of the Jaffa Sea Port,” 287.
- 14 Ruba Kana’an, “Waqf, Architecture, and Political Self-Fashioning. The Construction of the Great Mosque of Jaffa by Muhammad Aga Abu Nabbut,” *Muqarnas* 18 (2001): 120.
- 15 This mosque features in the complex relations between Jaffa’s Muslim population and the Israeli state, from riots near its premises in times of heightened tensions to verbal and legal confrontations over the enhanced speaker volume for the Muslim call to prayer.
- 16 Shacham, “Jaffa in Historical Maps,” fig. 13.12–13.
- 17 Zvi Shacham, “A Panoramic View of Late Ottoman Jaffa from November 1860 by Louis Vignes,” in *The History and Archaeology of Jaffa II*, ed. Aaron A. Burke and Martin Peilstöcker. (Los Angeles: Cotsen Institute of Archaeology Press), forthcoming; Yoav Arbel and Lior Rauchberger, “The Fortified Gate of the Land of Israel,” *Et-Mol* 216 (2011): 16–18 (Hebrew); Yoav Arbel and Lior Rauchberger, “The Jerusalem Gate of Late Ottoman Jaffa: An Updated Survey,” in *The History and Archaeology of Jaffa II*, ed. Aaron A. Burke and Martin Peilstöcker. (Los Angeles: Cotsen Institute of Archaeology Press), forthcoming.
- 18 Ruba Kana’an, “Two Ottoman *Sabils* in Jaffa (c. 1810–1815): an Architectural and Epigraphic Analysis,” *Levant* 33 (2001), 189–195. The fountain received mixed impressions from nineteenth century witnesses, see James S. Buckingham, *Travels in Palestine, through the countries of Bashan and Gilead, east of the Rive Jordan*. 2nd ed. 2 vols. (London: Longman, Hurst, Rees, Orme, and Brown, 1822), 146; William H. Dixon, *The Holy Land*. Vol. 1. 2 vols. (London: Chapman and Hall, 1865), 16.
- 19 David Ussishkin, ed., *The Renewed Archaeological Excavations at Lachish (1973–1994), Vols. 1–5*. Monograph Series 22. Emery and Claire Yass Publications in Archaeology (Tel Aviv: Poe & Hitchcock, 2004), 514–523.
- 20 Amihai Mazar, *Timnah (Tel Batash) I: Stratigraphy and Architecture*, Qedem 37, 2 volumes (Jerusalem: Institute of Archaeology, Hebrew University of Jerusalem, 1997), 113–121.
- 21 Kenneth G. Holum et al., *King Herod’s Dream: Caesarea on the Sea* (New York, Norton, 1988), 230.

- 22 Yoav Arbel et al., “Yafo, Roslan and Mifraz Shlomo Streets,” *Excavations and Surveys in Israel* 124 (2012), accessed December 24, 2016; Arbel and Rauchberger, “The Fortified Gate”; Arbel and Rauchberger, “The Jerusalem Gate of Late Ottoman Jaffa”.
- 23 Rehavam Ze’evi, ed., *Yafo – Tides of Times* (Tel Aviv: Ha’aretz Museum, 1985) (Hebrew), 76; Shacham, “Jaffa in Historical Maps,” figs. 13.12–13, 13.15; Ruth Kark, *Jaffa, A City in Evolution (1799–1917)*, (Jerusalem: Yad Izhak Ben-Zvi, 1990), 64, map 7.
- 24 Zvi Shacham, “The Northeastern Bastion of Jaffa’s Fortifications,” in *The History and Archaeology of Jaffa*, edited by Martin Peilstöcker and Aaron A. Burke. Ägypten und Altes Testament, eds. S. Wimmer & W. Zwickel. Münster (Germany: Ugarit Verlag), forthcoming.
- 25 Arbel, “Yafo, the Qishle”; Arbel, “Excavations at the Police Compound”, forthcoming.
- 26 Re’em, “Yafo, the French Hospital”.
- 27 Elizabeth DeMarrais et al, “Ideology, Materialization and Power Strategies,” *Current Anthropology* 37.1 (1996), 18–19.
- 28 Amihai Mazar, *Archaeology of the Land of the Bible, 10,000–586 B.C.E.* (New York: Doubleday, 1992), 208; David Ilan, “The Dawn of Internationalism – The Middle Bronze Age,” in *The Archaeology of Society in the Holy Land*, ed. T.E. Levy (London: Leicester University Press, 1998), 314.
- 29 Kark, *Jaffa, A City in Evolution*, 56.
- 30 Mary E. Rogers, *Domestic Life in Palestine* (Cincinnati: Poe & Hitchcock, 1865), 30; Kark, *Jaffa, A City in Evolution*, 239–241.
- 31 Yoav Arbel, “Yafo, Flea Market Complex,” *Excavations and Surveys in Israel* 120 (2008), accessed December 24, 2016; Martin Peilstöcker and Aaron A. Burke., “Yafo, Flea Market Complex”. *Excavations and Surveys in Israel* 118 (2006), accessed January 7, 2017; Martin Peilstöcker and Aaron A. Burke, “Preliminary Report for the 2007 Ganor Compound Excavations,” in *The History and Archaeology of Jaffa 1*, ed. Martin Peilstöcker and Aaron A. Burke. (Los Angeles: Cotsen Institute of Archaeology Press, 2011), 181; Lior Rauchberger, “Yafo, Ganor Compound,” *Excavations and Surveys in Israel* 124 (2012), accessed December 24, 2016; Angelina Dagot, “Yafo, Rabbi Aha Street,” *Excavations and Surveys in Israel* 120 (2008), accessed December 24, 2016; Amir Gorzalczany, “Yafo,” *Excavations and Surveys in Israel* 120 (2008), accessed December 24, 2016; Yoav Arbel and Lior Rauchberger, “Yafo, Magen Avraham Compound,” *Excavations and Surveys in Israel* 127 (2015), accessed December 24, 2016.
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- 35 Arnold Blumberg, *Zion before Zionism, 1838–1880* (Jerusalem: Devora, 2007), 37–40, 151–162.
- 36 Kark, *Jaffa, A City in Evolution*, 233–235; Haddad, “The Ascendance and Decline of the Jaffa Sea Port”, 289.
- 37 Kark, *Jaffa, A City in Evolution*, 271; Blumberg, *Zion before Zionism*, 129; Yoav Arbel, “An Austrian Lloyd Seal from Jaffa,” *Strata – Bulletin of the Anglo-Israel Archaeological Society* 32 (2014), 109–118.
- 38 Kark, *Jaffa, A City in Evolution*, 145–151.
- 39 Talkowsky, *The Gateway of Palestine*, 162–163.
- 40 Reed M. Holmes, *The Forerunners* (Tel Aviv–Yafo: Reed and Jean Holmes, 2003); Kark, *Jaffa, A City in Evolution*, 84–91.
- 41 Arbel, “Yafo, the Greek Market”.

- 42 Wittman, *Travels in Turkey*, 129.
- 43 Rogers, *Domestic Life in Palestine*, 21.
- 44 Shacham, "Jaffa in Historical Maps," figs. 13.13, 13.15.
- 45 Shacham, "Jaffa in Historical Maps," fig. 13.19.
- 46 Yoav Arbel, "Yafo, HaZorfim Street, Preliminary Report," *Excavations and Surveys in Israel* 122 (2010), accessed January 7, 2017.
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- 48 Arbel, Yoav, "Post-Medieval Muslim Burials in Jaffa: Archaeological Evidence and Historical Perspective," *Journal of Islamic Archaeology* 4.1 (2017): 87–112.
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- 50 Kark, *Jaffa, A City in Evolution*, 299; Samuel Giler, "The Tomb of Sheikh Abū Rabāḥ in Jaffa," *Ariel* 209–210 (Hebrew), forthcoming.
- 51 Arbel, "Yafo, the Qishle"; Arbel, "Excavations at the Police Compound"; Arbel, "Yafo, the Elisabeth Bergner Compound," *Excavations and Surveys in Israel*, forthcoming; Meir Edrey and Boaz Gross, "The Stratigraphy of the Eastern Area of the Qishle Compound," in *Excavations at Jaffa: The Mound and its Surrounding Area*, ed. Ze'ev Herzog et al., *Salvage Excavation Reports* 11, forthcoming; Ofer Sion and Yehuda Rapuano, "Yafo East, Razi'el and Ratosh Streets," *Excavations and Surveys in Israel*, forthcoming.
- 52 Hannah Ram, *The Jewish Community in Jaffa; From Sephardic Community to Zionist Center* (Jerusalem: Carmel Publishing, 1996) (Hebrew), 351–354.
- 53 The figures appear on the website of the Jewish burial society (Chevra Kadisha). Other sources state different numbers. See Ram, *The Jewish Community in Jaffa*, 358, footnote 43.

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# Bedford Park: Ruralism and the construction of heterotopic space in London's suburban margin

Simon Knowles

Within the context of the modern period, the suburb conceived as a ruralised space of retreat where an improved form of domestic life could be safely created, begins to emerge at a number of locations around the city of London during the eighteenth century. This vision of suburban life is first seen in the large villas, set in extensive grounds, built along the Thames at Twickenham and Richmond and in the bourgeois enclave constructed around Clapham Common.<sup>1</sup> The linkage established here between ruralised suburban space and the middle class was extended at the end of this century to include the idea of the garden suburb, first fully developed by John White in his 1794 plan for the Eyre Estate.<sup>2</sup> His use of open spaces planted with trees and an asymmetrical street plan, suggestive of the evolution over time indicative of traditional village development, was also adopted in 1823 by John Nash in his plans for Regent's Park Village East and West.<sup>3</sup> With its potential to combine the advantages of city and country in a single coherent space, the idea of suburban value, defined by its ruralised aspect, continued to gain traction during the middle decades of the century. Further amplified by the construction of outer suburban locations such as Haverstock Hill and Sydenham, the idea of the garden suburb had, by the 1870s, become firmly fixed in the public imaginary.<sup>4</sup> Defined by Henry James, in his essay *The Suburbs of London* (1871), as “the mingling of density and rurality”, the spatial and social significance of this perception of suburbia was made manifest in one of the most intriguing developments of the period: Bedford Park.<sup>5</sup>

Constructed on a green-field site in West London, this suburban enclave was the brainchild of Jonathan Carr (1845-1915). Operating as a cloth merchant with entrepreneurial aspirations but no background in property development, he began purchasing land in 1875 immediately north of the recently opened railway station at Turnham Green.<sup>6</sup> In the following year, in an article titled “Bedford Park Estate, Turnham Green”, *The Building News* summarized Carr's ambitions for this new estate, outlining his plan, “to supply for the middle classes ... houses well planned, conveniently arranged and constructed with regard to both stability and comfort and architectural character.” Having clearly established its social value, the article went on to identify the principal building materials as red brick and tile, the plot size of each house as a relatively modest 50 by 75 feet, with rental values ranging from £45 to £65. The article's positive evaluation of Carr's estate, also drew attention to Bedford Park's rural aspect, detailing how each house was to be set in “gardens filled with shrubs, surrounded by oak fencing”.<sup>7</sup> This activation of space, emulating the visual characteristics and gradual evolution of an English village, was also reflected in the overall asymmetry of the estate's street plan and its distribution of plots.<sup>8</sup>





Bedford Park: Ruralism and the construction of historic space in London's suburban margins

Crick...

FIGURE 1

“Plan of Bedford Park, as developed by Jonathan Carr.” Reproduced in D. W Budworth, *Jonathan Carr's Bedford Park*, The Bedford

Park Society, 2012. Reproduced by kind permission of Dr David Budworth. © Dr David Budworth.

In February 1877, Jonathan Carr set out his own position in the same journal. Signing himself as “The Freeholder”, he detailed his intention to commission houses, “that a gentleman would be glad to live in, which should be perfect architecturally, as the most splendid house, but that the extreme cost of a detached house should be £700, and for a pair of villas £1,100”. Carr explained his intention to offer an alternative to the current style of suburban villa of which he had heard “nothing but condemnation”, with well-designed homes that would combine this moderate price with aesthetic value.<sup>9</sup> His estate would include shops, a pub and a church, all of which were to be situated close to the new railway station (FIG. 1). More radical, was his plan to build a club-house with a tennis court for residents and an art school, whose presence (along with the club) would validate Bedford Park’s identity as a discrete community where health, education and culture guaranteed social and therefore moral value. By activating the familiar model, identified by James, of a ruralised suburb, Carr planned an estate whose intimate scale and community facilities would bring to its residents a measure of relief from the pressures of urban life, while retaining, through the railway, its close connection to the city.<sup>10</sup> This social agenda, as Andrew Saint recently argued, built upon his long term commitment to “Liberal-Radical politics”.<sup>11</sup>

This strategy clearly established the architectural and social advantages of Bedford Park by calling upon one of the most important elements in the construction of place identity: its mythical value. Such myths operate as a nexus, distilling the history, associated social practices and representations of place into a form that uses stereotypical values as a means to establish and amplify localized identity, helping to define a particular place by distinguish it from others.<sup>12</sup> As an intellectual construct, such myths, as the social geographer Yi-Fu Tuan has argued, are often highly elaborate, responding to the topography of place through feeling and imagination and which, in the context of residential spaces, frequently idealize place through myths of intimacy and security.<sup>13</sup> And yet Carr’s desire to create something new, whose value was measured by its capacity to create a simulacra of something old – in this case a long established English village – also revealed what Holloway and Hubbard have identified as the “fragmented, ambiguous and often contradictory”, aspects of place identity.<sup>14</sup> This underlines the extent to which space is struggled over by those who wish to define and therefore control it. The contradictions contained within Carr’s conception not only reflect the porous and hybrid nature of social space, they also demonstrate how such identities, when expressed through mythical values, can activate localised desires for a more bounded and authenticated sense of place and social value.<sup>15</sup>

Carr's article from 1877 not only established Bedford Park's architectural form, it also directed the reader's attention towards its social identity, expressed through planned facilities such as the club-house, whose purpose was to bind this community by promoting a range of behaviours and attitudes through which a heightened degree of social stability could be achieved. These social and architectural considerations gave shape to what Andrew Saint identified as Carr's principal ideological preoccupation, his desire to challenge perceived prejudices regarding the aesthetic value of suburban space and the quality of life such locations offered to the middle class.<sup>16</sup> Fairly typical of these contemporary attitudes was the condemnation offered by John Ruskin. Writing in 1873, he described how the rural lanes of his childhood, spent south of London, were now "covered by literally, many thousands of houses built within the last ten years of rotten brick". Having fulminated against the space, he then turned his attention to the suburbanites themselves, whom he collectivized by claiming that they live without "skill, knowledge or means of happiness".<sup>17</sup> However, Ruskin's position was far from universal. In an article written in 1891, Sidney Low countered this extreme critique with the brilliant claim that in contrast to this collective enfeeblement, the young men of suburban London displayed enough strength and vitality to "make a regiment which would hold its own on a battlefield against a *corps d'élite* selected from any army in the world". For this commentator, suburbanization was not a modern form of destruction, but the "greatest advance of the decade", a crucible in which the benefits of both city and countryside could be combined to produce something far greater than the sum of its parts.<sup>18</sup> Yet in spite of clear differences in their rhetorical positions, these two writers still recognized (as did Carr) that the key to understanding the nature of suburban experience was to be found in the close affinity between people and place. Alongside its mythic value and its position within the panoply of attitudes circulating on the subject of suburbanization, Carr's plan to build a modern suburban estate, whose architectural form referenced the identity of an English village, also reveals an intriguing connection to Michel Foucault's later formulation of heterotopic space. In his tantalizingly brief description, Foucault argued that such spaces operate as sites of difference, carrying utopian values that can be defined by their capacity to be, "in relation with all other sites, but in such a way as to suspect, neutralize or invert the set of relations that they happen to designate, mirror or reflect".<sup>19</sup> This complex conception of space connects at a number of levels with the process of suburbanization and to the development of the garden suburb in particular. Conceived as an idealized space whose ruralising tendency inverts the characteristics of the city of which it forms an integral part, Bedford Park's



PRINT OF ORIGINAL POSTER 1877 ADVERTISING THE PROPOSED FIRST GARDEN CITY IN ENGLAND COMMENCED THEN BY JOHNATHAN CARR ORIGINATOR OF BEDFORD PARK  
 THIS VIEW WAS MADE BY MAURICE B. ADAMS IN COLLABORATION WITH R. NORMAN SHAW TO SHOW 3 TYPES OF HOUSES DESIGNED BY HIM. THE LAST ON THE LEFT WAS BY R. W. GODWIN F.S.A.  
 PROBABLY THE LAST EXISTING COPY OF THIS PHOTOGRAPHIC ENGRAVING IS IN THE PUBLIC LIBRARY CHISWICK BY TORALD 1987.

FIGURE 2

Maurice B. Adams, *Bedford Park Estate, Turnham Green. Perspective view of villas* (1877, Chiswick Library Local Collection).  
 Reproduced by kind permission of Chiswick Library Local Collection.

heterotopic qualities lie in its capacity to mirror both city and country, while remaining fundamentally separate from both. In the third of the six principles Foucault used to define heterotopias, this connection is further amplified when he argued that such spaces encompass, “several sites that are themselves incompatible”, giving, as his example, the garden, described as “a happy universalizing heterotopia since the beginnings of antiquity”.<sup>20</sup> This connection between the definition of heterotopic sites and the social function of the suburb as a space of separation is further endorsed by his fifth principle, which states that “heterotopias always propose a system of opening and closing that both isolates them and makes them penetrable ... To get in one must have a certain permission and make certain gestures”.<sup>21</sup> In relation to Bedford Park, separated as an enclave but also connected by the railway, its planned identity as a setting designed specifically for the cultured middle class, helped to define its boundary very much in these social terms. In his sixth principle, Foucault further elaborated this conception of a heterotopia as a space of separation, carrying ideological as well as social value. In this case, it is defined by its opposition to other real spaces, its identity “as perfect, as meticulous, as well arranged as ours is messy, ill constructed and jumbled. This latter type would be the heterotopia, not of illusion, but of compensation”.<sup>22</sup> Foucault’s speculation on the heterotopic site as a space of separation and compensation is one that lies at the heart of the garden suburb, conceived as a preferred alternative to the socially problematic and polluted city centre.

In terms of its construction, Carr’s estate, conceived as a space of separation endorsed by its English village identity, was most clearly started by the “Queen Ann” style adopted by its principal architect, Richard Norman Shaw (1831-1912). Replacing Carr’s initial choice, Edward William Godwin, Shaw joined the project in 1877, submitting his first plans in that year for detached and semi-detached houses that made extensive use of this recently established style.<sup>23</sup> The distinctive features of “Queen Ann” were the use of red brick and tile hung walls, steeply pitched roofs with tall chimneys and dormer windows, Dutch gables, decorative fenestration using small panes of glass, and white painted woodwork. Shaw varied this range of building materials and architectural features across a number of housing types, creating degrees of individuality that helped counteract the suburban estate’s tendency towards architectural monotony.<sup>24</sup> This emphasis on establishing a distinctive but linked identity for each house was further elaborated through the use of decorative terracotta mouldings of motifs such as sunflowers, used as a means to amplify the identity of both individual houses and small groups of buildings.<sup>25</sup> Ideologically, Shaw’s use of the “Queen Ann” style suited Carr’s scheme at a number of



levels. Firstly, the eclectic use of traditional materials suited his plan to build a suburban community that recreated the appearance and spirit of what Nicholas Taylor described as, “a mythical early seventeenth century village”.<sup>26</sup> Secondly, its application by Shaw countered the palatial street façade of the Georgian Terrace with a series of plans that encompassed a more intimate and flexible architectural approach, suitable for properties of a more modest scale.<sup>27</sup> Thirdly, its perceived association with informality and an assumption of liberal individualism made it a particularly appropriate architectural style for the kind of middle class, cultured, *rus in urbe* enclave that Carr was trying to construct.<sup>28</sup> Fourthly, the connection between the “Queen Ann” and the Aesthetic Movement implied a more direct link between the estate and London’s artistic community, already signified by Carr’s plans to include an art school. Fifthly, this connection between architectural style and aesthetic value also aligned with perceptions of feminine taste, appropriate to a domestic suburban setting designed to amplify notions of security and privacy.<sup>29</sup> Alongside his 1877 designs for residential houses, Shaw also submitted designs for the club-house, the church of St Michael and All Angels, the local pub (the Tabard Inn) and a row of shops, all completed between 1879 and 1880. These slightly later designs, encompassing social and commercial function, demonstrate the adaptability of the “Queen Ann” style.<sup>30</sup> Although Shaw’s work on the estate ended at this point, two of his associates, Maurice B. Adams and E. J. May, continued to work on the project, maintaining the close link between Bedford Park and the aesthetics of the “Queen Ann”.<sup>31</sup>

Although initial progress on the estate was slow, improvements in market conditions accelerated the speed of development and by 1883, facilitated by further land purchases, the estate had been extended to 113 acres and contained 490 houses.<sup>32</sup> By the mid 1880s, Carr’s plan for a self-contained middle class community was largely complete.<sup>33</sup> Alongside its architectural style, this ideological imperative was also inscribed within its overall layout. His desire to recreate an English village is particularly evident in the placement of the church, the shops and the pub, all clustered at one end of Acton Green, recreating the communal function of the traditional village green, while the proximity of the railway station underlines the importance of the estate’s position within the city’s transport system.<sup>34</sup> This schema is further amplified by the close proximity of the club-house, a little to the north, and by the layout of residential streets, a number of which fan out from this grassed area. Bedford Park’s ruralised identity was further endorsed by the retention, where possible, of mature trees, the planting of saplings along its new streets, and the presence of front as well as rear gardens. This planned feature not only brought the rural world into the city

(as had been done at the Eyre Estate) it also combined the sense of intimacy, associated with private spaces, with that of spaciousness experienced in public spaces. In his brief description of Bedford Park, Edward Walford acknowledged this combination of spatial and mythic values: “on the west of Stamford Brook Green there has sprung into existence a veritable village, or rather, a little town, of ‘Queen Anne’s’ (*sic*) houses. These are built in small groups, or isolated, and stand in tiny patches of ground, with gardens attached, in which sun-flowers, hollyhocks, and other old-fashioned flowers predominate”.<sup>35</sup> Herman Muthesius also acknowledged the significance of Bedford Park in his book *The English House* (1904), in which he identified its rural features, as the key contribution made by Carr’s estate to the history of suburban development.<sup>36</sup> Shaw’s approach to street layout, use of vernacular styles of architecture and the mix of detached, semi-detached and terraced housing, was quickly adopted by other developments in and around London, including Heathfield Park (1883) and Grove Park Estate (1888).<sup>37</sup> Extending its influence into the twentieth century, Bedford Park’s key contribution to the ideology of the garden suburb was further developed at famous locations such as Letchworth (1903) and Hampstead Garden Suburb (1907).<sup>38</sup>

In terms of its visual representation, Bedford Park conceptualized as an ersatz English village, was underlined at the outset by an advertising campaign of 1877 built around an image prepared by Shaw’s associate, Maurice Adams (1849-1933). Titled *Bedford Park Estate, Turnham Green. Perspective view of villas* (1877), this advert shows a street lined with Shaw’s semi-detached and detached houses (FIG. 2). The rural aspect created by these red brick buildings with steeply gabled roofs and dormer windows, so typical of the “Queen Ann”, is further amplified by the front gardens planted with shrubs and by the mature trees at the far left. In the foreground of Adams’s poster, a small group of workmen can be seen completing the road, their curiously reduced scale minimizes their impact on this quiet residential setting. However, the text in the top left hand corner tells a rather different story, it reads: “Bedford Park is within 50 yards of Turnham Green Railway Station”, acknowledging the pivotal connection that had motivated Carr’s original land purchases.<sup>39</sup> Measured by this emphasis on transport, Bedford Park can also be understood as a railway suburb, in which social value was measured in spatial terms by degrees of both connection to, and separation from the centre.<sup>40</sup> This all-important degree of separation coupled to modern technologies of connection was achieved by the presence of Acton Green, an open space that provided a buffer between the residential areas of the estate and the station, separating its village status from its instrumental function as part of the networked city.



TOWER HOUSE AND LAWN-TENNIS GROUNDS.

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FIGURE 3  
John Nash, "Tower House and Lawn-Tennis  
Grounds" in Moncure Conway, "Bedford Park,"  
in *Harper's Monthly Magazine*, vol. LXII, no.  
CCCLXX (March 1881). © The British Library  
Board. Shelfmark: P.P.6383.ab., p. 483.



QUEEN ANNE GARDENS.

Bedford Park: Rujukan and the  
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FIGURE 4  
John Nash, "Queen Ann Gardens," in Moncure  
Conway, "Bedford Park" in *Harper's Monthly  
Magazine*, vol. LXII, no. CCCLXX (March 1881)  
© The British Library Board. Shelfmark:  
P.P.6383.ab., p. 485.

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As a green field site, Bedford Park had no previous history as a lived area. This circumstance amplified the opportunity for Carr, Shaw and the residents of the estate to develop a sense of collective and individual identity grounded in place. In this context, Foucault's conception of heterotopic space as one of difference, offering a reification of the utopic values carried by other spaces, is elegantly demonstrated through the activities of the estate's club-house. Designed to endorse a middle class social collectivism, its function as an idealized community space was clearly stated by the unusual strategy of offering membership to men and women on equal terms. This social agenda was then reflected in the facilities it offered, including a tennis court, billiard room and a large meeting hall used for activities such as theatrical productions and lectures. Family activities were also encouraged, including musical performances and plays written and performed by the children of the estate.<sup>41</sup> This spirit of social innovation was acknowledged in 1880 in an article by Helen Hunt Jackson who wrote "any woman who lives in Bedford Park may go to the club, read periodicals, play billiards, smoke (if she likes) as freely as if she were a man".<sup>42</sup> In the following year, Bedford Park resident Moncure Conway published his own evaluation of the estate's architectural and social value. Describing his first vision of this new community as an "antique townlet" seen "through a railway arch", he immediately connected the estate to the contemporary world, signified by the railway, while simultaneously identifying its mythic value through the word "antique", suggesting an extensive history that did not exist.<sup>43</sup> This clearly pre-empts Foucault's definition of heterotopic space as one of compensation; Conway's acknowledgment of modernity is compensated by an imagined past. But it is the club-house, where "ladies and gentleman are on a perfect equality", that provided him with the best evidence of the estate's social values, demonstrating not only the advantages of collectivism, but also the possibilities it offered for intellectual and cultural improvement.<sup>44</sup> Conway's interest in the facilities of the Club-House and gender equality was also addressed in one of the accompanying illustrations, produced by another local resident, Joseph Nash Jr. (fl. 1859-93). In "Tower House and Lawn-Tennis Grounds", Nash focused on a group of young men and women playing a game of mixed doubles (FIG. 3). Echoing the celebratory tone of the text, this scene is presented to the reader as a suburban idyll. The shadows cast by the players indicates late afternoon or early evening, the artist perhaps suggesting a game played as just reward for a day of fruitful labour. Nash elaborated this theme in another illustration for Conway's article titled, "Queen Ann Gardens", in which the estate is presented as peaceful and tranquil. Domestic security and social unity are signified by the two women on the nearside pavement, chatting to a man walking a



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FIGURE 5

Frank Hamilton Jackson, *The Church of St Michael and All Angels seen from the North East* (1882. Chromolithograph. Private Collection). Reproduced by kind permission of Dr David Budworth.

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FIGURE 6

Berry F. Berry, *Bath Road, Looking East* (1882).  
Chromolithograph. Private Collection.

Reproduced by kind permission of Dr David  
Budworth.

dog, and by the strolling figures on the other side of the street, including a couple, a mother with her daughter, and two children who play happily in this tree lined street (FIG. 4). 429

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This theme of social unity endorsed by domestic security, set within an idealised suburban space, was also adopted as the principal subject for a series of nine topographical studies of the estate commissioned from local residents by Carr in 1881 as an advertising strategy.<sup>45</sup> Of the nine prints, reproduced as chromolithographs, the best known is by Frank Hamilton Jackson (1848-1923). Titled, *The Church of St Michael and All Angels Seen from the North East* (1882), the foreground shows the private space of a well-kept garden seen on a sunny day. On the right, a woman sits peacefully reading a book, while a dog sleeps at her side (FIG. 5). A few feet away a little girl stands holding a parasol. Although it does not correspond to any identifiable plot on the estate, this garden underlines the social identity of the suburb as a place associated with women and the family. Its trimmed lawn and well stocked flowerbeds not only facilitated immersive experiences such as reading, it also helped bridge the gap between city and countryside, offering a private retreat within which the suburbanite could construct an improved version of self. Presented by Jackson as an idealised space of recuperation, the garden endorses the social value of the suburb, operating, in Foucault's terms, as a space of correction and compensation, whose moral authority is endorsed by the dominating presence of the church in the background. The planning and building of this suburban environment and its representation as an idealized rural setting is stated with particular clarity in another of these nine topographical studies, *Bath Road, Looking East* (1882) by Berry F. Berry (fl. 1874-93). In this illustration, the artist used the gentle angle of recession created by the street to open out this space, creating an opportunity to catalogue its mix of housing types (FIG. 6). On the far right can be seen the end of a short terrace that ran from number 14 to 24. Next-door stands number 26, an example of Shaw's second design for a detached house, which instead of following the orientation of its neighbours is positioned at right angles to them, thus varying the line of the street's façade.<sup>46</sup> Beyond number 26, can be seen a pair of semi-detached houses. This architectural variety, which extends to the end of the road, demonstrates Shaw's desire to use the "Queen Ann" style to create a varied but still unified, intimate domestic setting that reflected the asymmetries associated with traditional village development. The extent to which the planning and construction of Bath Road offered this simulacra of the past is further endorsed in Berry's print by the well-stocked gardens and clusters of mature trees. His depiction of the ruralised suburban street amplifies both its idealization and its function as a heterotopic space, whose strategic

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value was defined by Foucault, as one of separation and compensation, as perfect and meticulous, as ours is messy and jumbled. Berry's picturing of suburban space as a place of domestic security and social unity is further amplified – as in Nash's "Queen Ann Gardens" – by the presence of women walking together and a mother whose child is playing with her hoop. This theme is repeated in two other prints from this series: *The Church, Inn and Stores from Acton Green* (1882) by E. Hargit (1835-95), and *A View of Newton Grove* (1882) by Nash. Alongside the chromolithographs detailing the lives of local women and their children, free to define and enjoy this idealised space, a number of prints in this series also celebrated the facilities offered by Bedford Park. These include: *The School of Art, Inn and Stores, Looking West along Bath Road* (1882) by T. Erat Harrison (fl. 1875-93), *The Tabard Inn and the church of St Michael and All Angels seen from the Railway Station* (1882) by Thomas Matthews Rooke (1842-1942), and *The Tower House and Tennis Court on Newton's Grove* (1882) by Manfred Trautschold (1854-?). However, in spite of the efforts made by Carr, Shaw, and the residents of Bedford Park, by the mid 1880s the reputation of the estate was beginning to suffer. Writing in 1887, Charles Eyre Pascoe, having praised suburbs such as Wimbledon and Putney, took a much more jaundiced view of Carr's achievement, warning visitors not to waste time on "that piece of architectural humbug, Bedford Park, where he will see only sham examples of old English houses".<sup>47</sup> This criticism was repeated by Percy Fitzgerald in 1893. His description of an estate of "pseudo antique houses" found behind a "railway embankment", though it echoes Conway's earlier description, clearly offers a much critical appraisal.<sup>48</sup> Once separated by green fields and by the railway lines that bordered the estate to the south, east and north, Bedford Park was, by this time, becoming increasingly subsumed, into the development of western suburbs such as Acton.<sup>49</sup> Without a sense of spatial unity, this attempt at middle class social collectivism, defined architecturally by Shaw's reconstruction of an English village, could not be sustained, and so Carr's vision of a ruralised suburban utopia, applauded by Conway and those artists who promoted its social values, was lost to the demands of urban change.

- 1 On the development of Twickenham and Richmond, see: John Archer, *Architecture and Suburbia: From English Villa to American Dream House 1690-2000* (Minneapolis: University of Minnesota Press, 2005), 87-91. On the development at Clapham, see: Robert Fishman, *Bourgeois Utopias: The Rise and Fall of Suburbia* (New York: Basic Books inc., 1987), 51-52.
- 2 Mireille Galinou, *Cottages and Villas: The Birth of the Garden Suburb* (New Haven: Yale University Press, 2010), 62.
- 3 Dana Arnold, *Rural Urbanism: London Landscapes in the Early Nineteenth Century* (Manchester: Manchester University Press, 2005), 71.
- 4 Galinou, *Cottages and Villas*, 7.
- 5 Henry James, "The Suburbs of London," *Galaxy*, no. 24 (December 1877), 778.
- 6 D. W. Budworth, *Jonathan Carr's Bedford Park* (London: Bedford Park Society, 2012), 37-39.
- 7 "Bedford Park Estate, Turnham Green," *The Building News*, 22 December 1876, 621.
- 8 Sheila Binns, *The Aesthetics of Utopia: Saltaire, Akroydon and Bedford Park* (Reading: Spire Books Ltd., 2013), 67.
- 9 Jonathan Carr (The Freeholder), *The Building News*, 2 February 1877.
- 10 Donald J. Olsen, *The City as a Work of Art: London, Paris, Vienna* (New Haven: Yale University Press, 1986), 163-164.
- 11 Andrew Saint, *Bedford Park: Radical Suburb* (London: Bedford Park Society, 2016), 4.
- 12 Lewis Holloway and Phil Hubbard, *People and Places: The Extraordinary Geographies of Everyday Life* (London: Prentice Hall, 2001), 116-118.
- 13 Yi-Fu Tuan, *Space and Place: The Perspective of Experience* (Minneapolis: University of Minnesota Press, 1977), 99, 138-139.
- 14 Holloway and Hubbard, *People and Place*, 121.
- 15 Doreen Massey, *Space, Place and Gender* (Cambridge: Polity Press, 1994), 121-122.
- 16 Andrew Saint, "Whatever Happened to Jonathan Carr," *The London Journal*, vol. 12, no. 1 (Summer 1986), 61.
- 17 John Ruskin, "Letter XXIX La Douce Aime," April 2 1873, in *Fors Clavigera: Letters to the Workmen and Labourers of Great Britain*, vol. 2 (London: George Allen, 1900), 99-102.
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## Notes

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# Trogir i njegova predgrađa

Dunja Babić

Najveće urbanističke promjene svakako su širenje grada i njegovih predgrađa. Pri tome je trebalo nadalje voditi računa da se potroši što manje plodnih površina. Ti se procesi mogu pratiti na primjeru Trogira,<sup>1</sup> naselja na čijem području život započinje još od prethistorije. Naime, gradić je smješten na ekološki i strateški iznimnom mjestu, u morskom tjesnacu između kopna i otoka Čiova, na zapadnom pristupu Kaštelanskom zaljevu. Na kopnu pred Trogirom pružala su se plodna polja, danas najvećim dijelom uništena i izgrađena, a koja su bila baza njegove ekonomije i gospodarstva. Površina na kojoj se diže grad izvorno je bio jezičac kopna u lagunastom krajoliku. S vremenom, u historijsko doba, svojevrsna prevlaka je jarkom odvojena od kopna što se može potvrditi iz povijesnih izvora, starih mapa, ali i geološkim istraživanjem.<sup>2</sup> Opseg grada se nasipavanjem stalno mijenjao. Širio se jarak prema kopnu kako bi se stvorila operativna obala, a zemlja se nasipala na južnoj strani, prema otoku Čiovu. Još od kraja 13. stoljeća donose se komunalni propisi koji svakoga građanina, svake godine obvezuju na vađenje nanosa iz kanala.<sup>3</sup> Inače, kako je to opće poznato, gradovi kontinuirano izbacuju i nakupljaju materijal, najčešće građevinski otpad, u svojem neposrednom okolišu. Zbog skučenosti prostora i zbog povećanja broja stanovnika brzo se ukazala potreba za širenjem prostora. Tijekom 13. i 14. stoljeća nasut je cijeli zapadni dio grada. Na tom se prostoru tada oblikuje predgrađe zvano Pasike. Izgradnja na kopnu nije bila poželjna zbog nastojanja da se očuvaju plodne površine, ali i zbog izloženosti tog područja napadima. Tako je već u 14. stoljeću porušen franjevački samostan na kopnu kako se u njemu ne bi utaborio neprijatelj Trogira, feudalac Mladen II. Šubić Bribirski.<sup>4</sup> Posebno su, u odnosu na malarični prostor grada i kopna, bile atraktivne nasuprotne obale otoka Čiova. Zemljoradničkim, ali i građanskim; pomorskim i brodograditeljskim obiteljima stanovanje je ondje bilo pogodnije nego u skučenom prostoru unutar zidina. Komunalna vlast već od 14. stoljeća pokušava spriječiti nezadržive procese naseljavanja tog dijela Čiova gdje će nastati jedno novo predgrađe (SL. 1).

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Sve te faze prostornog razvoja Trogira jasno se očitavaju iz brojnih pisanih dokumenata 13. stoljeća od kojih je najveći dio već objavljen i koje je transkribirao Miho Barada.<sup>5</sup> Kako je Trogir zanimljiv zbog svoje kulturne baštine, tako su o njemu pisali mnogi domaći i svjetski povjesničari među kojima, kao polazište svakog istraživanja trogirске povijesti, valja istaknuti djela Ivana Lucića i Pavla Andreisa. Ovo je istraživanje obuhvatilo i obradu arhivske kartografske građe, starih planova, crteža i grafika koje se uspoređuju sa sadašnjim stanjem. Međutim, s obzirom na to da su te karte i planovi bili isključivo namijenjeni pomorcima te prikazivanju fortifikacijskog sustava grada, na njima su ostala zabilježena tek ključna mjesta – crkve na istaknutim položajima kao orijentiri u plovidbi, odnosno pojedine utvrde te



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SLIKA 1

Trogir na slici Fedora Karačaja, 1827.–1928. Prikazan je otočić na čijoj je zapadnoj stani predgrađe Pasike sa svojim zidinama. Na desnoj strani je predgrađe na Čiovu s kamenim kućama ograđenim zidovima. Na lijevoj strani je neizgrađeno kopno obilježeno s nekoliko crkvice na okolnim brežuljcima.

izgrađeni i planirani obrambeni zahvati. Naselja uza sam grad ili su izostala ili su pak samo sumarno prikazane skupine kuća pri čemu se nije vodilo računa o mjerilu. Egzaktno podatke daje tek austrijski katastar Trogira iz 1830. kao i vrlo pregledna karta Trogira iz 1828. godine koja se čuva u Državnom arhivu u Beču, vjerojatno pripremna mapa za izradu Katastra (SL. 2). Korištena je isto tako komparativna metoda pa je proučena literatura i izvori koji se odnose na predgrađa u drugim dalmatinskim komunama s obzirom na opće procese, slične povijesne i političke prilike u kojima su se ona razvijala. Ipak, treba naglasiti da su urbanistički razvoj Trogira odredili nadasve njegovi specifični prostorni odnosi i prirodni okvir.

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Tijekom 13. stoljeća dalmatinske komune poput Trogira, Splita, Dubrovnika, Zadra i Šibenika doživljavaju demografsku ekspanziju, što je potom potaknulo njihov intenzivan urbanistički razvitak. Napučivanjem stanovništvom koje pristiže iz okolnih krajeva, proširilo se gradsko tkivo i počela su se sustavno izgrađivati i rasti njihova predgrađa, *burgusi*, od kojih su neka također zatvorena zidnima.<sup>6</sup> Povijest i prostorni razvoj trogirskog predgrađa zvanog Pasike, vlasnički odnosi i komunalna politika koja je nadzirala njegovo oblikovanje, osvijetljeni su u više dosadašnjih istraživanja.<sup>7</sup> Imenom Pasike, smatra se, nazivalo se izvorno čitavo područje; vrlo nizak zapadni dio otočica s plićacima, i prije razvoja predgrađa. Toponim *pasike* prepoznat je kao stari slavenski naziv za naknadno kultivirane površine, u ovom slučaju bili su to plićaci koje je trebalo za izgradnju isušivati i nasipavati. Taj izuzetno niski dio otočica i danas često preplavi plima.<sup>8</sup> Izgradnja i naseljavanje na tom području započinje u prvoj polovini 13. stoljeća. Statut iz 1322. godine donosi propise (L. III, c. 53) o načinima kupoprodaje i mjerenju veličine zemljišta u Pasikama što pokazuje da je komuna, kao i u ostalim gradovima Dalmacije, kontrolirala, ali i poticala izgradnju predgrađa. Jedna od brojnih isprava iz istoga stoljeća koje spominju terene, kuće i kućerke u Pasikama, napominje da je neki građevinski teren kupljen u doba kada Tatari dolaze do Trogira, dakle 1242. godine.<sup>9</sup> Analizom kupoprodajnih dokumenta iz 13. stoljeća koje spominju nekretnine u Pasikama uočava se ipak da se većina tih nekretnina odnosi na neizgrađena zemljišta, a znatno manji dio na drvene kućice te vrlo rijetko na kamene kuće, pa se može zaključiti da je u ovom stoljeću predgrađe još rijetko izgrađeno.<sup>10</sup> Intenzivna izgradnja uslijedila je u 14. stoljeću kada se ondje bilježi znatno veći udio kuća od kojih su mnoge izgrađene u kamenu.<sup>11</sup>

Pasike

Oblikovanje prostora predgrađa u Pasikama odredio je prirodni okvir, oblik otočica i prije svega zatečena urbanistička situacija; linija zapadnoga gradskog zida na koje se ono naslanja i na koje su uzdužne ulice predgrađa okomite. Plansko oblikovanje i reguliranje Pasike naslućuje se već iz postojeće





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SLIKA 2

Karta Trogira iz 1828. godine. Österreichisches  
Staatsarchiv, Wien / Državni arhiv u Beču:  
Inland c III a, Trau nr. 06.

prostorne slike, pravilne mreže ulica i relativno ujednačene veličine parcela što su na osnovu analize komunalnih propisa i kupoprodajnih ugovora 13. i 14. stoljeća potvrdila spomenuta znanstvena istraživanja. Važne prostorne točke predgrađa su dvije crkve; Gospe od Karmela i crkvice sv. Frane<sup>12</sup> koje se podižu u drugoj polovini 13. stoljeća, dakle u vrijeme početaka naseljavanja Pasike, u ravnoj liniji, duž istočnog ruba predgrađa, što se također može sagledati u kontekstu promišljene urbanizacije tog prostora. Crkva sv. Frane postat će jezgra dominikanskog samostana koji se od sredine 14. stoljeća podiže u jugoistočnom uglu predgrađa. Taj je pothvat već prepoznat kao ključan čimbenik u daljnjem prostornom oblikovanju Pasika.<sup>13</sup>

Istovremeno s naseljavanjem i oblikovanjem predgrađa započinje i njegovo obzidavanje. Ono je isprva zatvoreno improviziranim, suhozidnim ogradama, a potom kamenim zidinama. Početkom 15. stoljeća Pasike su spojene s gradskim zidinama te su se od 1418. godine počele službeno nazivati Novim gradom (*Città nuova*).<sup>14</sup> Ipak, iako nakon što su se fizički povezale s gradom te time prestale biti predgrađe (*borgo*), u mnogim se kasnijim dokumentima još uvijek tako nazivaju. Primjerice, u izvješću kneza Giovannijs Battiste Michielija iz 1590. godine Pasike se nazivaju *Citta nuova cioè borgo*,<sup>15</sup> a taj stari, očito uvriježen naziv srastao je s nazivom crkava u tom dijelu grada. Često je tako još u 17. i 18. stoljeću središnja crkva, spomenuta Gospe od Karmela, bilježena kao sv. Marija od Burga.<sup>16</sup>

Grad na otočiću je dakle tijekom 15. stoljeća posve prostorno definiran i izgrađen, kako najstarija jezgra tako i predgrađe Pasike. Počinje se tada intenzivnije nastanjivati neposredna okolica grada. Od 15. stoljeća bilježe se u dokumentima nastambe od kamena i od drveta na otoku Čiovu preko puta i na kopnu.<sup>17</sup> Stanovnici na tim prigradskim područjima spominju se i u nekim izvorima iz prethodnog stoljeća. No s obzirom na mnogobrojne dokumente iz 13. i 14. stoljeća koji potvrđuju sustavnu izgradnju trogirskog predgrađa Pasike, ali i neke statutarne zabrane naseljavanja otoka Čiova, ipak nije vjerojatno da se već u to doba značajnije izgrađivao prostor Čiova ili kopna.

Otok Čiovo je, sudeći po brojnim odredbama Statuta bio za trogirsku komunu prostor od posebnog značaja. Tako se mnoge statutarne odredbe koje govore o ekonomskoj eksploataciji i nastanjivanju teritorija tiču isključivo otoka Čiova. Zanimljivo je da se u Statutu nalazi malo zasebnih odluka za dio teritorija na kopnu čiji su prirodni resursi bili mnogo bogatiji. Naime, s obzirom na sam položaj, neposrednu blizinu grada, a opet izoliranost u odnosu na nezaštićeno kopno, Čiovo je za komunu bio teritorij koji je trebalo sačuvati od izgradnje i pretjeranoga gospodarskog iskorištavanja kako bi u slučaju izbivanja rata poslužilo kao rezervni ekonomski resurs, ali i pribježište za ugroženo stanovništvo.

## Otok na Čiovu

Najstarija vijest o zabrani stanovanja na Čiovu i jedina takva odredba sačuvana u trogirskom Statutu je ona iz 1372. godine. (Ref., L. II, c. 54). Zabrana se daje naslutiti i u jednoj bilješci iz 1315. godine, sačuvanoj u fundusu Lucićevih izvoda iz trogirskih srednjovjekovnih isprava, koja je izvještavala da Čiovo nije namijenjeno za ispašu, osim za konje, ali ne više od 15 dana te kako ni u kakvom drugom slučaju na Čiovu nije dozvoljeno prebivati.<sup>18</sup> U daljnjem tekstu odluke Statuta stoji kako je stanovati na Čiovu dozvoljeno samo rekluzama, pustinjacima i gubavcima. Prisutnost pustinjaka i rekluzi uokolo starih crkava koje se nalaze na prostoru ili pak na rubovima budućeg predgrađa, Gospe pokraj mora, sv. Jakova, sv. Petra, sv. Antuna Pustinjaka (sv. Magdalenine) te sv. Andrije, uz koju se još u 13. stoljeću bilježi skroman samostan, potvrđuju brojni dokumenti, posebice testamenti iz 14. stoljeća.<sup>19</sup> Oboljeli od gube boravili su na položaju gdje će početkom 15. stoljeća biti podignuta crkva sv. Lazara.<sup>20</sup>

Odluka kojom se zabranjuje stanovanje na nekom području izvan zidina nije posebnost trogirskoga srednjovjekovnog zakonodavstva. Ona se uklapa u opće smjernice pravnih propisa dalmatinskih komuna koje su poticale gradnju unutar zidina, a naseljavanje ostalih područja u svojim distriktima, posebno onih u neposrednoj blizini gradskih zidina, stavljale su pod kontrolu bilo zabranama bilo posebnim mjerama. Iz straha da bi se u kućama pred gradom mogli utaboriti neprijatelji, zabranjuje se gradnja ili bilo kakve kuće, posebice zidane, ili se pak dozvoljava samo izgradnja u suhozidu ili kreću, kako se iščitava u statutima Korčule, Dubrovnika ili Šibenika.<sup>21</sup> Namjera donošenja zasebnih urbanističkih i populacijskih mjera bila je također da se nadoknadi manjak stanovništva unutar zidina, nastao zbog epidemija kuge. Niz odluka nastalih u takvim prilikama zabilježen je u šibenskom Statutu i zaključcima Vijeća.<sup>22</sup> Naime, početkom 15. stoljeća, kada je redigirana većina statuta dalmatinskih komuna i kada su izdavane navedene odredbe, epidemije kuge su u nekoliko navrata ispraznile gradove diljem Mediterana i Europe, pa zabranu naseljavanja Čiova treba tumačiti i u smislu obnove demografske slike unutar zidina. Pogođena je bila u nekoliko navrata i sama Venecija. Kuga je 1348. godine prepolovila stanovništvo Venecije, pa je providur bio primoran donositi poticajne mjere kako bi privukao okolnu populaciju, ali i strance da sa svojim obiteljima nasele ispražnjeni grad. Određeno je tako da se pravo građanstva dodijeli svakome tko se iz bilo kojeg mjesta sa svojom obitelji doseli u grad.<sup>23</sup> „Stare naredbe“ o zabrani stanovanja na Čiovu iz 1372. godine, kako piše Ivan Lucić, bile su obnovljene 1416. godine.<sup>24</sup> One su bile izrečene u nesigurnim vremenima, uoči mletačkog osvajanja grada, dakle s ciljem kontrole teritorija, no potaknute su bile vjerojatno i drugim nevoljama, poput epidemija kuge koje su zabilježene u Trogiru početkom stoljeća.<sup>25</sup>

Odredba o zabrani naseljavanja iz 1372. godine neizravna je potvrda da je ovaj dio Čiova pred gradom tada već bio, vjerojatno rijetko, naseljen. Obnavljanje zabrane također potvrđuje da njene odredbe nisu zaživjele u stvarnosti. Pored mreže crkava, redovničkih nastambi, koliba i izbi u kojima su boravili pustinjaci i oboljeli od kuge, postojale su na tom dijelu Čiova preko puta grada u 14. stoljeću i neke skromne kuće. One se mogu pretpostaviti uz manje plodne površine na vrlo strmom i skućenom prostoru. Komunalne, crkvene, samostanske ili pak privatne vinograde i vrtove bilježi više dokumenata iz 13. i 14. stoljeća. Oni se na osnovi nekih toponima ili naziva crkava s kojima graniče smještaju upravo na prostor budućeg predgrađa na Čiovu.<sup>26</sup> Stanovništvo koje obrađuje te male posjede po svoj prilici uz njih podiže skromne, vjerojatno suhozidne gradnje koje im olakšavaju rad i nadzor posjeda. Korčulanskom predgrađu prethodile su isto tako kuće koje su podizane izvan zidina uz vrtove (*domum extra civitatem prope hortum*).<sup>27</sup>

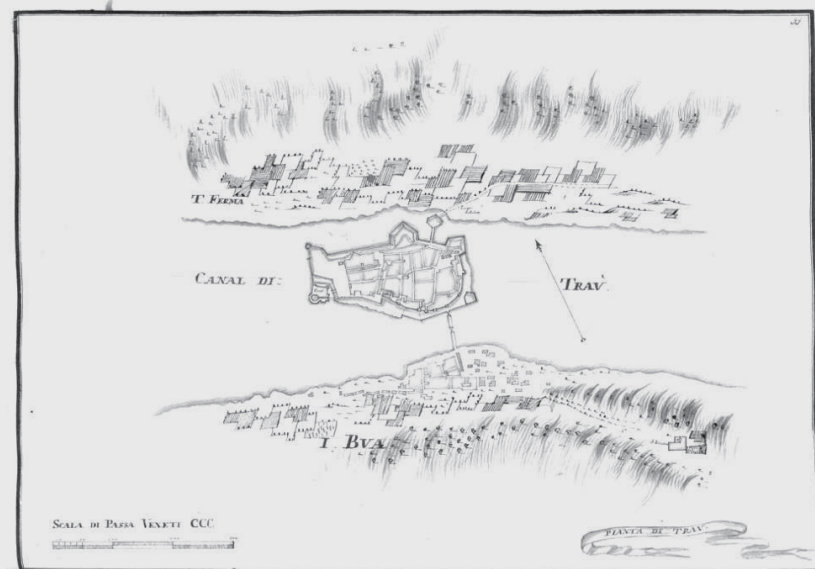
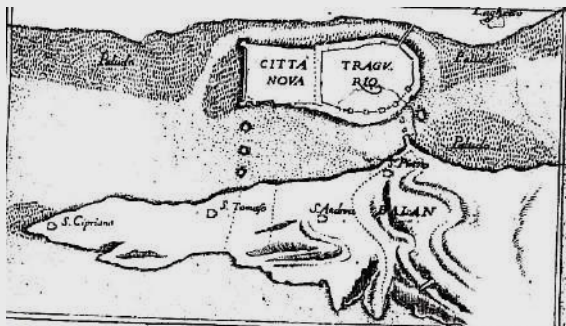
Naseljavanje i izgradnja prostora tog dijela Čiova u 14. stoljeću naslućuju se iz nekih odredbi statuta koje bilježe stanovnike Čiova, posebno u onoj o obavezi produbljivanja luke iz 1322. godine (L. I, c. 15). Ona obavezuje na to stanovnike Grada, Pasika i otoka Čiova što se odnosi najvjerojatnije isključivo na ovaj dio Čiova uz most, a ne na udaljena sela na otoku, kao što odredba nije obavezivala ni stanovnike sela na kopnu. Ivan Lucić na jednom mjestu piše kako su te obaveze morali redovito obavljati svi građani.<sup>28</sup> Odredba o nadzoru prodaje stranog vina iz 1368. godine izričito je zabranjivala takvu prodaju ili kupovinu svakom stanovniku grada, pa tako i stanovnicima Čiova (Ref., L. I, c. 54). Opisujući tijekom sukoba između mletačke i denovske mornarice krajem 14. stoljeća u trogirskoj luci, Ivan Lucić je na prostoru predgrađa spominjao neke odavno srušene vrtove i kuće od suhozida: „Čekajući da neprijateljska vojska doplovi ban i Đenovežani imali su vremena porušiti kuće od suhozida koje su odavna prazne i zidove vrtova koji su se nalazili na otoku i tako zatvorili padine spajajući jarke na zapadu balvanskom pregradom, a na istoku nasipom mostova. Na otoku sada postoje neznatni tragovi, zbog dvorišta i nastambi što se danas tamo nalaze, nema traga ni kamenju od suhozida koje je bilo prenošeno na obližnje mjesto gdje se balvanska pregrada spajala s prvim lukobranom.“ Na planu Trogira iz Lucićeva djela ucrtane su linije suhozidnih ograda na prostoru budućeg predgrađa, koje su se spuštale od uzvišenja Balana prema moru (SL. 3). Na tom strmom, hridinastom terenu, poslije gusto izgrađenom, koji se od crkve sv. Petra uzdiže prema sv. Andriji mogu se pretpostaviti te prve skromne kuće među malim vrtovima. U spomenutim ratnim sukobima koji su se odvijali u luci krajem 14. stoljeća, ubrzano se podižu zaštitni zidovi u Pasikama, unutar kojih su, obavještava Lucić, povučeni svi stanovnici otoka.<sup>29</sup>

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Nastanjivanje ovog dijela Čiova tijekom kasnoga srednjeg vijeka omogućio je i most koji spaja Trogir s Čiovom, a koji se spominje već u 13. stoljeću. Most je bio neophodno sredstvo svakodnevne komunikacije gradskog stanovništva sa svojim posjedima na otoku. Prve vijesti o mostu su iz 1281. godine.<sup>30</sup> Nije poznato kada se most počeo graditi, ali može se pretpostaviti da je to bilo u 13. stoljeću, u doba velike izgradnje u Trogiru, kada se između ostalog počinje izgrađivati i predgrađe Pasike.

Od početka mletačke uprave u Trogiru 1420. godine nastupilo je razdoblje intenzivnijeg naseljavanja i oblikovanja predgrađa na Čiovu. Presudnu ulogu u tome imala je državna politika. Naime, dukala iz 1421. godine kojom je odobreno obrađivanje Čiova, za što je trogirski knez morao izdati posebnu dozvolu, ali i obavljati nadzor, omogućila je zasigurno da dio zemljoradničkog stanovništva, bilo grada ili pak šire, distrikta, naseli i ovaj dio Čiova u neposrednoj blizini grada. Ondašnje društvene i političke promjene u Trogiru te njegov postupni prostorni razvoj na područje Čiova preko puta mosta, kao i na ono na kopnenoj strani, koji dosad nije bio predmet iscrpnijeg istraživanja, treba sagledati i u kontekstu razvoja dalmatinskih gradova tijekom 15. stoljeća kada se uključuju u posjed Venecijanske Republike, ali i šire u kontekstu ondašnjeg osvajanja *terraferme* same Venecije te općeg razvoja i migracija stanovništva koje je potom uslijedilo.<sup>31</sup> Od toga su razdoblja dalmatinski gradovi doživjeli značajnije demografske i prostorne promjene kada je uglavnom započeo razvoj novovjekovnih predgrađa odnosno gradskih predjela izvan srednjovjekovnih zidina. Razvijao se prije svega Zadar, koji tijekom tog stoljeća postaje najveći gradski centar istočne obale Jadrana.<sup>32</sup> Proširio se gradski prostor Šibenika, posebice njegov sjeveroistočni dio.<sup>33</sup> Tijekom 15. stoljeća zabilježene su i prve vijesti o predgrađu izvan zidina Splita.<sup>34</sup> Razvio se tada i korčulanski *borgo*.<sup>35</sup> Prostorni razvoj izvan zidina doživio je i Dubrovnik gdje se tijekom 15. stoljeća oblikovalo zapadno predgrađe Pile.<sup>36</sup>

Najraniji dosad poznati dokument koji poimence spominje stanovnike predgrađa na Čiovu jedna je oporuka iz 1439. godine koju je dao sastaviti izvjesni Stanoje Birojević (Birojević) kojom, između ostalog, obdaruje hospital sv. Duha u gradu i lazaret za oboljele koji se nalazio u samom predgrađu, uz crkvu sv. Lazara podignutu u prvom desetljeću 15. stoljeća.<sup>37</sup> Oporučitelj je naveden kao stanovnik (*habitor*) otoka Čiova (*de Insula Bua*). Kao svjedok oporuke koju je notar sastavio u kući oporučitelja, zabilježen je još jedan stanovnik predgrađa Juraj Maravić. U dokumentima iz 17. stoljeća, odnosno prijepisima pisama koje su ondašnji stanovnici predgrađa upućivali duždu, stanovnici se pozivaju na jednu ispravu iz 1459. godine. Tom je ispravom Veliko vijeće pojedinim obiteljima dalo dozvolu boravka na otoku Čiovu.<sup>38</sup> Naime, u jednom od tih pisama oni na neki način sažimanju



SLIKA 3

Potezi suhozidnih ograda na području budućega trogirskog predgrađa na Čiovu. Isječak karte Trogirске комуне i Splita iz djela Ivana Lucića *Memorie istoriche di Tragurio ora detto Traù*, Venetiis, 1673.

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SLIKA 4

Trogir i njegovo predgrađe na Čiovu na prikazu Faustina Brascuglie, 1745. Biblioteca nazionale Marciana, Venecija, Faustino Brascuglia, *Pianta di Traù*, IT-VE0049; sign. Ms. It. VI, 195/10054.

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povijest nastanjivanja tog područja; pozivaju se na tradiciju dviju veoma starih bratovština koje su stoljećima djelovale u predgrađu i koje su štitile njegova predgrađa kao i njihove pretke, onu sv. Jakova, koja je osnovana sredinom 15. stoljeća i Gospe pokraj Mora, utemeljenu još u prvoj polovini 14. stoljeća.<sup>39</sup> Sačuvana je i jedna isprava kneza Alviza Barbariga iz 1496. godine kojom je dozvolu za stanovanje na Čiovu dao Ivanu Markoviću.<sup>40</sup> Može se pretpostaviti da su od početka venecijanske uprave gradski knezovi dodijelili niz takvih pojedinačnih odobrenja nastanjivanja na Čiovu koja su upućena bilo skupinama, obiteljima novo pridošlih stanovnika bilo pojedincima, poput onih kneževih dozvola za obrađivanje čiovskih zemljišta koje spominje navedena odluka iz 1421. godine.

U isto vrijeme, od druge polovine 15. stoljeća pa tijekom iduća dva stoljeća prijetnje turskih upada na rubne dijelove trogirске komune na kopnu izazvale su raseljavanje tog stanovništva. Raseljavanje se odvijalo u nekoliko navrata i bitno je izmijenilo prostornu i demografsku sliku trogirskog teritorija, kao što je to slučaj duž čitave obale i otoka Dalmacije. Ubrzano raste i trogirsko predgrađe na Čiovu. Onodobni izvori spominju kako se na Čiovu u najvećem broju sklonilo stanovništvo Velikog polja.<sup>41</sup> Sredinom 16. stoljeća u predgrađu na Čiovu stanuje petstotinjak duša, a krajem stoljeća zabilježen je čak 912 stanovnik, gotovo isto koliko ih je zabilježeno u predgrađu Pasike.<sup>42</sup> Nastanjivanje i izgradnju u neposrednoj okolici Trogira osim navedenih vanjskih, općih, faktora, uvjetovale su dakako i prilike u samom gradu. Naime, kako je već iznijeto, sam otočić je početkom 15. stoljeća posve prostorno potrošen. Pored toga, važan čimbenik kretanja gradskog stanovništva, pa tako i izgradnje prigradskog područja bila su ponovna izbijanja epidemija kuge u Trogiru šezdesetih godina 15. stoljeća, potom novih epidemija koje su harale u više navrata tijekom 16. i 17. stoljeća. Takve prilike bit će jedan od važnih poticaja daljnjeg razvijanja predgrađa na Čiovu. Slična je situacija i drugdje u Dalmaciji, primjerice unutar zadarske komune, gdje su epidemije od sredine 15. stoljeća bile bitan poticaj izgradnji i naseljavanju širega komunalnog teritorija, pa čak i udaljenih otoka.<sup>43</sup> Trogirski knez Giovanni Battista Michieli 1590. godine piše da je grad posve ispražnjen.<sup>44</sup> Nekoliko godina poslije knez Bernardo Venier također je upozoravao državne vlasti na napuštanje grada unutar zidina, a posebno na njegovu posljedicu: intenzivno naseljavanje Čiova što je činilo štetu gradu, ali i stanju državne blagajne.<sup>45</sup> O prilikama izgradnje predgrađa te o prednostima samog položaja opširno izvještava Pavao Andreis, pa valja citirati nekoliko isječaka iz njegova djela: „Zato su u dijelu koji se nalazi nasuprot gradu bila sagrađena razna zdanja lijepe tvorevine koja oplemenjujući ovaj položaj čine da izgleda drukčijim nego što jest. Nastavaju ga također mnogi dobrostojeći građani, a u unutarnjim dijelovima mornari

i seljaci koji se bave ribolovom i obrađivanjem s velikim naporom zloplate. Da nije bilo odluka s kojima se zabranilo u njemu stanovati bio bi i još više napučen plemenitim i uglednim ljudima. Među mnogim strogim čini mi se najsvježija od 28. veljače 1625., kojom se ostajući zabranjeno graditi na Čiovu i nastaviti ga, proglašava lišenim naslova građanina onaj koji bi ga nastavao te kao lišen svake povlastice podložan plaćanju dvostruke carine, teretima straže i nametu galiota. Usprkos svakoj odluci razni su se uvukli da u njima stanuju.<sup>46</sup> Razlog donošenja ove smjele uredbe 1625. godine, u vrijeme kada je predio Čiova preko puta grada naseljavao već gotovo jednak broj stanovnika kao onaj u gradu i u predgrađu Pasike, jest prije svega strah da ne opusti sam grad koji su poharale teške epidemije kuge i zabrinjavajuća demografska slika o čemu su i prije upozoravali trogirski knezovi. Međutim, razloge treba tražiti i u daljnjim posljedicama iseljavanja stanovnika, koje je tada bilo mnogo teže nadzirati negoli stanovništvo unutar zidina, kao i općenito onovremenim ratnim okolnostima, općoj promjeni prostorne i društvene situacije. Iz bilježaka trogirskog biskupa Ivana Pavla Grazonija iz 1663. godine doznaje se da je na Čiovu, odnosno na dijelu preko puta grada, još uvijek bilo zabranjeno daljnje nastanjivanje. Kao razlog ponovno je istaknuto zaustavljanje iseljavanja iz samog grada, gdje su zdravstveni uvjeti bili znatno lošiji.<sup>47</sup> Međutim, kako pokazuju kasniji dokumenti, daljnji demografski razvoj predgrađa na Čiovu nije bio zaustavljen.

U raspravljanim dokumentima ovaj se prostor bilježi imenom otok Čiovo (*Isola Bua*) ili samo Otok (*Isola*), a njegovi stanovnici Otočani (*Isolani*). Treba naglasiti da se taj naziv odnosio isključivo na prostor pregrada, a ne kako bi moglo zbuniti čitatelja, na cijelo Čiovo. Brojne su analogne situacije, posebno na zadarskom otočju gdje se naziv *Isola* uglavnom odnosio na određeno, uglavnom najveće naselje na otoku, a ne na čitav otok.<sup>48</sup> Predgrađe se nazivalo i „Otok pred gradom“ (*Isola dinanzi alla città*) ili pak *Isola all`incontro della città*.<sup>49</sup> Apostolski i biskupski vizitatori zabilježili su uz naslov crkva predgrađa naziv na Otoku odnosno od Otoka (*In Insula (Bua)/dell`Insula (Bua)*). U svim navedenim, službenim dokumentima, bilo komunalnim ili crkvenim, za ovu cjelinu nije do 19. stoljeća korišten termin predgrađe (*borgo*). On se bilježi tek na nekim kartama, primjerice na onoj Giuseppea Justera iz 1708. godine, kao *borgho detto Isola*. Ivan Lucić tek na jednom mjestu, gdje govori o nasipavanju čiovske obale uz most, naziva naselje „novim predgrađem“.<sup>50</sup> Činjenicu da naselje na Čiovu, iako gusto izgrađeno i nastanjeno, nije službeno nazivano predgrađem, pored dugog zadržavanja naziva borgo uz predio Pasike, moglo bi se objasniti samim položajem u odnosu na grad. Iako je predgrađe na Čiovu administrativno pripadalo gradu i njegovo se stanovništvo pribrajalo gradskom stanovništvu, ono je od njega bilo fizički odvojeno i nije bilo naslonjeno na gradske zidine.



Primjerice, novovjekovna predgrađa koja su se razvijala pred zidinama Splita, već se od 15. stoljeća bilježe kao *borgo*.<sup>51</sup>

U organizaciji prostora na kojemu se poslije razvilo predgrađe na Čiovu od presudne važnosti bila je zadana prostorna situacija, postojeće crkve i putovi. Naime, predgrađu je prethodila cijela jedna prostorna mreža crkava. Crkve sv. Jakova, sv. Lazara i sv. Petra podignute gotovo uza samu obalu postat će središnje crkve predgrađa, a pred njima će se formirati malena proširenja, svojevrсни trgovi. Mreža komunikacija također je vrlo stara i zadana naprosto prirodnim okvirom. Kako je to uobičajeno u prostornom razvoju naselja, trase starih putova se zadržavaju te su se sačuvale od izgradnje. Putovi će tako postati ulice budućeg predgrađa. Oni idu optimalnim geografskim linijama kako bi svladali relativno strmi i krševiti teren. Glavna komunikacija predgrađa postaje put koji se proteže od istoka prema zapadu i spaja one tri stare crkve. Središnji dio obale na koji se oslanja most bio je izvorno mnogo istureniji nego danas dok se za zapadne i istočne strane nastavljao niz uvala. Nasipavanje pred mostom spominje se, kako je prije napomenuto, još u 13. stoljeću.<sup>52</sup> Kako je čitav prostor predgrađa strm i skučen, ubrzo se pokazala potreba za stvaranjem novog prostora za izgradnju. Vjerojatno već tijekom 16. stoljeća započinje intenzivno nasipavanje obale istočno i zapadno od mosta kako bi se ondje podigli prostrani, reprezentativni sklopovi kuća s vrtovima zatvoreni ogradnim zidovima. Taj priobalni niz sklopova predgrađa na Čiovu naznačuju stari planovi i grafike (SL. 4).

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#### Vrtal na kopnu

Na širokom prostoru na kopnu, može se također, istovremeno s počecima razvoja predgrađa na Čiovu, pratiti pokušaj stvaranja još jednoga prigradskog naselja. Ta vrlo plodna površina naziva se Malo polje. Ona obiluje vodom, ondje teče nekoliko potoka i bujica, a pred samim gradom nalazi se izvor vode Dobrić koji je stanovnicima Trogira, ali i onima Čiova stoljećima služio kao jedini izvor pitke vode.<sup>53</sup> Sve do druge polovine 20. stoljeća ovo se polje sačuvalo od intenzivnije izgradnje, kako je to običaj da se čuvaju dragocjene plodne površine. Nisu poznate odredbe u trogirskom Statutu koje bi kontrolirale ili ograničavale izgradnju i naseljavanje tog prostora pred gradom. Ipak, bilježe se neke kuće i kućerci još u 14. stoljeću.<sup>54</sup> Po završetku razmirica sa Šibenčanima, 1326. godine donesena je odluka kojom se nastojalo riješiti pitanje vraćanja posjeda i kuća izbjeglih Trogirana. Spominjale su se tako njihove kuće unutar grada, na kopnenom dijelu te na otocima.<sup>55</sup>

Na tome su prostoru postojale vjerojatno skromne, drvene ili suhozidne nastambe obrađivača okolnih polja i vrtova, poput onih koje su zabilježene tijekom 14. stoljeća na prostoru budućeg predgrađa na Čiovu, ili pak pred zidinama drugih dalmatinskih gradova koje spominju i čiju

izgradnju kontroliraju navedeni statuti. Vrtovi, odnosno poljoprivredne kulture koje su oni podrazumijevali, tražili su stalnu njegu i rad, pa se trebaju pretpostaviti skromne kuće i prateći gospodarski objekti u kojima je boravilo stanovništvo koje ih je obrađivalo i održavalo. Vjerojatno, kako je to bilo uobičajeno, vlasnici tih nastambi nisu bili i vlasnici zemljišta, već su ga uzimali u najam.<sup>56</sup>

Za povijest nastanjivanja i izgradnje ovog prostora važan je jedan dokument u rukopisu iz 1470. godine o opremanju galije soprakomita Jakova Andreisa, koji je transkribirao i objavio Vjeko Omašić.<sup>57</sup> U njemu je zabilježen predio nazvan Vrtal (*Orto*) odnosno Vrtlovi (*Orti*), kao jedan od četiriju predjela koji pripadaju gradu. Spominju se tako grad (*città*), predgrađe (*borgo*), Vrtal (*Orto*) te Otok (*Isola*). Autor rada je taj predio, smatramo, krivo protumačio kao područje predgrađa na Čiovu, oslanjajući se na jedan pravni akt još iz 1271. godine gdje je zabilježen neki Vrtal s vočkama (*in Vrtal cum arboribus seu ortum ipsius Dabre sclave*).<sup>58</sup> Donoseći topografiju trogirskog kraja isti je autori Vrtal smjestio na Čiovo, na područje nasuprot gradu, gdje je bilo gradskih vrtova, pretpostavljajući „kako su već tada tamo bili nastanjeni neki privilegirani pojedinci“ te je nadalje zaključio da je na Čiovu u srednjem vijeku postojalo naselje koje je nosilo taj naziv.<sup>59</sup> S obzirom na to da je već razjašnjeno da se prostor predgrađa na Čiovu nazivao Otok, može se s velikom sigurnošću predio zvan Vrtal smjestiti na prostor kopna pred gradom, koje obiluje vrtovima (SL. 4). Vrtal je, dakle, zaista toponim, s obzirom na to da je na hrvatskom jeziku s velikim početnim slovom i očito vrlo star, kako to daje naslutiti dokument iz 1271. godine. U jednoj odredbi Statuta iz 1436. godine (Ref., L. II, c. 51) izričito su navedeni vlasnici vrtova na kopnu (*patronos hortorum terre firme*) i obrađivači zakupnika tih vrtova (*laboratoribus de dictis eorum hortis*) koji su vjerojatno i nastanjivali predio zvan Vrtal. Pavao Andries opisuje položaj crkve sv. Jurja, koja se nalazila na kopnu, pored mosta, kao „priljubljenju uz vrt Zuanea Buffalisa“. <sup>60</sup> U prijepisima dokumenata 15. stoljeća crkva sv. Barbare, također na kopnu, zapadno od mosta nedaleko komunalnih solana, bilježi se kao se kao *ecclesia Sancte Barbare in hortis*, odnosno *ecclesia Sancte Barbare de hortis Tragurii*.<sup>61</sup>

Vrtove u kojima su bili nastanjeni neki pučani spominjao je i Ivan Lucić rekonstruirajući povijest bratovštine sv. Duha u 15. stoljeću: „Kongregacija građana i pučana redovito se okuplja u dvorani sv. Duha. U njoj uzima učešće šest građana s titulom defenzora puka i ovima je povjerena sva ona vlast koju su u staro vrijeme imale bratovštine građana pučana svih onih koji su stanovali u vrtovima i bili nazivani Vrtljani, i stanovnika Čiova koji su nazivani Otočani.“ Naime, crkve na tom dijelu kopnenoga prigradskog teritorija imale su također svoje bratovštine osnovane tijekom 15. stoljeća:

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djelovala je tako ona sv. Marije od Anđela (Gospe od Anđela), sv. Jurja te sv. Kuzme i Damjana.<sup>62</sup>

Da je Vrtal zaista bio predio na kopnu potvrđuje jedan rukopis iz 1869. godine, prijepis nekoga starijeg dokumenta o starim trogirskim bratovštinama, koji je upotpunio Lucićevu vijest podatkom da su Kongregaciju pučana činili stanovnici unutar zidina, Vrtlani, koji su živjeli na kopnu te stanovnici otoka Čiova: *L`università del popolo di Traù consisteva de (...) antichi da quelli, che abitavano entra la mura della città, da alcuni altri, che avevano le abitazioni nel`Orti di Terraferma, e perciò si chiamavano Ortolani e dagli abitanti dell`Isola Bua, la maggior parte di quelli avevano particolari Confraternite.*<sup>63</sup>

Nakon dokumenta iz 1470. godine nije više zabilježen predio Vrtal. Daljnje nastanjivanje na tom predjelu spriječile su provale Turaka u neposrednu okolicu Trogira. To nezaštićeno i nesigurno područje pred samim gradom i prije je bilo neprikladno za izgradnju. U 14. stoljeću ruši se, kako je spomenuto, franjevački samostan koji se ondje nalazio.<sup>64</sup> Onemogućena je također gradnja arsenala planirana na zapadnom rubu polja 1416. godine.<sup>65</sup> U vremenima opasnosti od Turaka, kako je opasnost dolazila s kopnene strane, valjalo je posebno osigurati taj prostor na kopnu, pa se u nadolazećim stoljećima iznova u nekoliko navrta ruši franjevački samostan. Srušene su i kule u Malom polju pred gradom kako se Turci ne bi u njima utaborili. Porušene su i crkve sv. Jure uz most i ona sv. Barbare. Bilo je naređeno da se razruši i obližnja kuća za Morlake, turske podanike na kopnu, kao i sve kuće koji su se nalazile na tom području.<sup>66</sup> Tijekom mletačko-turskih ratova mnoge kuće i crkve u splitskom predgrađu potpuno su stradale, što neprijateljskim rušenjem, što iz predostrožnosti.<sup>67</sup> U Korčuli je knez 1491. godine donio odluku da se nitko, bez obzira na društveni položaj; bio plemić, pučanin ili stranac ne smije niti usuditi na prostoru pred gradom sagraditi kuću kako ne bi neprijatelju poslužila kao uporište.<sup>68</sup>

p. 438

Osovina početaka urbanizacije ovog dijela kopna pred Trogirom bila je put koji se u ravnoj liniji od mosta nastavljao prema bunaru Dobrić (SL. 2). Kod Dobrića su se račvali putovi prema istoku i zapadu. Jezgra za urbanizaciju mogao je biti i franjevački samostan kao što je to čest slučaj s podizanjem samostana prosjačkih redova u izvangradskim područjima koji postaju tako polovi izgradnje ili pak poticaj za nastanak novih naselja.<sup>69</sup> Na karti s kraja 16. stoljeća, koja prikazuje trogirske solane, na kopnu pred mostom nacrtana je skupina kuća gusto poredanih u nizu u liniji mosta.<sup>70</sup> Upravo na tom mjestu stajala je crkva sv. Jurja. Iako prikaz nije vjeran, na crkvu zasigurno ukazuje građevina na kojoj je nacrtan tornjić/zvonik. Uz crkvu je stajala i spomenuta kuća za Morlake. Druge nacrtane kuće sugeriraju vjerojatno kućerke, tada već rijetke, u kojima žive „Vrtljani“, ali i neke druge skromne javne i gospodarske gradnje, koje treba ondje pretpostavi

s obzirom da je zabilježeno kako se pred mostom i na mostu obavljala trgovina i održavale dražbe za zakup.<sup>71</sup> 449

Spomenuti dokument iz 1470. godine, u kojemu su po naredbi kneza Karla Capellija popisani veslači jedne trogirске galije, daje sažetu sliku prostorne i administrativne organizacije područja grada Trogira na početku novog vijeka. Četiri su, dakle, cjeline koje su pripadale gradu: područje (naselje) na kopnu pred gradom (*Vrtal/Orto*), grad na otočiću (*Città*) i njegovo srednjovjekovno predgrađe Pasike (*borgo*) te naselje na Čiovu (*Otok/Isola*). Slijede potom zasebno popisana sela trogirskog distrikta. Ovaj izvor potvrđuje da se stanovništvo naselja na Čiovu i na kopnu od samih početaka smatralo gradskim stanovništvom, a ne širega trogirskog teritorija odnosno distrikta. Primjerice, stanovnici splitskih predgrađa koji, kao i oni sela u distriktu, nisu bili ni plemići, ni građani ni pučani, uglavnom su navođeni kao *districtulaes*, a čitavo predgrađe se ponekad naziva Selom.<sup>72</sup>

Vrtal i Otok, dakle, iako nisu činili kompaktne jezgre obuhvaćene zidinama i iako su fizički bili odvojeni od grada, bilježeni su kao gradski predjeli, a ne zasebna sela. Ona su prostorno, društveno i administrativno u potpunosti pripadala gradu. Njihove su bratovštine uz one gradske sudjelovale u Kongregaciji građana i pučana. Zanimljiv je podatak iz ovog dokumenta da je Vrtal dao 18 veslača, grad 23, predgrađe 17, a Otok samo 4. Može se tako približno, jer riječ je tek o broju muškaraca sposobnih za vojsku, rekonstruirati demografska slika i prostorni odnosi između tih cjelina krajem 15. stoljeća. Predgrađe na Čiovu bilo je tek u formiranju te je još rijetko bilo naseljeno u odnosu na prostor na kopnu, gdje su ratne okolnosti ubrzo zaustavile daljnji razvoj.

U kasnijim stoljećima, kada je opasnost od Turaka jenjavala, potreba čuvanja plodnih površina nije ipak dozvolila da se na prostoru Vrtala oblikuje kompaktno prigradsko naselje. Na karti trogirskog polja na kopnu iz 1763. godine, na njegovima rubnim dijelovima ucrtano je nekoliko desetaka kuća i štala te je zapisano da su one bile bespravno izgrađene i porušene, te potom ponovno podignute.<sup>73</sup> Još u prvoj polovici 19. stoljeća, kako to pregledno ilustrira spominjana karta Trogira iz 1828. godine, taj je prostor ostao posve neurbaniziran (SL. 2). Bilo je tek nekoliko štala i kućeraka raštrkanih po polju uz vrtove, oranice i stare putove. S druge strane gusto izgrađenog otočića, na kojemu se još razabire pravilna parcelacija i mreža ulica Pasika, pruža se prostrano predgrađe na Čiovu. Obalnu liniju tog predgrađa zauzimaju veliki blokovi kuća, a uz putove koji započinju kod mosta, gusto su nanizane manje kuće. U tom je razdoblju broj njegovih stanovnika nadišao ukupan broj stanovnika Grada i Pasika.<sup>74</sup>

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# Dvije „polovice“ Novog Zagreba

Melita Čavlović  
Lana Lovrenčić  
Antun Sevšek

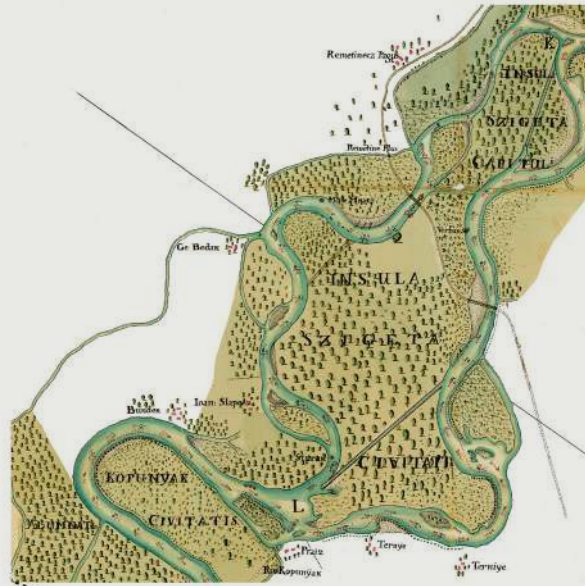
Istraživanje prati evoluciju područja Zagreba oblikovanog i određenog promjenjivim tokom rijeke Save. Tranzicija je to iz slabo definiranoga krajnjeg limesa grada do prostora koji se počeo sagledavati kao središte njegovoga budućeg razvoja. Period koji se analizira omeđen je dvjema prekretnicama u razvoju tehnologija bilježenja i promišljanja protourbanog prostora. Istraživanje započinje trenutkom kada se taj prostor u geopolitičkom smislu počinje poimati kao teritorij, dok kraj predstavlja trenutak formiranja svih zakonskih, tehničkih i planerskih alata nužnih za njegovu urbanu transformaciju. Kroz konceptualnu i sudbinsku spregu između desne i lijeve obale rijeke prate se transformacije ovog teritorija zajedno s mijenama vrijednosnog okvira njegovog promišljanja.

Umjesto prevladavajućeg narativa herojskog prijelaza CIAM-ovske matrice na južnu obalu Save, istraživanje nudi čitanje ovog razvoja i kroz prizmu prostora Trnja. Ono se prikazuje kao povijesni antipod i njegovo daleko ishodište. Tekst je strukturiran kronološki, prateći evoluciju prostora naizmjenično iz rakursa rijeke, odnosno poplavnog područja njenih obala, sukladno njihovome recipročnom odnosu. Ova urbanološka analiza nastaje superponiranjem niza kartografskih prikaza tretiranih kao zapisa prirodnih, gospodarskih i političkih procesa koji su dopunjeni pokušajem oprostorenja raznovrsnih linearnih povijesnih narativa. Tako izgrađena prostorno-vremenska matrica otkriva usložene i promjenjive odnose infrastrukture i teritorija, prirodnog i urbanog, figure i pozadine otvara nove rakurse valorizacijskih okvira zagrebačke desne obale Save.

Praćenje ovog prostora počinje 1786. godine čitanjem karte koja prikazuje rijeku Savu od utoka Sutle do prostora Lonjskog polja (SL. 1). Jedini sadržaj predstavlja tok rijeke. Izostaju bilo kakve informacije o širem teritoriju kroz koji prolazi, a lokacija naselja Zagabria samo je usputna oznaka. Bjelinom papira apstrahiran prostor izvan toka rijeke izmješta fokus na čitanje Save kao predominantno prirodnog okoliša. Legenda, međutim, dokida ovo pastoralno čitanje, otkrivajući supostojanje guste mreže anotacija dubine riječnog toka, stabilnih i opasnih mjesta prijelaza, lokacija splavi i mostova. U vrijeme nemogućnosti tehnološkog ovladavanja silinom rijeke, ova se karta priklanja višestoljetnoj<sup>1</sup> povijesti ekonomskog i političkog prisvajanja Savišća. Otkriva važnost detaljnog poznavanja njenog toka i održavanja plovnosti kao bitnog preduvjeta razvoja.<sup>2</sup> Ova je karta važna iz dva razloga: kao dokument vremena u kojem je priroda u svojoj nesavladivosti jasna opozicija tehnologijama upravljanja prostorom predindustrijske države, a ujedno i kao reprezentativni prikaz razvoja alatā koji će ubrzo omogućiti njeno podčinjavanje. U vremenu izrade ove karte europskim krajolikom uz rijeke dominiraju zajednice poplavnih šuma, livada i ribnjaka.<sup>3</sup> Agrarnom

**Pripitomljavanje  
rijeke i nastanak  
protourbanog  
teritorija**

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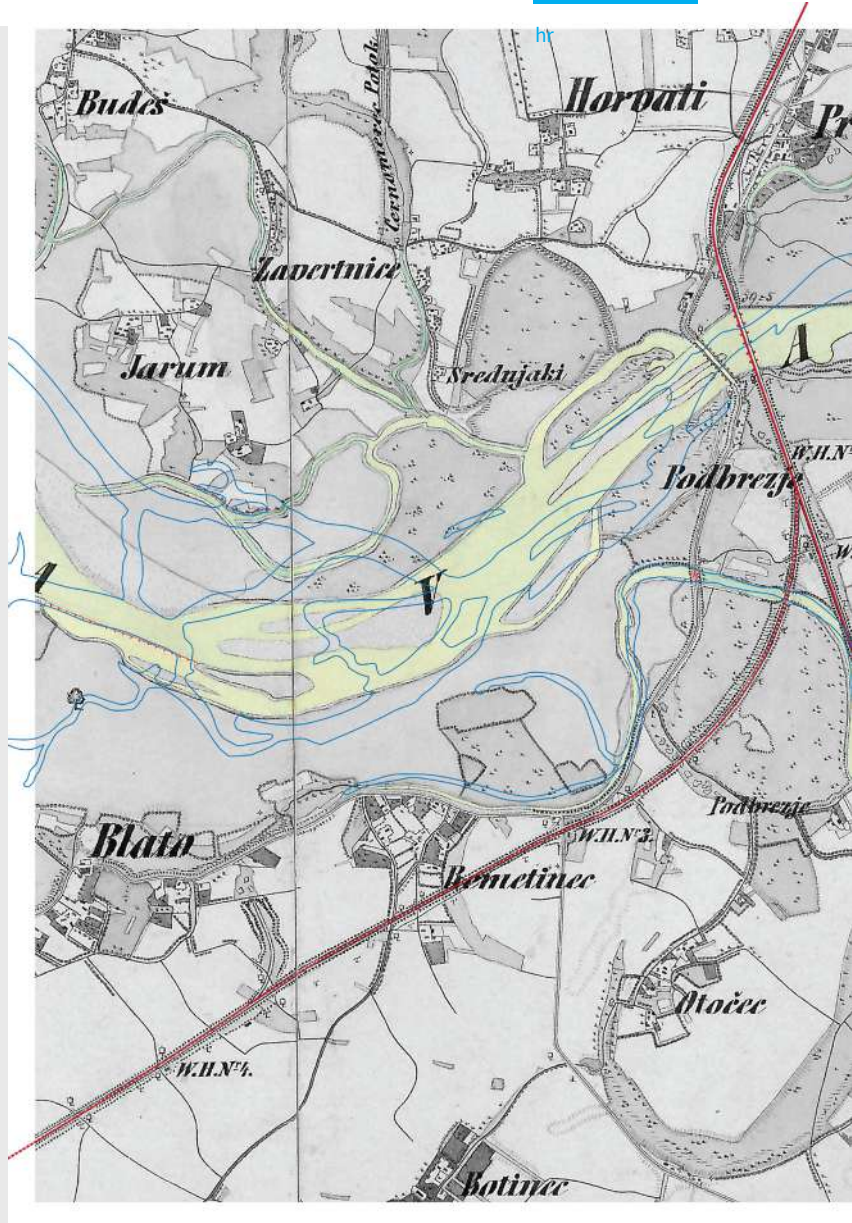
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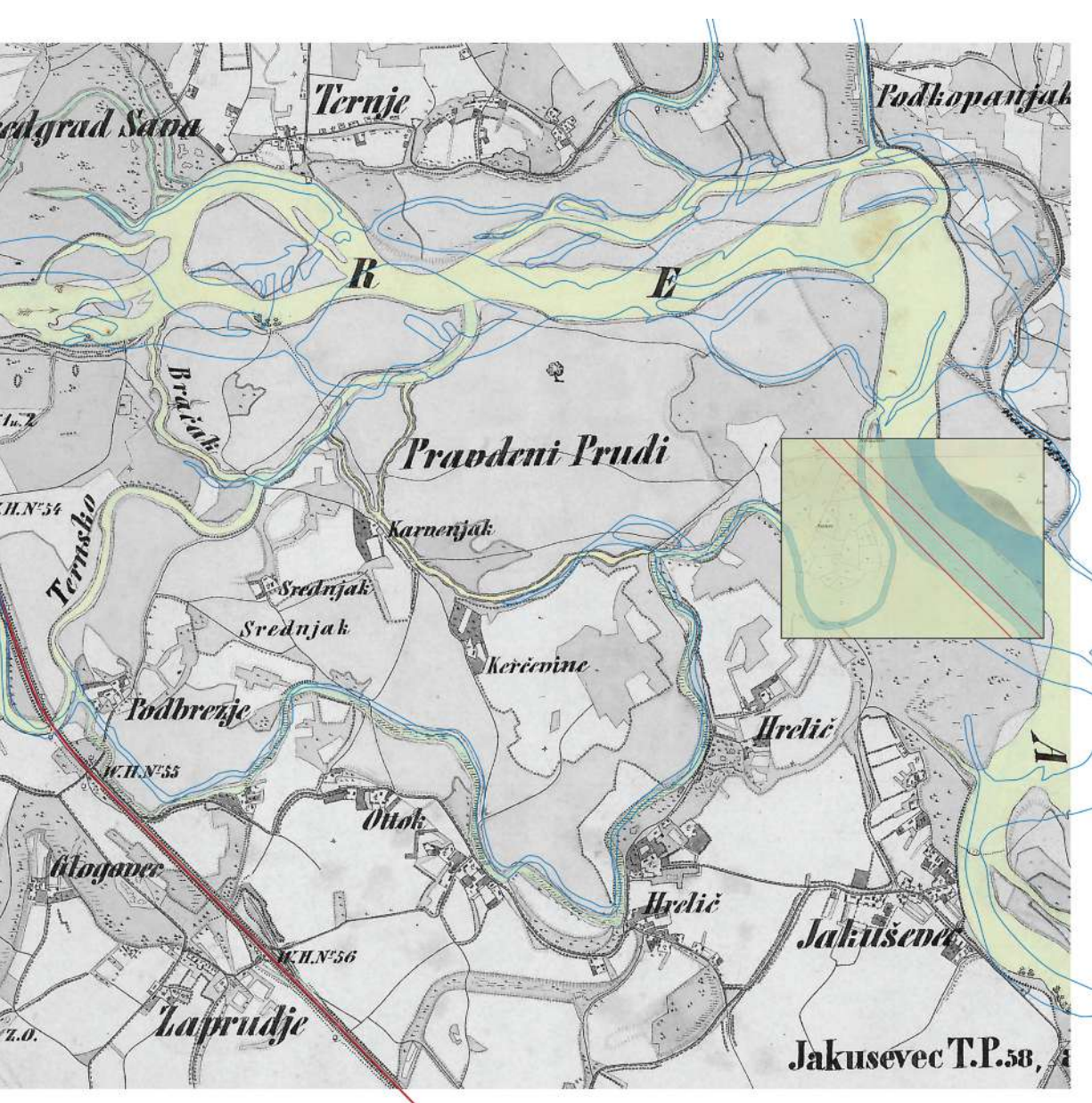
SLIKA 1

Početak proučavanja toka rijeke, čije zauzdavanje izmiče tadašnjim tehnološkim mogućnostima, postavlja je u dominantan položaj prema okolnom prostoru lišenog svih svojstava.

Antun Sevšek, grafička intervencija na izvornoj karti: *Mappa totum fluxum Savi inde ab ... ducatus Styriae et Car...* ..., 1786., MNL OL S 12 – Div. XIII. – No. 61:9-18., Magyar Nemzeti Levéltár / Madžarski državni arhiv.







SLIKA 2

Vojne izmjere omogućile su sagledavanje krajolika, dotad određenog isključivo promjenjivim tokom rijeke, unošenjem „odozgo” trasa infrastrukture i spekulativnih linija regulirane Save. Antun Sevšek, grafička intervencija na izvornoj karti:

*Französisch-Österreichische Landesaufnahme*, B IX a 758-4 Section No 5. westliche Colonne No III, 1867., Österreichisches Staatsarchiv / Austrijski državni arhiv; ubačeni ulomak: katastarska općina Jakuševac, 1861., snimka zaslona sa <http://mapire.eu/en/>.

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reformom i znanstveno-tehnološkim inovacijama koje nastupaju nakon pokretanja velikih državnih kartografskih pothvata započet će njegova drastična transformacija. Sveobuhvatnom jozefinskom vojnom izmjerom iniciranom 1763. godine Habsburška Monarhija pokreće višedesetljetni proces kartiranja geografskih elemenata u rasponu od osnovnih geoloških formacija terena, uključivo i tokove rijeka, pa sve do načina korištenja zemljišta, položaja kuća, broja stanovnika i grla stoke.<sup>4</sup> U razdoblju između 1783. i 1784. godine istovjetna logika kojom se sagledavala rijeka, zahvaća i prostor obje obale Save. Detaljna evidencija teritorija postala je osnovom učinkovitog upravljanja državom.

Superponiranje toka rijeke Save, zabilježeno franciskanskom (1806.–1869.) i francjozefinskom (1869.–1916.) izmjerom, otkriva fluvijalnim procesima u potpunosti određen krajolik (SL. 2). Akumulacijsko-erozijski mehanizmi „vrpčaste“ rijeke zbog intenzivnog taloženja naplavnog materijala često mijenjaju tok. Staro korito se napušta, sporedni dijelovi toka postaju meandri. Potencijalno nove trase toka rijeke prijete raštrkanim naseljima okruženim poljoprivrednim površinama. Oscilacijama toka, rijeka u sezonskim, višegodišnjim ili stoljetnim ritmovima pronalazi put sebi kroz podatnu šljunkovitu aluvijalnu terasu.<sup>5</sup> Amplitude ovih ritmova na krajnjoj periferiji budućega regionalnog središta Austro-Ugarskog Carstva definiraju prostorni opseg ovog istraživanja (SL. 3). Toponomastička analiza<sup>6</sup> povijesnih karata otkriva niz naselja i oznaka područja na krajnjim sjevernim i južnim granicama ovih amplituda, kao i na području samog toka rijeke koji formira nizove otoka i sprudova. Etimološki svi toponimi nedvosmisleno prikazuju združenost s promjenjivom topografijom i sastavnicama pejzaža savske doline. Dijele se na one koji upućuju na pozicije nekadašnjih vodotokova (Savica, Stara Savica, Savišće), riječnih otoka (Siget, Sigečica, Otočec, Otok), karakteristike vegetacije (Vrbani, Vrbik, Savski gaj, Trnsko, Trstik, Trnje), a čak i pretežno (Gredice)<sup>7</sup> ili u potpunosti od plavljenja sigurne lokalitete (Peščenica, Zapruđe, Struge).<sup>8</sup> Analiza učestalosti pojavljivanja i promjene položaja tih toponima otkriva razmjere nesigurnosti obitavanja i korištenja ovog prostora kao i složene procese određivanja jurisdikcije nad njime. Zabilježeni su primjeri vlasničkih sporova oko položaja skele za prelazak rijeke jer su promjene korita uvjetovale promjene granica posjeda<sup>9</sup> ili pak promjena područja župa poput slučaja crkve Sv. Marka Evanđelista u Jakuševcu<sup>10</sup> koja tri puta mijenja lokaciju.<sup>11</sup> Tek 1862. izgradnjom željezničkog, odnosno 1892. godine stabilizacijom obližnjega cestovnog mosta određena je prva stabilna koordinata u ovome promjenjivom prostoru.<sup>12</sup> Nakon više od stoljeća poplavama uvjetovanih rekonstrukcija i popravaka, nastaje inicijalna točka predstojeće regulacije rijeke.

Gospodarski i tehnološki napredak 19. stoljeća donosi nov način gledanja na problem vodnog gospodarenja. Načelo „ispravljača rijeka“ Johanna

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Gottfrieda Tulle da „u pravilu, niti jedan potok i niti jedna rijeka ne treba-  
ju više od jednog korita“,<sup>13</sup> nakon uspješnih pionirskih zahvata na Rajni,  
odjeknula je širom Europe. Inženjerski udžbenici preuzimaju stav da su  
prirodni tokovi rijeka, u najmanju ruku, nesavršeni i neučinkoviti, te da ih  
treba „poboljšati“ i „izravnati“, ili još borbenije, da su neprijatelji razvoja  
društva, pa da ih treba „ukrotiti“, „zauzdati“ ili „pripitomiti“. Razdoblje je  
ovo užurbane vodotehničke aktivnosti kada se započinju projekti uređivanja  
tokova svih većih europskih rijeka. Unutar Carstva se tako pokreću opsežni  
radovi regulacije toka Dunava. Kod Budimpešte oni kreću nakon velike  
poplave 1838., a u Beču se (Wiener Donauregulierung) odvijaju u razdoblju  
od 1870. do 1875. godine.<sup>14</sup> Opetovane poplave Save i materijalne štete na  
usjevima, naseljima i infrastrukturnim objektima,<sup>15</sup> te strah koji je uvjetovala  
neizvjesnost života uz rijeku potakli su, sukladno tada aktualnoj europskoj  
praksi, dugotrajan proces razmatranja problema regulacije rijeke na području  
Zagreba. On je kulminirao 1895. godine nakon dviju poplava katastrofalnih  
razmjera koje su inicirale pokretanje sveobuhvatne inženjerske operacije  
zauzdavanja i ispravljanja „neprijateljske“ rijeke.<sup>16</sup> Novoosnovana Građevna  
uprava za regulaciju Save užurbano snima glavni tok, stara korita i rukavce,  
kao i poprečne profile obale, te ih zajedno s predloženom novom trasom  
unos u katastarske planove. Trasa odabrana Osnovom za regulaciju Save  
kod Zagreba iz 1899. godine polumjera 800 m simetrično je postavljena u  
os srednjovjekovnoga dvojnog grada na suprotnoj obali. Ona po kazivanju  
inženjera nije ništa više „nego posredujuća crta između nebrojenih smjerova  
živih i mrtvih rukavaca neuredjenog toka rijeke Save“.<sup>17</sup> Neposredno nakon  
ucrtavanja tankih crvenih linija novog toka, koje se jedva vidljivo pojavljuju na  
reambuliranim katastarskim planovima, buduća je trasa ucrtana i na terenu  
ukapanjem betonskih stupova u razmaku od 500 do 1000 m i pridruženim  
kamenim markacijama kutnih točaka. Tehnološke mogućnosti omogućile  
su ovladavanje rijekom, a mjerenja i spekulativne linije korigiranog toka  
generacija geometara uskoro postaju stvarnost (SL. 4). Regulacija rijeke,  
inicijalno planirana u trajanju od 12 godina, uključujući prekide zbog novih  
ciklusa poplava i ratnih zbivanja, protekla se duboko u prvu polovicu 20.  
stoljeća.<sup>18</sup> Unatoč tome, Sava je od tada smatrana dovoljno sigurnom da  
se nestabilan prostor nekadašnjih amplituda toka može promišljati za  
razvoj grada. Počinje period transformacije u kojem priroda prestaje biti  
zastrašujuća i prijeteća, te postaje pitoma i uslužna.

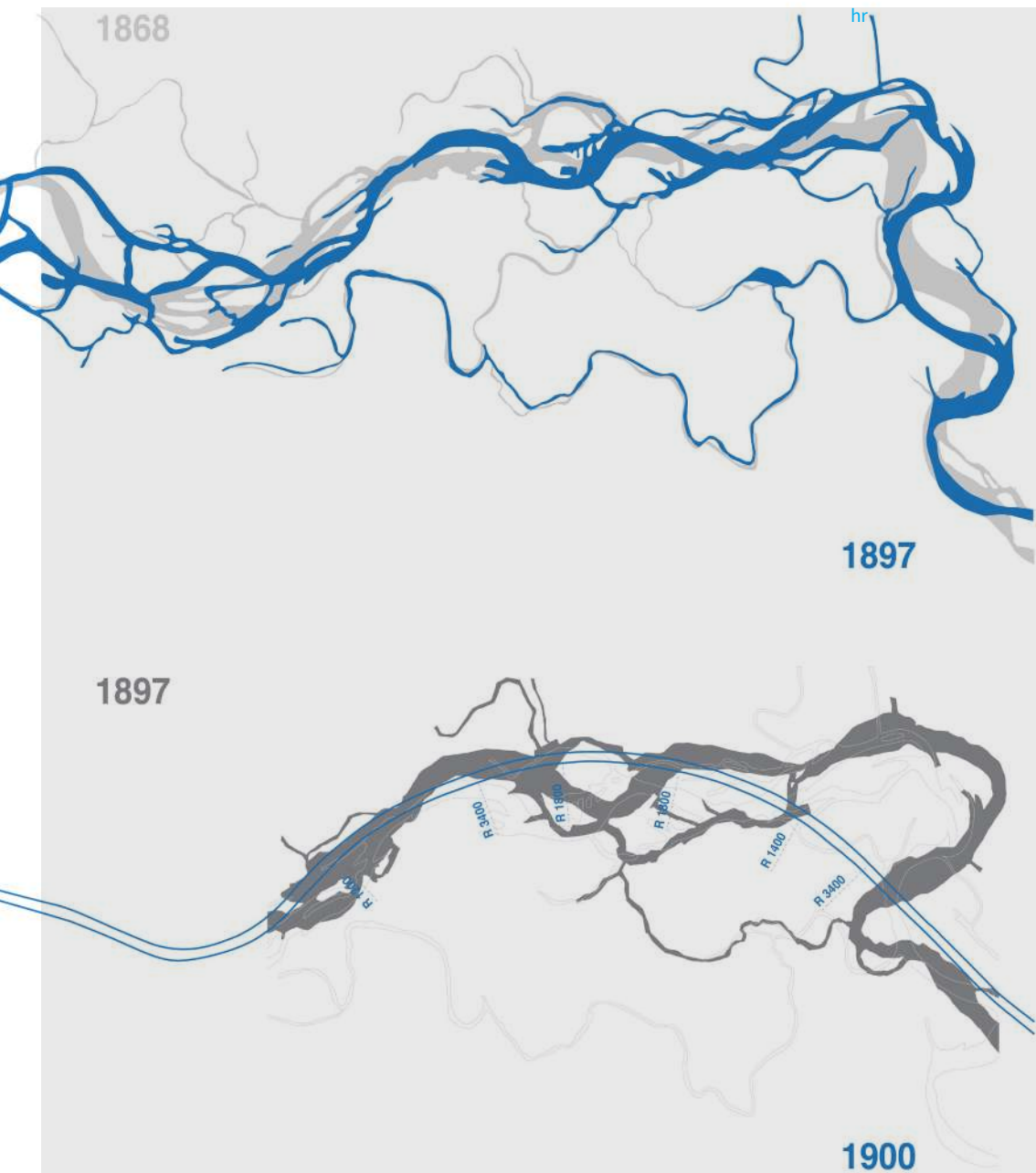
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Organizacija procesa regulacije prvi put uvezuje lijevu i desnu obalu Save  
u planerski i konceptualno koherentan prostor. Osim očiglednih prioriteta  
vezanih za sprečavanje daljnjih katastrofalnih poplava te osiguravanje toka  
i plovnosti rijeke, kao jedan od ključnih ciljeva navedeno je i privođenje

**Transformacija  
teritorija u  
moderni  
grad**

n.  
4-18

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SLIKA 3

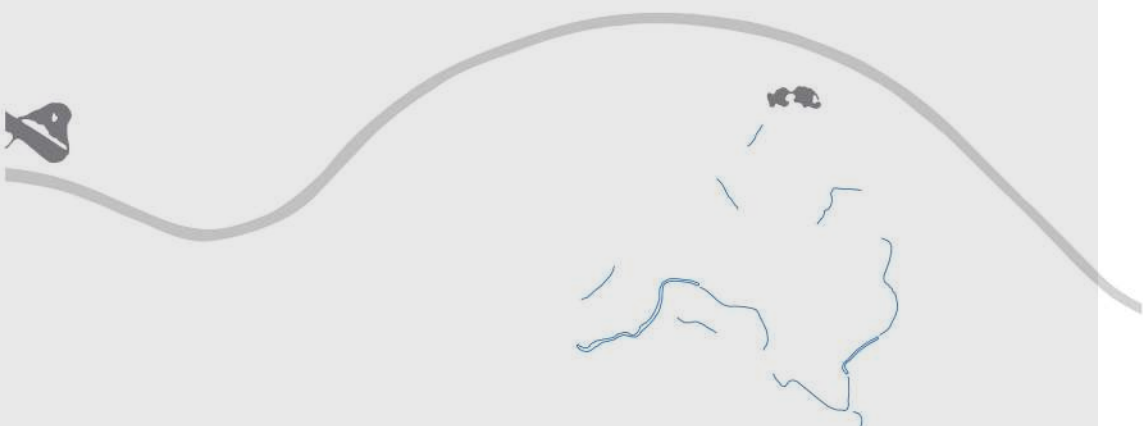
Shematski prikaz amplituda rijeke tijekom povijesti kao i njihovoga postupnog zatiranja svjedoči o transformaciji plavne savske doline u denaturalizirani urbani teritorij.

Antun Sevšek, ilustracija prema: *Franzische Landesaufnahme* (1806.–1869.), <http://mapire.eu/en/>; *Franziskojoosephinische Landesaufnahme* (1869.–1916.),

1868



1959



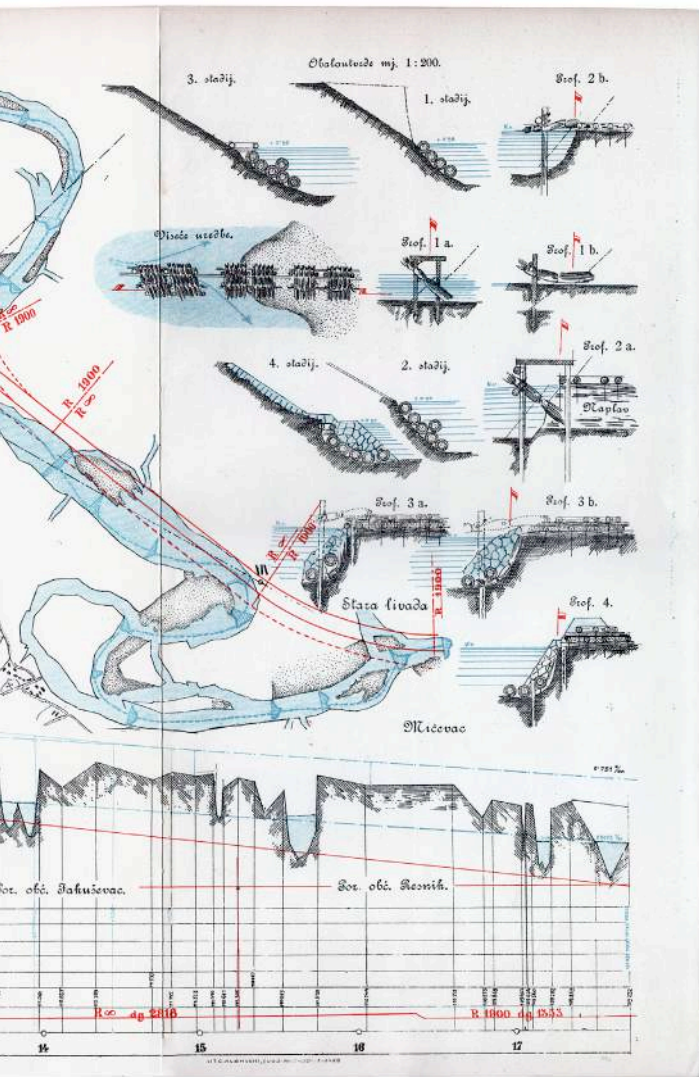
2017

<http://mapire.eu/en/>; „Regulacija Save kod Zagreba,“ *Viesti društva inženira i arhitekata u Hrvatskoj i Slavoniji* 5 (1899.); Georeferencirani zračni snimci, 1959., niz R-13: 5058, 5060, 5062,

5321, 5323, 5325, niz R-15 4748, 4750, 4752 i 4754, Državna geodetska uprava Republike Hrvatske.







„kulturi 7000 jutara sada neplodnog tla“.<sup>19</sup> Lijeva (sjeverna) obala Save bila je dotad, premda već Prvom regulatornom osnovom iz 1865. godine pripojena razmatranju širega gradskog područja, u velikoj mjeri određena hirovima rijeke. Nakon izgradnje željezničke pruge 1862. godine i njenog izdizanja na zemljani nasip, prostor grada podijeljen je na područje sigurnog razvoja građanskog Zagreba i daleku, pretežno neizgrađenu i tek u naznakama planiranu periferiju. Ovaj se II. Razdjel grada, kako ga naziva regulatorna osnova iz 1887. godine, prostire od pruge sve do Save, a planovi grada ga prikazuju kao neartikulirano zeleno prostranstvo prošarano rijetkim vijugavim putovima ili skupinama kuća.<sup>20</sup> Prostor desne (južne) obale je u ovo vrijeme izuzet iz prikazivanja grada. On još uvijek predstavlja krajnju sjevernu granicu prostrane ravnice u koju su se tijekom povijesti upisivali interesi gradečkih i kaptolskih veleposjednika (*Territorium Seminary*,<sup>21</sup> *Campus Nobilium Zagrabienis*<sup>22</sup>), odnosno općine Turopolja (*Campus Turopolje*). Uspješno pokrenutim procesom regulacije stvara se protourbani teritorij koji se počinje transformirati sukcesijom poljoprivrednih, infrastrukturnih i urbanističkih operacija. One intenzitetom postupno nadmašuju i polako brišu akumulirane tragove prirodnih procesa.

Agrarne reforme koje su uslijedile nakon ukidanja kmetstva, povezane s jačanjem privlačne snage gospodarstva grada te mogućnošću korištenja i naseljavanja nekadašnjih veleposjeda, uvjetuju početak migracije osiromašenih seljaka iz Turopolja i drugih dijelova sjeverne Hrvatske na prostor južno od pruge. Velika ih se većina, zbog drastične nestašice jeftinih stanova, naseljava onkraj pruge gdje su donedavno prevladavale „...blatnjave livade gdje su pasle krave, a svinje se kaljužale u sjenovitim vrbicama“.<sup>23</sup> Razvoj toga „drugog grada“ i njegovih „divljih kuća“ prešutno se tolerira te kroz nedostatno osiguravanje osnovne komunalne infrastrukture,<sup>24</sup> prometnih veza i javnih sadržaja, u potpunosti ignorira.<sup>25</sup> Katastrofalni uvjeti života kao posljedica izostanka gradskih politika socijalne stanogradnje i nemogućnosti zaustavljanja štetnih zemljišnih politika formiraju u novoj generaciji urbanista svijest o nužnosti osmišljavanja drugačijih paradigmi vođenja razvoja grada. Zametak je to višedesetljetnog procesa borbe protiv partikularnih privatnih interesa kroz modalitete gradskog, a poslije društvenog i zajedničkog raspolaganja gradskim teritorijem.<sup>26</sup> Neprestani pritisak stalno nadolazećeg stanovništva i sveprisutna špekulacija zemljištem transformirali su nepravilnu poljoprivrednu matricu u gusti supstrat koji dinamikom rasta i opsegom širenja preduhitruje te, pokazat će se, dugotrajno onemogućuje implementaciju generacija *top down* strategija urbanističkog razvoja. Promjene brzinom izmiču gradskim nastojanjima njihovog sagledavanja, a kamoli kontrole. Druga katastarska izmjera grada (1909.–1913.) *de facto* je zastarjela već u procesu izrade. Neadekvatne procedure održavanja





p. 472

SLIKA 5

Shematska analiza u međuvremenu „urbaniziranih” dijelova Trnja u odnosu na državne (1), gradske (2), crkvene (3) i privatne (4) veleposjede iz 1928. godine otkriva

nemogućnost sustavne gradograditeljske aktivnosti izvan njihovih okvira. Antun Sevshek, ilustracija prema: *Nacr. slob. i kr. glav. grada Zagreba*, Gradski mjernički odsjek, 1928.,



(iz Tamara Bjažić Klarin, "Home and Life; Or, How Do People Live in Zagreb?" u *Atlas of the Functional City. CIAM 4 And Comparative Urban Analysis*, ur. Evelien van Es, Gregor Harbusch,

Bruno Maurer, Muriel Pérez, Kees Somer, Daniel Weiss (Bussum: Thoth Publishers / gta Verlag, 2014.), 423); Digitalni preglednik Grada Zagreba, <https://geoportal.zagreb.hr/Karta>.

izmjere početak su nepovratnog razilaženja katastarskih i zemljišnoknjižnih evidencija<sup>27</sup> sa stvarnošću na terenu. Procesi usitnjavanja posjeda i uslo-  
žnjavanja vlasničke strukture počinju stvarati i danas nepremostiv pravni  
talog te protourbanističke transformacije. Inicijalno ruralni, a sredinom  
stoljeća geografski centralni *patchwork* substandardnih izgradnji, zelenih  
okućnica, vrtova te sporadične i tek naknadno provedene komunalne  
infrastrukture vrlo se kasno nameće planerima kao stvarnost unutar koje  
moraju djelovati, a ne tek privremeno stanje koje mogu ignorirati. Desna  
je obala pošteđena tih transformacijskih procesa tek pukom činjenicom  
udaljenosti mjesta rada koja se pretežno nalaze uz prugu u središnjem  
dijelu grada. Sporadična ilegalna izgradnja uz zaseoke Blato, Otok, Zapruđe,  
Jakuševac ili Svetu Klaru predaleko je od očiju gradskih otaca.<sup>28</sup> Izuzetak je  
područje Kajzerice, na mjestu nekadašnje vojne streljane, koja zbog blizine  
strateški važne točke prijelaza cestovnog i željezničkog mosta prva dobiva  
kakvu-takvu zaštitu od poplava. Premda je u odnosu na Trnje ograničenog  
opsega, transformacija Kajzerice ipak predstavlja prvu u nizu translacija  
strukturnih matrica na desnu obalu Save. Usporedba danas „urbaniziranih“  
dijelova Trnja s kartom vlasničke strukture,<sup>29</sup> koju je 1928. godine izradio  
gradski Odsjek za regulaciju grada, otkriva da se grad razvijao pretežno  
ekspropriacijom i nacionalizacijom velikih državnih, crkvenih ili privatnih  
veleposjeda koji su sačinjavali vlasničku strukturu ovog područja (SL. 5).

p. 470

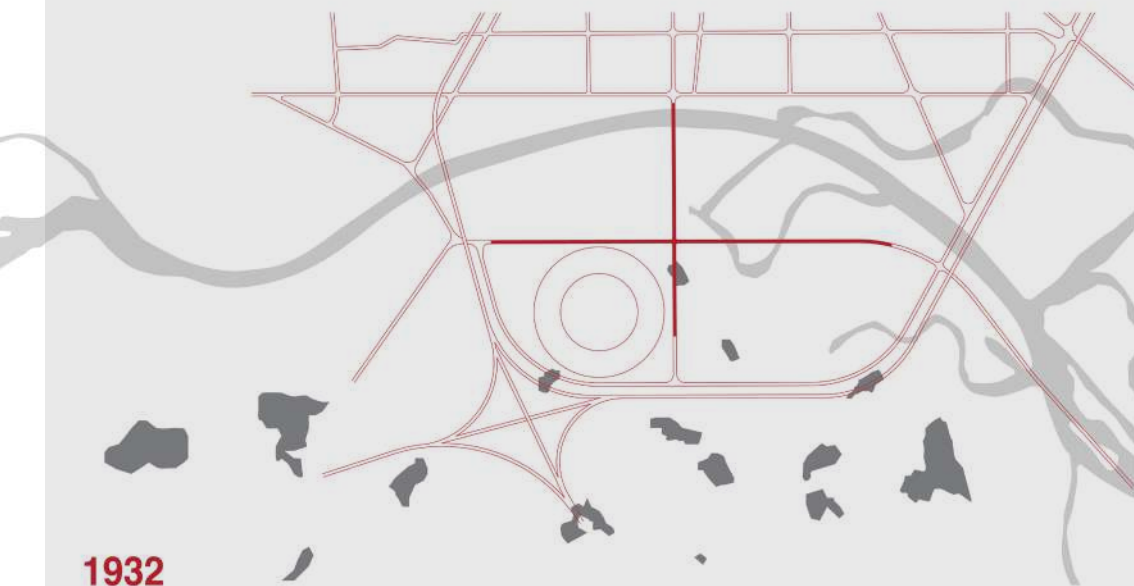
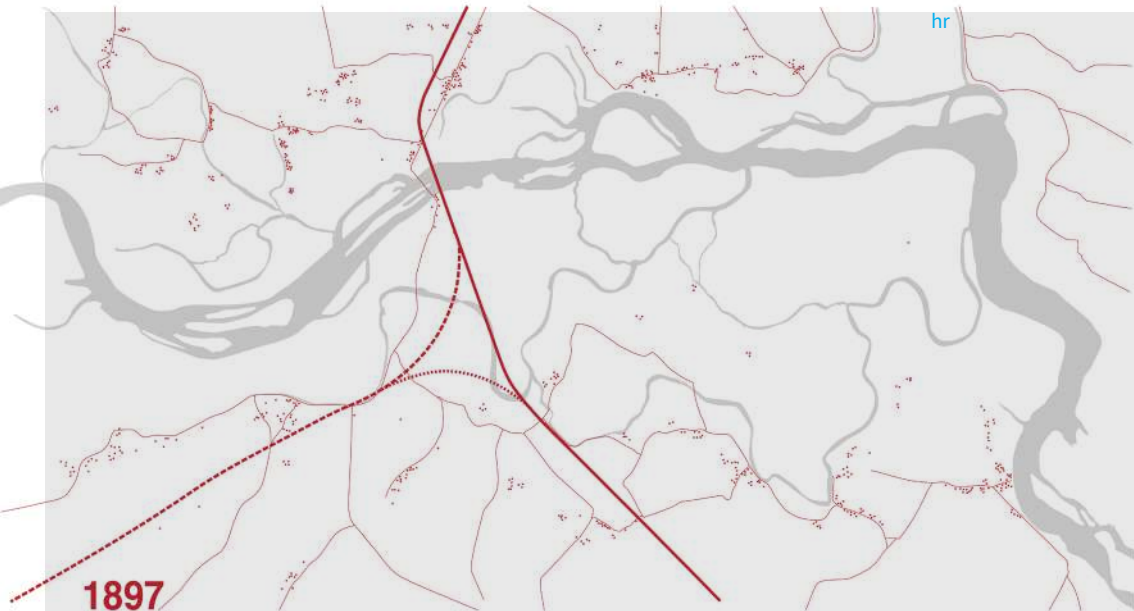
Tkivo „ilegalnoga“ grada izvan tih zona, unatoč postupnim točkastim  
transformacijama, u velikoj je mjeri preživjelo i do danas.  
Sljedeći sloj promišljanja i upisivanja u ovaj prostor čini sukcesija infra-  
strukturnih zahvata koji su prethodili, a često i uvjetovali razvoj koherentnih  
urbanističkih koncepcija. Željeznička,<sup>30</sup> cestovna, lučka i komunalna infra-  
struktura počinje tražiti optimalne trase određujući još nejasne gabarite  
„trećega“ odnosno „četvrtog“ Zagreba.<sup>31</sup> Prvu u nizu infrastrukturnih figura  
predstavljaju odvojci željezničke pruge prema Sisku i Karlovcu koji 1862. i  
1865. godine predstavljaju prve tragove „odozgo“ na poplavnom području  
desne obale Save. Izgrađena pruga inicijalno je bila poticaj gospodarskom  
razvoju grada, a nakon podizanja trase na nasip postaje i krajnja točka  
obrane grada od poplava. Ubrzo je, međutim, njena blizina središtu grada  
shvaćena kao prepreka razvoja prema jugu te je inicirana potraga za rje-  
šenjem „zagrebačkog željezničkog pitanja“. Prijedlog regulacijske osnove  
Milana Lenucija iz 1907.<sup>32</sup> godine prvi put obuhvaća i desnu obalu, doduše  
samo kao „prazan“ prostor koji preuzimanjem zaobilazne trase može  
rasteretiti središte grada neželjenog prisustva željezničkog prometa. Dugo  
usvajani prijedlog regulacije iz 1932. godine preuzima ovu zaobilaznicu  
u formaliziranom, simetričnom obliku, dok konačno preusmjeravanje  
teretnog prometa zaživljava tek tijekom 1960-ih odabirom finalne lokacije

ranžirnog kolodvora. Pokušaji promišljanja cestovne mreže desne obale<sup>33</sup> 473

u odnosu prema datostima zatečenih tradicionalnih putova ili u relaciji prema krivulji rijeke napuštaju se u korist jasnijih shema. Trasiranjem Varaždinske ceste<sup>34</sup> (današnja Ulica grada Vukovara) u smjeru istok-zapad i kodificiranjem urbanističke figure središnje gradske osi položene kroz tjeme lūka rijeke postavljena je jasna konceptualna matrica daljnjeg razvoja. Od tada se širenje grada prema jugu određuje njenim sukcesivnim umnažanjem. Ortogonalna matrica razvija se prvo na lijevoj obali kroz trasu „Autoputa“, odnosno nikad dovršeni nastavak ulice Prisavlje te jednako teško dosežno „produljenje“ Runjaninove i Draškovićeve ulice. Istovjetna se gradograditeljska operacija prenosi i na desnu obalu promišljanjem optimalnog položaja križanja dodatno „produljene“ središnje osi i prekosavske obilaznice u pravcu istok-zapad.<sup>35</sup> Zadanu matricu preuzimaju svi planovi koji slijede te ona predstavlja ishodište smještanja svih budućih urbanih sklopova na ovom prostoru. Razvoj te figure kulminirat će dogmatskim interpoliranjem homogene CIAM-ovske prometne mreže nakon 1962. godine koja predstavlja njegovu konačnu inkarnaciju (SL. 6). Čak petnaest razmatranih lokacija gradske riječne luke na istovjetan je način upisivano u ovaj prostor, no nemogućnošću njene realizacije izostao je utjecaj na razvoj šireg područja nekadašnjeg Savišća.<sup>36</sup> Usporedo s izgradnjom prometne infrastrukture širi se i mreža komunalnih instalacija. Upravo će potreba izgradnje glavnoga sabirnog kanalizacijskog kanala, paušalno postavljenog na udaljenosti 450 m od pruge od 1930. do 1932. godine, odrediti položaj i trasu urbanističke i simboličke figure centralnoga gradskog bulevara. Ono što će krajem 30-ih značiti nastavak polaganja instalacija novim koridorom duž tadašnje Varaždinske ceste za očekivani nagli početak urbanizacije, višestruko će premašiti infrastrukturni zahvati na desnoj obali omogućeni translacijom Zagrebačkog velesajma 1956. i izgradnjom Mosta slobode 1959. godine. Pretežno neizgrađena i u velikoj mjeri još uvijek prirodna osnova postupno prerasta u infrastrukturno premreženu i oblikovno ujednačenu pozadinu budućih gradnji.

Ne ulazeći u genealogiju reprezentativnoga urbanističkog sklopa Moskovskog bulevara i osi produženog Zrinjevca, koja je ujedno i povijest akumulacije simboličkih projekcija koje izlaze izvan okvira ovog istraživanja, za daljnji razvoj prostora na obje obale rijeke bitna je sukcesija urbanističkih matrica koje se predlažu unutar prethodno postavljenih infrastrukturnih figura. Ranomodernistički diskurs podčinjavanja prijetećih prirodnih procesa kao osnove uspostave uređenog i od prirode odvojenog urbanog stanja,<sup>37</sup> transformira se početkom prošlog stoljeća u zagovaranje nove organizacijske paradigme koja kao glavnu prepreku vidi nasljeđe tradicionalnoga grada. Opisi blokova sa „zagušljivim dvorištima bez provjetravanja i ispravnog

p. 474



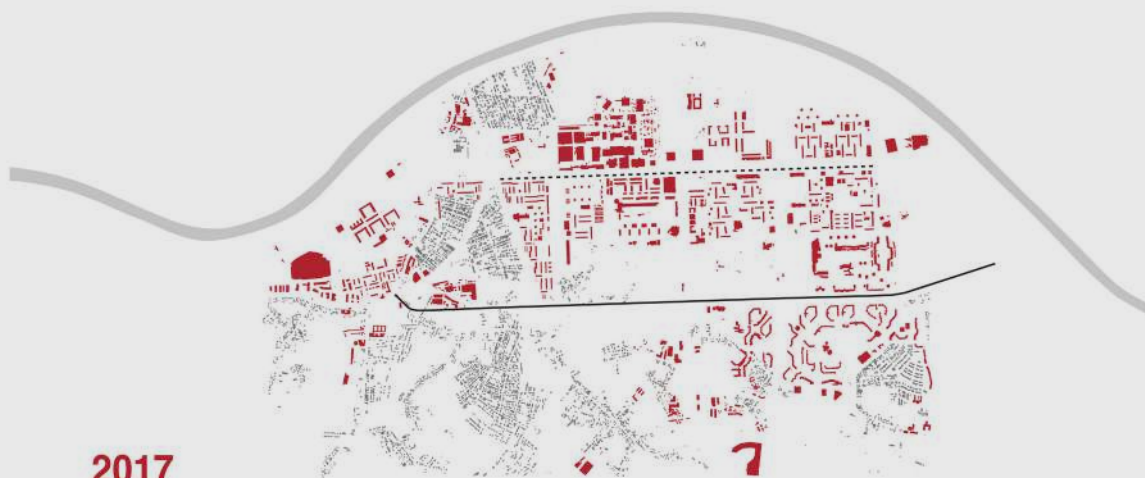
p. 473

SLIKA 6  
Shematska analiza međuovisnosti sukcesije  
infrastrukturnih „figura” i razvoja  
izgrađenoga gradskog tkiva.  
Antun Sevšek, ilustracija prema:

*Franzische Landesaufnahme*, B IX a 758-4  
Section No 5. westliche Colonne No III, 1867.,  
Österreichisches Staatsarchiv / Austrijski  
državni arhiv; “Regulatorna osnova za grad



1962



2017

Zagreb," *Tehnički list – organ udruženja jugoslavenskih inženjera i arhitekta* 6-7 (1933.); *Skica idejnog rješenja Novog Zagreba* (1962), Arhiv Zavoda za prostorno uređenje Grada

Zagreba; Digitalni preglednik Grada Zagreba, <https://geoportal.zagreb.hr/Karta>.

osunčavanja<sup>38</sup> odjek su nekadašnjih karakterizacija Save koja „djeluje vrlo nepovoljno i na zdravstveno stanje žiteljstva“.<sup>39</sup> Čitanje postojećega grada kao nepravilnog i nezdravog stanja u zagrebačkom primjeru naglašeno je, možda nehotice, i prirodnim metaforama u opisima rubnih dijelova gdje prevladavaju „divlje kuće u samoniklim naseljima“.<sup>40</sup> Niz urbanista i arhitekata u gradskim službama lokalnim, a poslije i međunarodnim djelovanjem – putem izložbi grupe *Zemlja* ili aktivnostima Radne grupe Zagreb – od kraja 1920-ih javno artikulira potrebu rješavanja problema uvjeta stanovanja na periferiji grada.<sup>41</sup> Modernistička dogma djelovanja *ex nihilo* tako se preklapila s čitanjem prostranstava zanemarenih rubova grada kao prostorne inkarnacije krajnje društvene nepravde i neravnopravnosti. Iz tih vrijednosnih polazišta, nakon međunarodnog natječaja za novu generalnu regulatornu osnovu grada Zagreba 1930. godine, počinje višedesetljetna urbanistička praksa crtanja novih strukturnih matrica preko nepravilnog i velikim dijelom već izgrađenog supstrata lijeve obale rijeke. Regulatorna osnova izrađivana u Odsjeku za regulaciju grada od 1932. do 1936. godine predviđa tako nekoliko tipova rezidencijalnih zona s lijeve obale Save čija se gustoća progresivno smanjuje prema rijeci. Stambene jedinice raspoređene su po kriterijima optimalnog osunčanja, provjetravanja i odvajanja kolnog od pješačkog prometa. Higijenska i medicinska potka ovakvog planiranja dopunjena je ekstenzivnim korištenjem urbanog zelenila kao supstancijalne dopune izgrađenom tkivu. Zaštitni pojasevi uz prometnice, pošumljeni parkovi s pješačkim putovima i dječjim igralištima te ograđeni individualni vrtovi čine sustav regulirane i „proizvedene“<sup>42</sup> prirode kao protuteže nepovoljnim uvjetima života u gradu prošlosti. Imajući na umu aktivističko djelovanje autorā tog plana te prirodu njihovog angažmana u predlaganju sadržajnih izmjena temeljnog manifesta modernističkog urbanizma na 4. kongresu CIAM-a 1933. godine,<sup>43</sup> jasno je da crtanje preko postojeće vlasničke strukture unutar kapitalističke Kraljevine Jugoslavije ne predstavlja samo ushićenost novim formalnim paradigama, već jasno artikuliran stav o prednostima javnog raspolaganja gradskim zemljištem. Kao jedan od ključnih aktera iz predratnog razdoblja Vladimir Antolić kroz prijedlog Direktivne regulacione osnove Zagreba iz 1949. godine, zbog promijenjenih društvenih i političkih okolnosti uspostavljanjem Federativne Narodne Republike Jugoslavije, u potpunosti preuzima vrijednosno utemeljenje prethodnog plana. Zadržana je orijentacija zgrada u strogom smjeru sjever-jug koja dobiva daljnji naglasak kodifikacijom središnje gradske osi. Ona tako povezuje davnu gradsku jezgru i Zrinjevac s budućim središtem Novog Zagreba na lijevoj obali rijeke. Predložena stambena struktura sada je gušća i isključivo višestambena, a položena je i baždarena interpolacijom u izvedene fragmente predratnog Cvjetnog naselja i novoizgrađene skupine

gradskih četverokatnih kuća na Poljanama koje će postati ishodišnom matricom svih budućih stambenih naselja.<sup>44</sup> Rješenje problema postojećeg tkiva lijeve obale vidi se u njegovoj postupnoj i taktičkoj zamjeni novom matricom. Ako je zbog sveopće nestašice stanova 1949. postojala zadržka prema radikalnijim zahvatima u periferiju, prijedlog regulacijske osnove iz 1953. godine jasno odlaže tu transformaciju u budućnost kada će „slobodan način gradnje“ ujedno značiti i slobodu vlasništva nad zemljištem koja bi je omogućila. Naime, opsežnim poslijeratnim konfiskacijama i eksproprijacijama unatoč, vlasnički su odnosi i dalje predstavljali nepremostivu zapreku. Društveno je vlasništvo i dalje bila politička, a ne zemljišnoknjižna kategorija. Odbijanjem tog prijedloga i njegove skore dopune,<sup>45</sup> temeljem između ostalog i argumenata izostanka odlučnijeg razvoja grada na desnu obalu, završava višedesetljetni Antolićev angažman u Zagrebu koji tako nije dočekao donošenje zakona o nacionalizaciji građevinskog zemljišta iz 1958. godine. Tada stvoreni preduvjeti za realizaciju prvoga Novog Zagreba svoju će realizaciju doživjeti u njegovoj drugoj inkarnaciji južno od rijeke. Ova široka elaboracija historijata promišljanja prostora Trnja presudna je kao osnova za tumačenje evolucije razvoja desne obale. Predratna osnova uza Savu predviđa gradski zeleni pojas namijenjen aktivnom korištenju. Desna obala tako je posvećena isključivo sportu i rekreaciji. Taj „fiskulturni grad“,<sup>46</sup> s južne strane omeđen dugačkim veslačkim kanalom, predstavlja ekstenzivnu parkovnu zonu koju ravnomjerno ispunjavaju brojna igrališta, kupališta, centralni gradski stadion i zoološki vrt. Prijedlog osnove iz 1949. godine načelno preuzima to gledanje desne obale kojoj pridaje ipak puno manje pažnje u odnosu na Trnje, prikazujući je kao strukturalno i sadržajno nedefiniran zeleni limes grada. Skice središnje osi identitetske potke plana prikazuju prekosavski prostor isključivo kao krajobrazni pandan Medvednici. Krajnji južni predjeli omeđeni prstenima infrastrukturnih koridora tom se studijom prvi put prepoznaju i kao mjesta budućih stambenih zona. Tretman savskog amfiteatra kao rekreacijske zone, inzistiranje na gradaciji gustoće izgradnje prema rijeci te zagovaranje ograničavanja rasta grada na štetu njegove regije upućuju više na nakanu transformacije postojećih tradicijskih naselja u rijetko naseljena predgrađa, nego na zagovaranje širenja gradskih zona stanovanja preko Save. Bez obzira na tu ogradu, zona nekad čuvana isključivo kao zaštitno područje gradskih vodocrpilišta i budućeg aerodroma, počinje na sebe primati dodatne sadržaje. Oba prijedloga Direktivne regulativne osnove iz 1953. godine puno preciznije situiraju planerske intencije u centralnoj gradskoj rekreacijskoj parkovnoj zoni. Predlažući transformaciju jezgre naselja Kajzerica u zonu javnih sadržaja, lociraju i nedvosmisleno novu lokaciju Velesajma. Povlače ga sjeverno preko netom izgrađenog hipodroma ostavljajući široki zeleni pojas



između njega i „velesajamske ceste“ zadržavajući dominantno krajobrazni koncept tog poteza. Stambene su zone sada nedvosmislenije određene kao satelitska naselja. Vidljivo je to iz oblika zona koje se uvelike prilagođavaju postojećoj izgradnji, pa i aluvijalnoj geometriji. Zone su prikazane kao samostalne, odvojene elementima postojećeg krajolika. Već opisanim odbacivanjem Osnove iz 1953. godine napušta se dotadašnja krajobrazna paradigma razvoja desne obale i počinju pripreme za njegovu konsolidaciju kao teritorija implementacije dugo očekivane industrijalizirane i masovne stambene izgradnje.

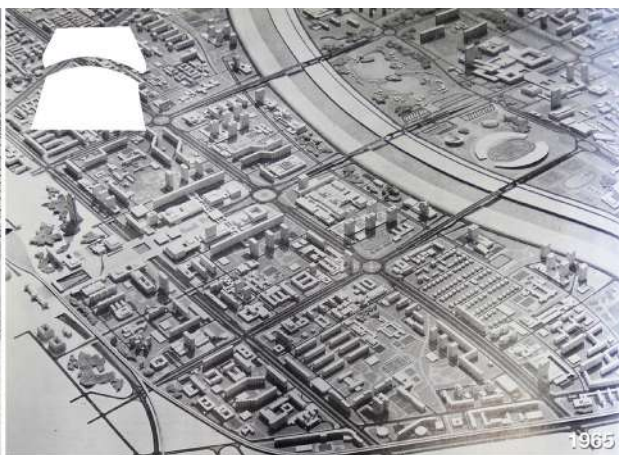
Praksa prikazivanja studijā za ovo područje maketama, uvedena 1949. godine, na zanimljiv način počinje upućivati na sudbinski odnos dviju obala. Naime, dopunjena verzija Osnove iz 1953. prikazana je maketom koja predstavlja izvornu maketu iz 1949. godine upotpunjenu južnom „polovicom“. Maketa desne obale iz 1962. godine prikazuje novu urbanističku paradigmu koja nije bila moguća u vlasnički opterećenom „drugom“ i „trećem“ Zagrebu. Svijest o nemogućnosti postupnog unaprjeđivanja Trnja tako će operativno osamostaliti donju polovicu „južnog Zagreba“.<sup>47</sup> Razvoj urbanističkih koncepata njegove sjeverne „polovice“ tako je omogućio njenu opsežnu realizaciju. Maketa Idejnog urbanističkog rješenja Trnja iz 1965. godine prenosi pak pouke inicijalne realizacije plana desne obale na drugu, lijevu stranu Save. Time je prvi put obrnut smjer prijenosa urbanističkih matrica gdje desna obala postaje strukturalni predložak za lijevu. Cjelovita maketa izložena u Muzeju grada Zagreba predstavlja završni stadij prakse naizmjeničnog prikazivanja oba ili pak samo jednog pola toga cjelovito promišljanog prostora. Takvo strukturalno i oblikovno ujednačavanje obje obale svjedoči o njihovoj konceptualnoj bliskosti i do neke mjere međusobnoj zamjenjivosti (SL. 7).

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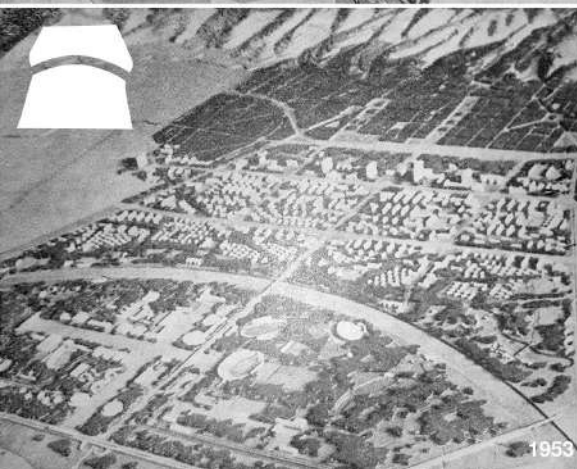
Usporedno s pokušajima cjelovitog sagledavanja desne obale, 1949. godine pokreće se izgradnja vojno-istraživačkog kompleksa Brodarskog instituta. Time je započet niz pojedinačnih graditeljskih intervencija divergentnih gospodarskih, političkih ili funkcionalnih utemeljenja na kojemu se baziraju sva dosadašnja tumačenja razvoja Novog Zagreba. Presudna činjenica u odabiru lokacije Instituta bila je neograničena dostupnost vode neophodne za funkcioniranje sustava probnih bazena koji ga sačinjavaju.<sup>48</sup> Skučenost netom proširene lokacije u Savskoj uvjetovala je hitnu translaciju Zagrebačkog velesajma na prvu raspoloživu lokaciju u neposrednoj blizini presudnog koridora željeznice. Njegov značaj kao ključnog međunarodnog sučelja rastućega gradskog gospodarstva ubrzao je pomicanje na desnu obalu već nakon 1955. godine. Početak izgradnje „naselja februarskih žrtava“ iste godine potrebno je sagledati u kontekstu pripojenja općine Remetinec administrativnom području grada čime je i formalno prekosavski prostor



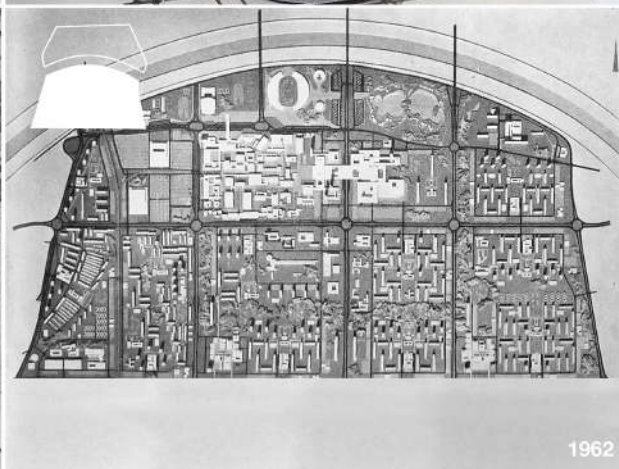
1949



1965



1953



1962

SLIKA 7

Usporedni prikaz razvoja urbanističkog promišljanja dviju „polovica“ Novog Zagreba kroz proces dopunjavanja maketa prethodnih planova. Antun Sevšek, ilustracija prema: “Regulacioni plan i direktivna regulaciona osnova Zagreba,” *Arhitektura* 18-22 (1949.): 18;

*Grad Zagreb*, turistički vodič (1956.); “Idejno urbanističko rješenje Južnog Zagreba,” *Zagrebačka panorama* 1(1963.): 9; “Urbanističko rješenje Trnja,” *Zagrebačka panorama* 1(1965.): 6.

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integriran u korpus grada. Nikad poslije ponovljen redosljed izgradnje naselja kroz inicijalno formiranje administrativnoga, kulturnog i javnog središta, nakon kojega je uslijedila gradnja stambenih jedinica, svjedoči o jasnoj političkoj gesti izgradnje dotad nepostojećega municipalnog identiteta novoformirane gradske općine. Izgradnja pak naselja Savski Gaj od 1957., odnosno mikrorajona Novi Zagreb I i II od 1959. godine predstavlja primjenu urbanističkih modela i arhitektonskih tipova razvijanih tijekom 1950-ih na širem prostoru teritorija Zagreba. Savski Gaj predstavlja tako nastavak oportunističkog zapunjavanja vlasnički cjelovitih parcela unutar dotad dominantne paradigme postupne zamjene gradskog tkiva. Trnsko, s druge strane, koristi netom uvedenu zakonsku inovaciju nacionalizacije građevinskog zemljišta u opsežnoj implementaciji dotad teško provedivog modela mikrorajonske aglomeracije slobodno postavljenih stambenih zgrada. Promjena paradigme razvoja desne obale najvidljivija je u evoluciji Zagrebačkog velesajma. Inicijalni plan Marijana Haberlea iz 1955. godine otkriva jasno suglasje s Antolićevom vizijom desne obale kao programski premreženoga krajobraznog središta grada (SL. 8). Evolucija planova Božidara Rašice, počevši već od 1956., a zaključno s njihovom integracijom u Idejno rješenje iz 1962. godine, svjedoči o postupnom progušćivanju matrice i istiskivanju krajobrazne komponente u korist očekivanog završetka reprezentativne i poslovne središnje gradske osi. Sveobuhvatna arhitektonsko-urbanistička analiza odnosa Velesajma prema razvoju grada zahtijeva zasebni prikaz koji opsegom izlazi izvan okvira ovog ogleada.<sup>49</sup> Zaključnu etapu sustavnog promišljanja ovog prostora i ujedno krajnju vremensku točku ovog istraživanja predstavlja već najavljeno Idejno rješenje Južnog Zagreba iz 1962. godine. Ono dosljedno primjenjuje dugo proklamirane, no dotad nedostižne postulate funkcionalnog planiranja. Kroz postojeće infrastrukturne koordinate interpolira se snažna prometna matrica koja određuje pačetvorine budućih stambenih susjedstava i zajednica okupljenih u veće rajone. Njome se u homogenu cjelinu integrira prethodno opisana sukcesija građevinskih zahvata koji prema nositeljima izrade plana predstavljaju prepreku postizanja optimalnoga urbanističkog rješenja. Mirko Maretić tako u novinskom prikazu plana konstatira da su „Kompleksi Velesajma i Brodarskog instituta locirani ... u vrijeme kada nije postojala dovoljno definirana koncepcija širenja grada prema jugu“<sup>50</sup> te da je njihovo eventualno širenje potrebno limitirati ne bi li se izbjeglo produbljanje prostornih konflikata s potrebama razvoja grada. Nemogućnost pomirenja dogme simboličke gradske osi i dosegnutoga prostornog zasićenja ovog prostora najizraženije se očituje u nezgrapnim pokušajima impostiranja središnjeg trga novoga gradskog centra iznad zadane trase glavne prometne arterije. Za razliku od problema s konceptualizacijom reprezentativnih dijelova plana konačno



SLIKA 8

Perspektiva prve varijante Zagrebačkog velesajma Marijana Haberlea otkriva njenu podudarnost s Antolićevom vizijom razvoja desne obale preuzimajući simbolički krajobrazni dualitet Medvednice i Save.

Marijan Haberle, *Proširenje Zagrebačkog Velesajma*, crtež, 1953., Državni arhiv u Zagrebu, HR-DAZG-866, Zbirka fotografija, sign. 1126.

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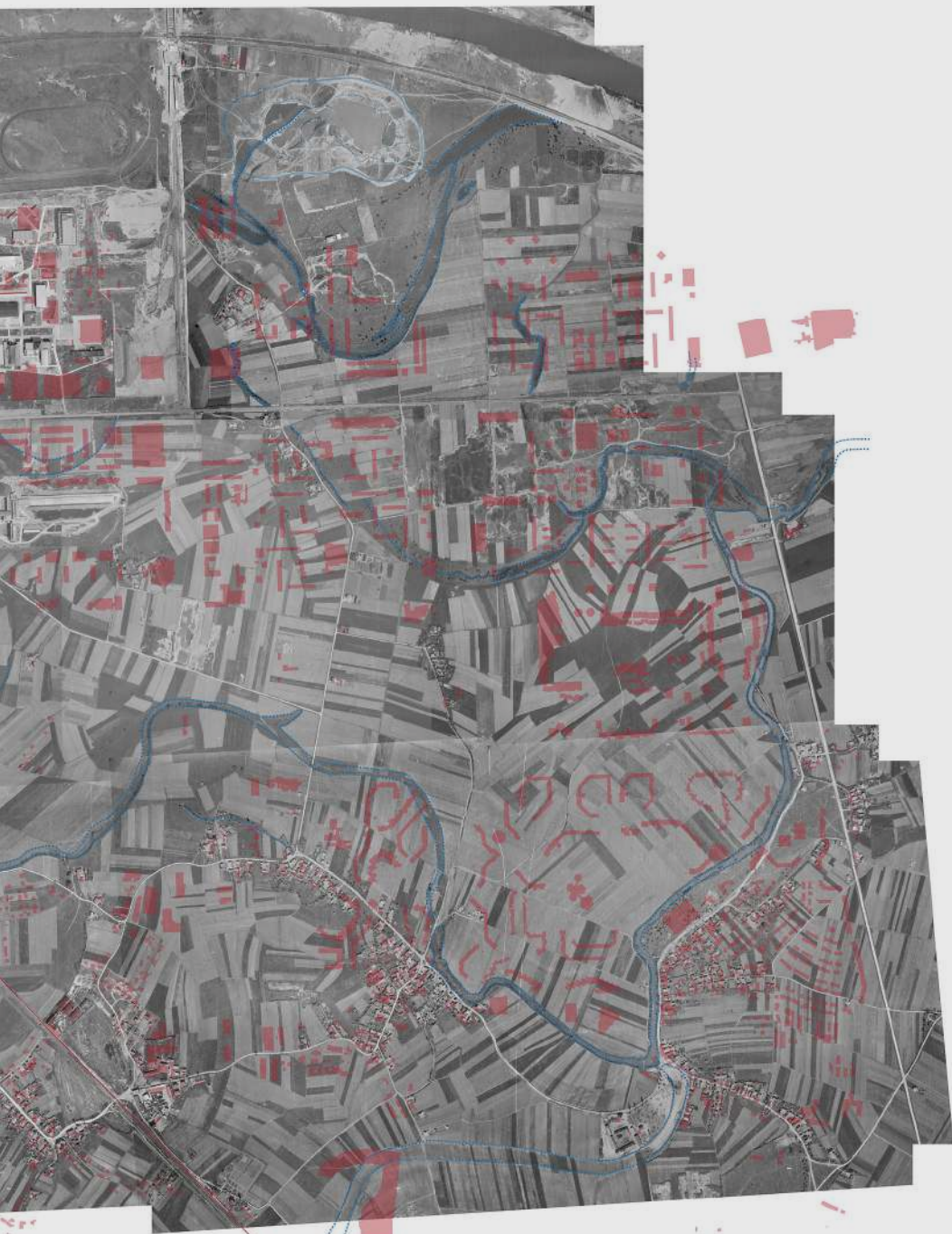


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SLIKA 9

Fotomosaik neposredno prije opsežne urbanizacije drugoga Novog Zagreba otkriva razmjere njegove realizacije i ujedno upućuje

na preživjele fragmente fluvijalnih i agrarnih geometrija. Antun Sevšek, grafička intervencija i



fotomozaike prema: *Digitalni preglednik Grada Zagreba*, <https://geoportal.zagreb.hr/Karta>; *Georeferencirani zračni snimci*, 1959., niz R-13:

5058, 5060, 5062, 5321, 5323, 5325, niz R-15  
4748, 4750, 4752 i 4754, Državna geodetska  
uprava Republike Hrvatske.

postaje moguća realizacija već tri desetljeća sanjanih opsežnih predjela slobodne stambene izgradnje unutar zelenih prostranstava odijeljenih od kolnog prometa. Usporedan početak primjene zakona kojim je omogućena nacionalizacija zemljišta, optimalno financiranje izgradnje kao i dosegnuta organizacijska i tehnološka zrelosti velikih građevinskih poduzeća uklonila je konačno prepreku širenja grada na jug.

Pregled transformacija ovog prostora zaključuje zračni fotomosaik iz 1959. godine koji predstavlja trenutak neposredno prije nadolazeće urbanizacije (SL. 9). Ostaci aluvijalnih procesa te generacija diobi poljoprivrednih imanja pretežu u odnosu na fragmentirane građevinske intervencije. Snimanje provedeno usporedo s trećom zagrebačkom katastarskom izmjerom, koja 1958. godine<sup>51</sup> kreće upravo s područjem južno od Save, dio je opsežnih pravnih i tehničkih inovacija koje će prvu primjenu imati upravo tu. Razrješenje konceptualne dileme „grada na rijeci ili rijeke u gradu“<sup>52</sup> u kontinuiranom procesu regulacije uvjetovan opetovanim plavljenjem prevagnut će u korist hidrotehničkih argumenata. Naučeni oprez dokinuo je u korijenu formiranje krajobrazne vizije ove rijeke koja „je izgubila svoje meke obale te više nije bila mjesto ribolova, kupanja, pranja, odmora i izleta“.<sup>53</sup> Šumoviti predjeli uz Savu su regulacijom toka gotovo potpuno iščezli, velikim dijelom i odabirom tehnološkog rješenja „visećih uredbi“<sup>54</sup> koje je zahtijevalo ogromne količine drvenih stupova i na ovom području obilnog šiblja. Karakterizacija tog prostora uništenog „bivšim rukavcima Save, većim depresijama i raznim degradiranim površinama“ s mjestimičnom izgradnjom unutar poljoprivredne parcelacije koja prikazuje „sve karakteristike horizontalnog slama“<sup>55</sup> jasno prikazuje ograničenost afiniteta urbanista prema njegovim aluvijalnim i povijesnim specifičnostima. Fizičkom niveliranju, zatrpavanju i brisanju tih stoljećima akumuliranih zapisa u šljunkovitoj savskoj dolini prethodilo je i njeno konceptualno pretvaranje u *tabulu rasu*. Nastavljajući se na Antolićev krajobrazni kôd, ova CIAM-ovska pješačka arkadija u nastajanju osobitu pažnju posvećuje očuvanju „izuzetno vrijedne vizure iz južnog Zagreba prema sjevernim dijelovima grada s Medvednicom“ negirajući tako zatečene prirodne vrijednosti. Subordinacija otvorenih prostora budućih naselja toj vizuri reflektirat će tako funkcionalan odnos njegovih stanovnika prema gradu preko rijeke. Slobodna će izgradnja programski jednoobraznoga grada na desnoj obali Save nekoliko desetljeća biti dominantna prostorna figura, a zajednički prostor između brzinom i ekonomičnošću uvjetovanih uniformiranih zgrada tek blijeda zamjena krajolika koji mu je prethodio. Dominantna čitanja te sukcesije građevinskih zahvata kao kauzalne progresije koja će kulminirati današnjim Novim Zagrebom,<sup>56</sup> njihove pripadnosti cjelovito mišljenom urbanističkom projektu<sup>57</sup> ili pak nastavka taktičkog zaobilaznja nemogućnosti provedbe službenih urbanističkih planova<sup>58</sup>

potrebno je, slijedom izloženih urbanističkih promišljanja i operacija, 485  
dopuniti i donekle zamijeniti tumačenjem transformacija prostora desne  
obale Save kao integralnog dijela puno dužeg i opsežnijeg procesa. Upravo  
će stoljetno promišljanje Savišća i Trnja kao središta modernog Zagreba  
razviti zametke konceptata i procedura koji su omogućili njegovu konačnu  
realizaciju na suprotnoj obali Save.

Sudbine triju sastavnica ove analize danas se bitno razilaze. Preskakanje  
razvoja područja izvornog Novog Zagreba plaćeno je visokom cijenom i  
danas nerješivim prostornim problemima Trnja. Njemu izvorno namijenjeni  
prostorni standardi, realizirani tek na desnoj obali, s vremenom se čine  
sve nedostižnijima. Katastrofalna poplava iz 1964. godine kao posljednja  
inkarnacija riječnih amplituda kojima je omeđen prostor ovog istraživanja  
nedvosmisleno je odredila primat hidrotehničkog sagledavanja rijeke,  
dodatno izuzimajući njen koridor iz nekadašnjeg Savišća. Recentna inicijativa  
Program Sava samo je nastavak pretpostavljanja inženjerskih, a sada i  
nekretninskih razmatranja krajobraznom promišljanju ovog vodotoka.  
Prirodni riječni tokovi i njihova poplavna područja, nekad smatrani antite-  
zom civilizaciji, progresivnim nestankom prirodnih staništa postaju upravo  
ključnim resursima za održavanje bioraznolikosti. Prirodni procesi koji su  
nekad proglašavani neučinkovitima pokazuju se pak višestruko otpornijima  
u svjetlu klimatskih promjena i sve češćih prirodnih katastrofa. Trenutno  
jedva čujne inicijative za renaturalizaciju toka Save u Zagrebu morat će  
se formulirati kao koherentne alternative dominantnim tehnicističkim  
rješenjima. Uspjeh renaturalizacije rijeke Isar u Münchenu može biti poticaj  
tom usmjerenju jer je upravo regulacija te rijeke prije više od stoljeća bila  
ishodištem tehnologije primijenjene u Zagrebu.

Desna se obala rijeke, zbog parcijalne realizacije plana iz 1962. godine,  
danas otkriva kao palimpsest uslojenih prirodnih, ruralnih i urbanističkih  
figura koje ga premrežavaju. Kroz procjepe CIAM-ovske strukture i dalje  
probijaju fragmenti aluvijalnih geometrija i stoljetne agrarne parcelacije.  
Tradicionalne se matrice kontinuirano proglašuju, a cjelovite javne parcele  
podliježu špekulantskom cjeplanju, formirajući zajedno s planiranom  
izgradnjom kompleksni strukturni *patchwork*. Valorizacija Novog Zagreba  
izmještena je iz domene kasnomodernističke samokritike u prepozna-  
vanje identitetskog suživljavanja socijalno heterogenog stanovništva s  
njime kao ključnoga urbanističkog dosega.<sup>59</sup> Nekadašnja *tabula rasa*  
nivelirane zelene podloge lišene identitetske specifičnosti nakon pola  
stoljeća rasta postaje dominantnom prostornom figurom. Zaboravljeni  
aluvijalni fragmenti počinju se pritom konceptualno oživljavati kasnijim  
iteracijama detaljnih planova. Konačno sazrijevanje te krajobrazne potke i

Ponovno  
pretvaranje  
pozadine u  
figuru

n.  
51-59

Dvije „polovice“ Novog Zagreba



potreba njenog „kuriranja“ kao sustava otvorenih prirodnih i artificijelnih površina premreženih komunalnom i socijalnom infrastrukturom može poslužiti kao poticaj formiranju paradigmi razvoja kojima će konačno biti nadvladana dihotomija grada i njegovoga prirodnog okoliša.

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# Challenges of 3D and 4D reconstructions

Drawing the past shape  
of the monastic town  
of Samos and its  
immediate environment  
through an archival  
document of the  
mid-17th century  
*Estefanía López Salas*

Verwundet und  
wiederauferstanden  
– Dresdens Stadtgeschichte  
in 4D  
*Kristina Friedrichs*



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# Drawing the past shape of the monastic town of Samos and its immediate environment through an archival document of the mid-17th century

Estefanía López Salas

The last goal of the present paper is to analyse and visualise the urban shape of the village called Samos at some period or moment in its past. This village is located next to the ancient monastery of San Julián de Samos, in the north-west of Spain. Its urban history has always been attached to this religious house, which was founded back in the 6th century. However, no references to a village in the surroundings of the monastery are known to have existed before the early 16th century, although the first houses were bound to be built in the late medieval ages (FIG. 1).

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The earliest extant map of this village dates from the end of the 19th century. It is a significant, but not unusual problem if we aim to understand what this village was like in the past. As a consequence, in the present research, we propose to move away from only using maps as a resource for shaping the former urban tissue. On the contrary, we base our study on visualising the past urban shape of this village through one type of archival document together with all the architectural evidence and physical features that remain from some period in its past, which is the mid-17th century.<sup>1</sup>

The chosen primary source for our research is the one called “Demarcations of Samos parish. The year of 1660”.<sup>2</sup> The best way to introduce this document is saying that it is a portrait of the territory that belonged to Samos parish in 1660. It was written by a royal scribe to demarcate all the properties that the monastery of San Julián de Samos possessed at that moment. This way the boundaries of each demarcated property were perfectly identified in writing and the monks avoided gradually losing their possessions by improper invasions.<sup>3</sup>

**The book of demarcations written in 1660**

The parish called Samos was spread around the monastery and in the very centre of the monastic jurisdiction, which was an area that comprised roughly seventy-four square kilometres since the 10th century.<sup>4</sup> The book of demarcations contains thirty-two records of each and every one of the monastic properties that were placed inside the limits of that parish as well as a last record with the demarcation of the parish itself, with the aim of knowing how it was bordered by the parishes of San Martiño del Real, Santa María del Valle del Mao, Santalla de Pascais, and San Mamed and Santa María de Loureiro (FIG. 2).

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Another important fact to be highlighted at the beginning of this study is that the monastery of San Julián de Samos was the only owner of all the land that was inside the monastic jurisdiction when this archival document was written.<sup>5</sup> As a consequence, the book gathers the demarcation of each and every one of the plots of land and buildings that the parish comprised. As a matter of fact, the analysis of the document reveals



that only the properties that the monks retained for their use were not demarcated. These represented a low percentage of the whole monastic landed estate, which was leased to other people in most cases.

### The layout of the demarcation reports

The starting point for visualising the former shape of this city is to know what data a demarcation report contains concerning the village and the nearby landscape. In this sense, the reading of the document let us realise that the scribe followed the same structure for all the demarcations he wrote. Firstly, he titled each record with the name of the demarcated place and properties as well as the name of the leaseholders. Then, a petition was developed to introduce in writing the property or properties they aimed to demarcate. That action was carried out to apply for the needed demarcation through the summons of all the people that was affected by this process: the owners and the bordering leaseholders.

The next part of the document is a detailed description of all the plots of land and buildings that the property comprised. As a result, many features of them were recorded by the book, as we will show later.

After the petition and description, the book dealt with the notice and summons of the witnesses that were compelled to appear in the act of demarcation, which always took place at the house of the monastic scribe in the village of Samos. The number of notices and summons was not the same in all the demarcation reports because it depended on the witnesses that were involved.

The next step was to write each witness statement. The first part of each statement was a description of the properties they aimed to demarcate, which was quite similar to the previous one in most cases. In fact, the already known data were only widened or modified in few occasions. Secondly, each witness recognised the monastery as the only owner of the demarcated properties, and it mentioned the name of the leaseholders that ran the properties at that moment as well as the rent they had to pay the monks for them.

Finally, based on all the previous information, the royal scribe declared the end of the demarcation. Then, the scribe asked the leaseholders to present all the deeds they had to show that they were the real tenants. In addition to this, the scribe copied by hand the deeds at the end of the report. This way, in the book of demarcation, we can also read the text of the original lease agreements that were granted by the monks even more than one hundred years before this document of the mid-17th century, was made, in some cases.



Examining the past, traces of the Protestant  
Revolution in Samos and its immediate  
environment through an archival  
document of the mid-17th century

FIGURE 1  
The village of Samos and its surroundings  
(photograph by the author, 2011).

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FIGURE 2  
 The territory of Samos parish in the latest  
 cartographic map (©Geographic National  
 Institute of Spain, 2006).

The reading and analysis of this book of demarcation provide us with a huge amount of data to understand what this parish was like in 1660. However, the key aspect of this primary source is that it allows us to garner a detailed knowledge of the former shape of the village at some period in its past.

In the description of each demarcation report, firstly, the scribe wrote down the full name of all the leaseholders, and he also pointed out their professions, such as farmers, stonemasons, tailors, scribes, and so on. Then, he indicated what properties they possessed inside the territory he aimed to demarcate. The next step was a thorough description of each and every one of the buildings that the above-referred leaseholders used and maintained. He explained the location, the materials that were used to build their roof, and the number of floors they had. He also wrote down their function, which could be a house, a wood-fired oven, a metal workshop, a mill, or a cowshed, among others. Moreover, the scribe described all the bordering properties by the north, south, west and east.

When the description of the buildings ended, the scribe began the one corresponding to the plots of land. Firstly, he pointed out the place where they were located as well as their measure, using former Galician units of measurement. Then, he described their use and type of plantation, such as wheat, rye, grass, forest, and so on. Furthermore, he indicated if there were trees inside this plot of land, and if they existed, he also pointed out the number and the type of trees. Finally, as it happened in the case of the buildings, he defined all the boundaries of the property by the north, south, west and east sides. All the previous data were confirmed in the following witness statements, which modified or completed this description in very few cases, as we pointed before.

Thus, the book of demarcations is a valuable source because of the information it recorded to make the descriptions, from which it is possible to begin the visualisation of a certain former shape of the village. In addition to this, at the end of each record, the book also gathered a copy of the original rental agreement that certified the leaseholders of 1660 as the real tenants of the demarcated properties on behalf of the monastery. These rental agreements are the other key source of the book, because they let us know the name of former tenants, and whether they were relatives of the contemporary ones or not. They also recorded the term of the rental contract, the names of the leaseholder's many generations ago, the transformations caused by the properties' sale, leasing, second leasing, and so on. Therefore, this final document of each report of demarcation also provides us with valuable information concerning the past of each monastic property, which is also key to link this book to other primary sources as well as to begin the approach to the knowledge of former stages of the village and its evolution in a period before 1660.

ID	Name of the property	Full name of the tenants	Full name of the sub-tenants	Profession	Boundaries			
					Upper part	Bottom	One side	Another side
A1	House of Outeiro	Pedro de Bales		Unsaid	Royal road	Monastic wall	Vegetable garden	Garden of Outeiro
A2	Garden of Outeiro				Royal road and fence	Monastic wall and house that Felipa Fernández de Baldés runs	House of Outeiro	Royal road and fence
A3	Vegetable garden				Royal road	Monastic wall	Monastic wall	House of Outeiro
A4	House at the place of Fontao	Marta Rodríguez			Unsaid	Unsaid	Fontao stream	House of Fontao
A5	House at the place of Fontao				Unsaid	Unsaid	House of Fontao	Tower-house and palace of the monastery
A6	Threshing floor at the place of Fontao	Marta Rodríguez, Francisco López		He was a farrier	Threshing floor at the place of Fontao that Felipa Fernández runs	House at the place of Fontao (oven); tower-house and palace of the monastery	Unsaid	Unsaid
A7	Vegetable garden				Meadow and garden that Felipa Fernández runs	Fontao Stream	Threshing floor at the place of Fontao that Marta Rodríguez and Francisco López run	Unsaid
A8	Vegetable garden				Road to Reboredo	Samos River	Fontao Stream	Garden of the Bridge that Antonio Pérez runs
A9	Meadow				Road to Reboredo	Samos River	Fontao Stream	Land of Lacha
A10	Land of Lacha				Road to Reboredo	Samos River	Road to Herrería	Carracha Stream
A11	Land				Road to Reboredo	Samos River	Carracha Stream	Caneiro Grande

Use of the building	Number of floors	Mesures of the plots of land	Type of trees	Existence of enclosing walls	Date of the rental agreement	Full name of the former tenants or subtenants
Single family home	Ground floor	1 fanega* of sowing		Yes	11th April 1638	Alonso Díaz, who was a tailor
		1 celemín* of ryegrass				
Single family home	Unsaid				8th April 1633	Domingo Monteiro, Francisco López, who was a farrier, and their wives
House with a wood-fire oven	Unsaid	1/2 celemín*	One chestnut tree			
		1/2 cuarta* of wheat	One cherry tree			
		1/2 cuarta* of wheat		Yes		
		1 anega* of wheat	Six chestnut trees	Yes		
		2 fanegas* of wheat	Five chestnut trees, one pear and two apple trees	Yes		
		1.5 fanegas* of ryegrass				

\*Ancient Galician units of measurement

Drawing the past shape of the monastic town of Samos and its immediate environment through an archival document of the mid-17th century

However, the process we suggest to turn the written data of the book into a former physical urban tissue had some problems which made difficult our work. Firstly, the information recorded in the book of demarcations could not be directly used for the purpose we proposed. That is, we had to extract data from the book previously. Then, we slowly organised these data according to certain criteria, as we will see later.

Secondly, the big problem was that all the information that the book contains is written, but no drawings or cartographic maps were made at that moment. The lack of drawings or maps is not an unusual fact, but if they existed, they would be the perfect complement to the book, and they would make easier the process of converting the handwriting information into maps.

Thirdly, although the boundaries in the north, south, west and east of each property were recorded by the description, which is a fact that will be key in the process of visualising the former map of the village; the measure of the properties was not always specified. The description reveals the area of each plot of land, but this was set through ancient Galician units of the area which are not still used at present. Despite that fact, we can draw the real area of the historical plots if we accept a small margin of error. However, in the case of the buildings, the descriptions of this book of demarcations do not contain any reference to their size. This fact impedes the graphic reconstruction of their ground floor without taking into account other primary sources.

The fourth problem to be tackled in our research was that a few number of buildings and plots of land that were inside the parish of San Julián de Samos in the mid-17th century were not demarcated in the book. This was the case of those that were directly used and maintained by the monks when the book was written. As a result, any description of them was made, but we know they existed because they bordered different demarcated properties. Therefore, the book does not deal with any information about their size, location, features or boundaries, and we cannot visualise their former shape without considering other historical sources.

Finally, we faced another last problem during the used procedure, which derived from an inaccurate or mistaken description of the demarcated property. We refer to those cases where the scribe mismatched the boundaries or described different ones for the same property in the descriptions of various reports of demarcation.

In any case, and despite all the previously presented difficulties, the information of this book of demarcations is the only one that allows a detailed spatial analysis, and it also lets the understanding of the urban shape that this townscape showed in the mid-17th century.

ID	Name of the property, landmark or another element
ANC1	Royal road (Samos-Teiguin)
ANC2	Road to Reboredo and Searas
ANC3	Road to Herrería
ANC4	Road from the bridge of Samos to san Martiño and other places
ANC5	Road to Carballal and san Eufrasio
ANC6	Road to Outeiro
ANC7	Road to Bargado, Pascáis and other places
ANR1	Fontao Stream
ANR2	Samos River
ANR3	Carracha Stream
ANCA1	Tower-house and palace of the monastery
ANM1	Forest of the monastery
ANM2	Forest of Samos
ANM3	Forest of Teiguin
ANP1	Vegetable garden of the Hospital
ANP2	Doctor's garden
ANO1	Monastic wall
ANO2	Bridge of Samos
ANO3	Square of Samos

Drawing the past shape of the monastic town of Samos and its immediate environment through an archival document of the mid-17th century

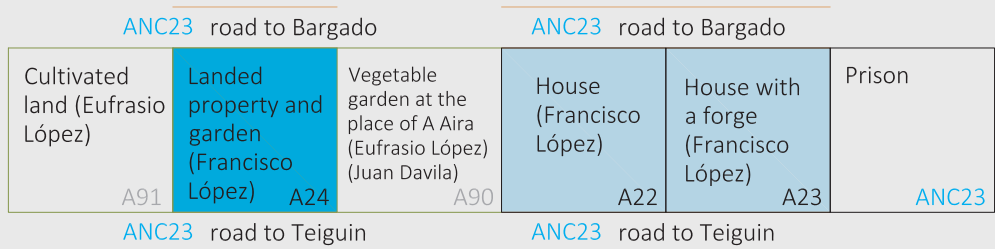
TABLE 2

Some non-demarcated properties, landmarks and other elements recorded by the book of 1660.

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



## Sketch map



## Description from the demarcation report

Firstly, two houses where Francisco López lives. One of the houses has ground and first floors, and the other one hosts the forge under a roof. Both are placed together under a slate roof, and they are next to the prison of that place. They border the road to Teiguin by their low side, and they border the road to Bargado at the upper part. They border the prison by one side, and they border the vegetable garden, which is at the place of A Aira, and Juan Davila runs it on behalf of Eufrasio López. Plus the landed property and garden that is behind the referred houses. It is closed by a wall and it measures three "cuartales" of wheat. It borders the road to Bargado by the upper part, and the road to Teiguin and other places by the low side. It also borders the cultivated land that Eufrasio López runs by one side, and the vegetable garden that Juan Davila runs by the other side. Besides, there are five cherry trees and a pear inside this garden (...)

## Legend

-  demarcated building
-  demarcated plot of land
-  bordering building
-  bordering plot of land
-  road

A1 identification code of a demarcated property

ANX1 identification code of a non-demarcated property, landmark or another element

A1 identification code of a property that is demarcated by another report

House of Outeiro

(Pedro de Bales)

name of a property  
(name of the tenant) (subtenant)

After explaining what part of the reports gathered more valuable data to achieve the aim we proposed, as well as the obstacles we faced, now we are going to show what procedure we followed to turn the written depictions of the book into graphic sources from which we will be able to recreate the historical tissue of this village and its former landscape.

The first step of the process was the whole transcription, reading and analysis of the archival document. Then, we prepared a table or database table in which each and every one of the demarcated properties was included in the order of appearance within the document (TAB. 1). Besides, each property was assigned an identification code in the format A0, where A is the first initial of the Spanish word used to refer to a demarcation (*apeo*) and 0 is a digit that comes from the order of appearance of the demarcated property in the book. This identification code is the first column of the table. Then, we wrote the name of the property in the second column. This name used to include the name of the place where the property was located. The following columns of the table contains the full name of the tenants, the full name of the subtenants, their profession, the boundaries of the property by its four sides, the function of the buildings, their number of floors, the measure of the plots of land, the type of trees, the existence of enclosing walls, the date of the rental agreement, the full name of former tenants or subtenants, and, finally, some former features that the rental contract recorded regarding the demarcated properties.

When we ended the table, we realised that some existing properties were not demarcated, but they were mentioned in some parts of the book. We refer to those that, as we pointed out before, were directly used by the monks in 1660. In addition to this, the data we organised in the table reveal that the bordering property was not always a plot of land or building. It could be a road, a river, a bridge, a square, and so on. This second group of elements that the book mentioned but did not demarcate were moved to a second table (TAB. 2). Each of them was assigned an identification code in the format ANX0, where AN is the first initial of the words “not demarcated” in Spanish, X is the first initial of the type of element (a building=C, a road=CA, a forest=M, a plot of land=P, a river=R, and other types such as a square, a bridge, the monastic wall or a calvary=O), and 0 is a digit that comes from the order of appearance of the element in our table, after doing a classification of them into different groups.

The organisation of the information in two tables was considered the most suitable way to face the first part of the procedure due to the fact that our primary source is a handwritten one. As a result, we achieve a first approach, which is clear and organised, in spite of the huge amount of information recorded in the book of demarcations.

## Creating a digital map of the historical village using the book of demarcations

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Sketch map of the place of Outeiro and a part of the place of Fontao

Legend

- demarcated building
  - demarcated plot of land
  - bordering building
  - bordering plot of land
  - road
  - A1 identification code of a demarcated property
  - ANX1 identification code of a non-demarcated property, landmark or another element
  - ■ ■ area where this place is linked to another place
- House of Outeiro (Pedro de Bales)  
name of a property (name of the tenant)  
(subtenant)

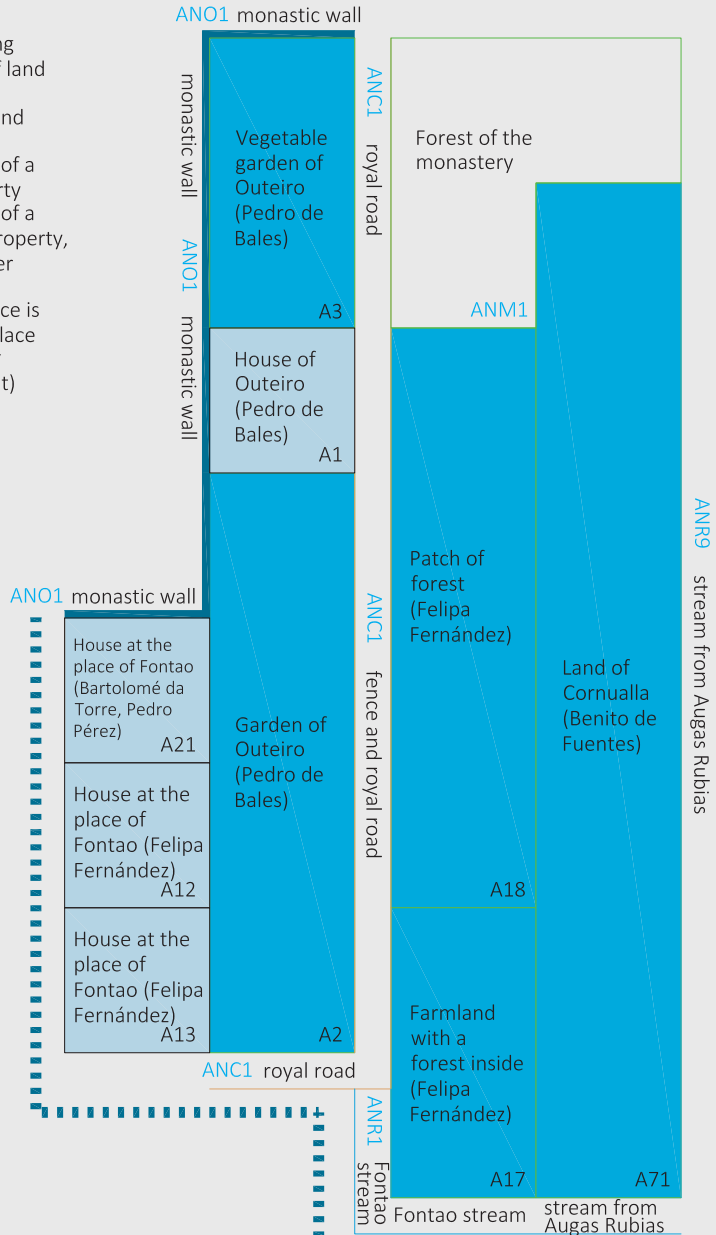


FIGURE 4  
The jigsaw puzzle of the place of O Outeiro after the assembly of its individual demarcated properties (drawing by the author, 2015).

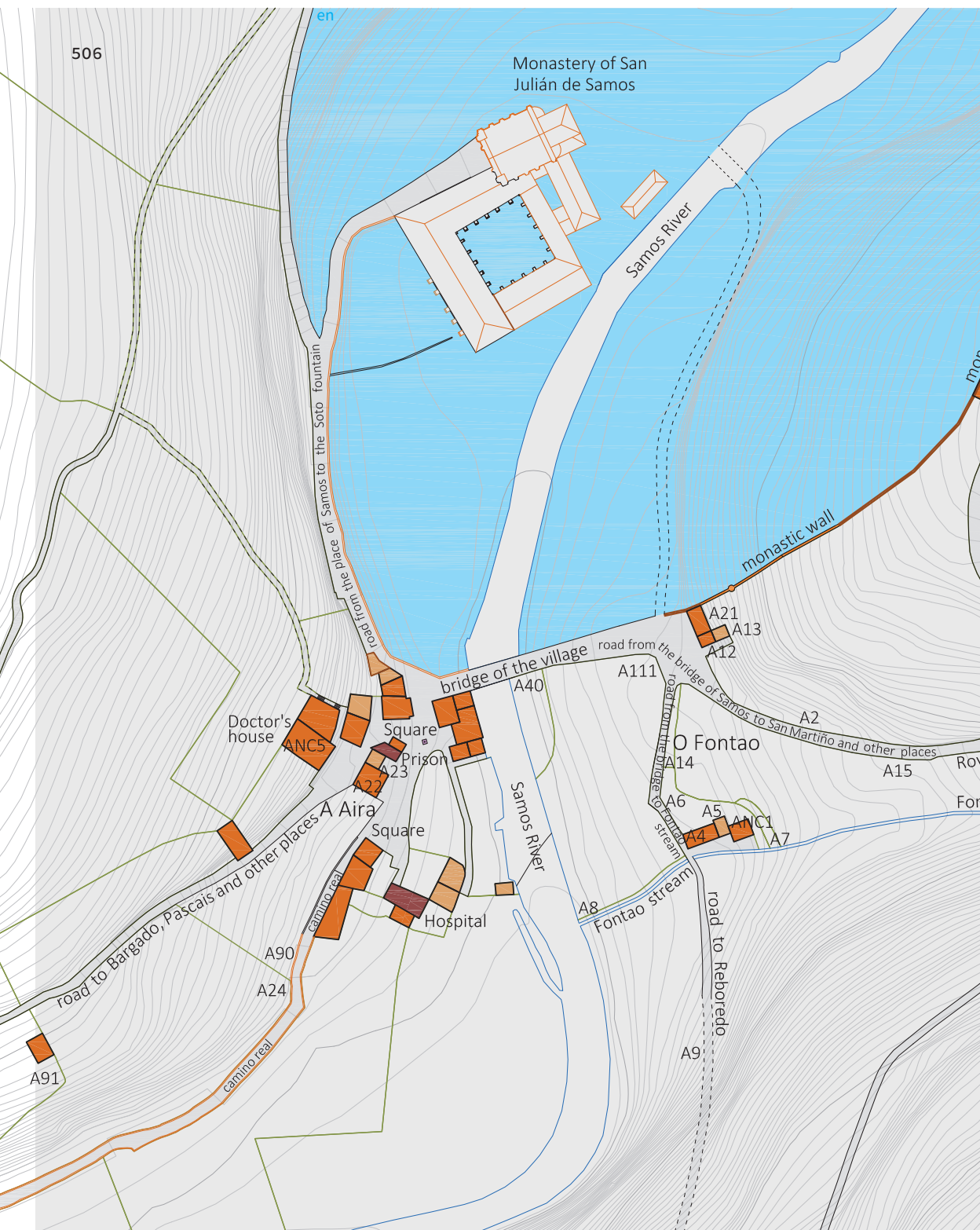
The next step was to draw a sketch map of each demarcated property in relation to their bordering estate. It is a drawing with no scale that demands the reading of each description and the elaboration of an individual graphic representation. Therefore, it was slow, hard work. Each demarcated property was sketched as a geometric shape of four sides, which can be a square or a rectangle. Then, we drew another geometric shape of four sides beside each side of the previous one to represent the corresponding bordering property according to the description of the demarcation reports (FIG. 3). We chose a geometric shape of four sides to sketch each property because the descriptions always recorded the bordering estate by their four sides. These four sides were mentioned with the following words: in the upper part, at the bottom, on the one side, and on the other side. Therefore, these four sides equal the four cardinal points. Moreover, we wrote the identification code of the property inside each geometric shape as well as two short texts in which we indicated the type of property, which could be a building or a plot of land, and the name of the tenant. In the case of the bordering properties, we only wrote their name inside the geometric shape at first. The following step was to revise all the sketch maps we had drawn previously to check and complete the written data they contain. That is, we assigned the corresponding identification code to the geometric shapes that represented a bordering property according to the table we made before. This process was even harder than the previous one, because the descriptions of the book recorded very few information about the boundaries of each property, and they hardly mentioned the name of the property and the name of the tenant. This fact made enormously difficult the identification of the boundaries between the demarcated properties that were described in other records. The identification was impossible in some few cases. It mainly happened with some large plots of land, which were located within the limits of the parish and, for that reason, they bordered properties of other parishes that were not recorded by the primary source we analyse here.

The outcome of this second phase of the procedure was truly successful because it was an advance towards the visualisation of the former village. In fact, the properties we drew in that stage of the procedure with their borders were the individual pieces of a large jigsaw puzzle. Assembling this jigsaw puzzle was the next step of our work.

In order to make easier the assembly, firstly, we tried to make smaller sections of the whole jigsaw puzzle. For this purpose, we sorted pieces by places, and then, we assembled one part of the whole jigsaw puzzle for each main place of the village: O Outeiro, O Fontao and A Aira (FIG. 4). After that, we tried to put together the different places. In the case of the places of O Outeiro and O Fontao, the royal road or pilgrimage route to Santiago

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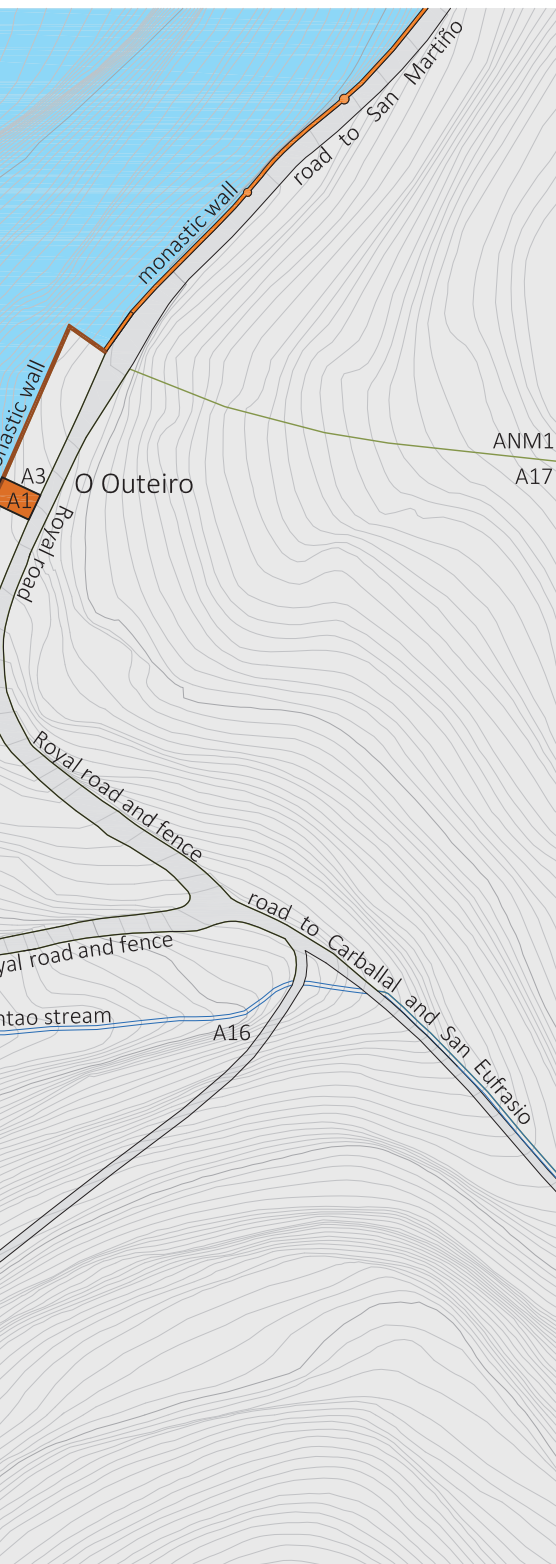


FIGURE 5

2D visualisation of Samos in 1660  
(drawing by the author, 2015).

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FIGURE 6

Samos in a photograph around the year 1950, where the doctor's house is highlighted in blue (©Photographic Archive of Samos Abbey).

de Compostela was the element that made possible to put together both parts. Then, we added the pieces of the place of A Aira to the previous ones. The place of A Aira is connected to O Fontao through the bridge, and the river is the other element that separates, but also connects both areas of the village.

Assembling the different pieces was difficult. The main obstacle was the way in which the borders were recorded by the descriptions of the book of demarcations. As we pointed before, the royal scribe always specified the bordering properties in the upper part, at the bottom, on the one side, and on the other side. However, all these expressions cannot be directly identified with the northern, southern, western or eastern boundaries. In fact, in some cases, the upper piece could be the northern boundary or the southern one, and the bottom piece could be one or the other cardinal points, too. The same explanation can be given for the other two sides. Therefore, we cannot recognise a common pattern in the way the boundaries were portrayed in the different descriptions, which would be essential to make easier this part of the procedure. As a consequence, when we began to assemble one property to another, we had to exchange the upper border by the lower boundary, or one side of the other. This fact led to multiple combinations that forced us to continuous attempts and changes to fit together all the pieces.

The final sketch map we obtained is closer to our last goal, although it might have some minor errors due to certainly mistaken descriptions in the primary source. As a matter of fact, we can say that this sketch map with no scale depicts the former shape of the village of Samos and its immediate territory in the mid-17th century, because it visualises the urban tissue, although no references to real sizes and shapes are shown, at least for now. The last stage of the process was to turn the previous sketch map with no scale into a cartographic map with the real shapes and measures of the historical tissue of the village (FIG. 5). We began with the pieces of the jigsaw puzzle that remain at present, at least partially. In this sense, the first common elements between the past shape and the current cartographic maps are the names of places or toponyms, although the study reveals that some of them have been lost. Besides, certain geographical features or landmarks such as rivers or streams are also permanencies of the past in the present. Furthermore, it is easy to recognise that one part of the former road network remains nowadays.

In addition to that, it was also important to identify some common buildings between the 17th century and the present landscape. This is the case of the bridge that connects the centre of the village to the place of O Fontao. Other traces are the sections of the monastic wall that still stand up in the



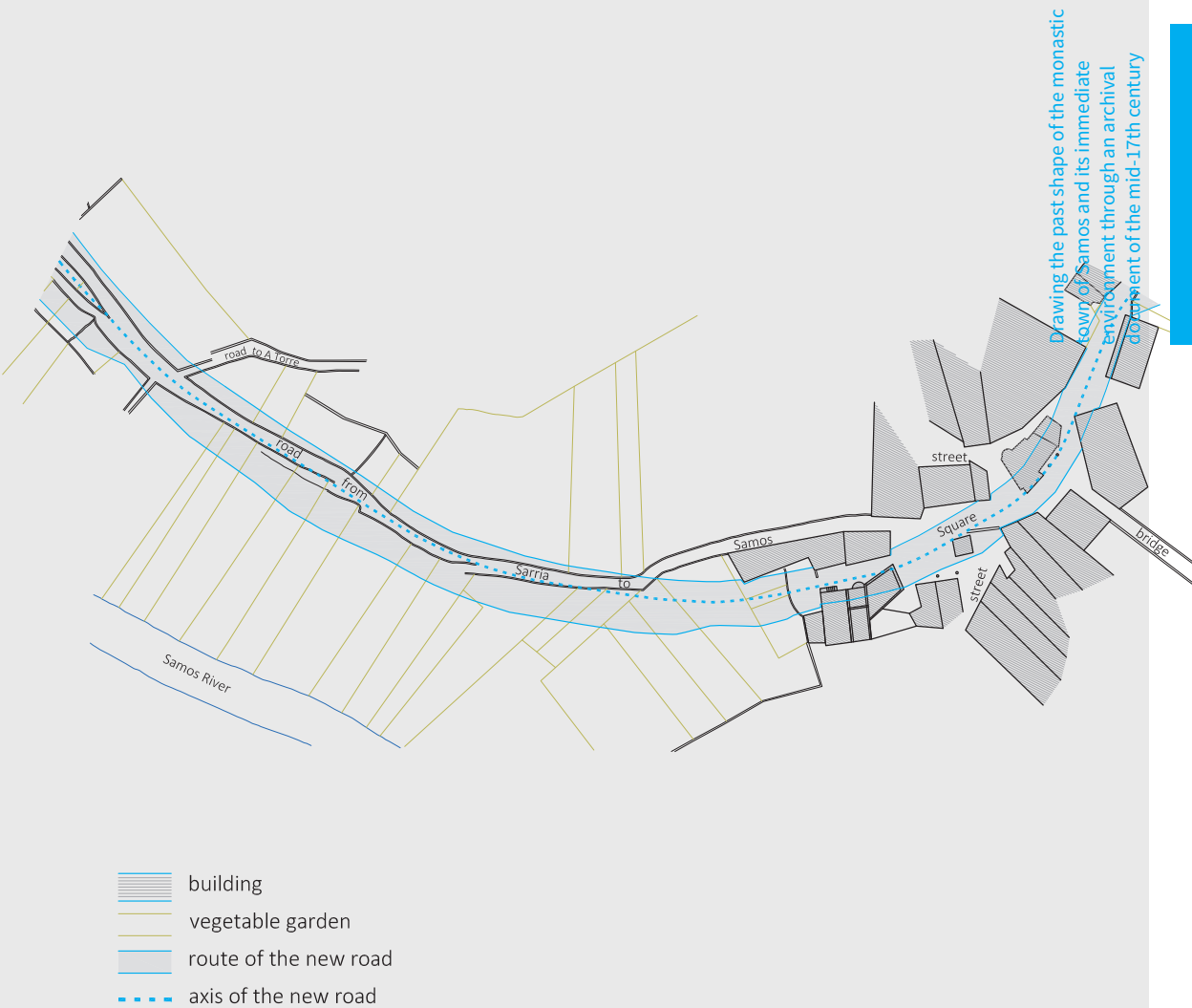
east area, which was mentioned as boundaries by different demarcation reports. However, we could only identify one house as a trace of the former village in the present urban tissue. We refer to the one called the doctor's house. This name was written by the scribe in the books of demarcations, and it is still used today. The doctor's house was not demarcated in the book, but it was mentioned on several occasions as a boundary of other properties. This way, its location was perfectly set by the descriptions of different demarcated properties. As a result, it became a continuity point between two distant periods, although we are also aware of the fact that the name remains, but the building was clearly transformed over the course of the centuries (FIG. 6).

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Depending on the type of property, our work went on through different paths. In the case of the buildings, we cannot get their size from the book, as we pointed before. In fact, the book of demarcations only recorded the size of the building A21, because the scribe said that this building was erected in the plot of a former vegetable garden, with a certain area. As a consequence, we have to look for other primary sources to complete this issue. In this sense, it was really important the cadastre of 1753.<sup>6</sup> It is also a handwritten source without maps, but it recorded a short description of each and every of the existing houses in the mid-18th century. Among the features recorded by this source, we can highlight the following ones: the length and width of the floor plan of each building in the village. However, these measures were also specified through ancient units of measurement, which is a fact that leads to the necessary conversion.

In short, the procedure we followed to use the cadastre of 1753 together with the book of demarcations of 1660 was the next. Firstly, we converted the former measures into meters. Secondly, we drew the houses that were described in 1753 according to their real measures. Finally, we studied what houses of 1660 matched each and every one of the ones described in 1753. Another significant source to complete this procedure was the earliest map we preserve from this village. It dated back to 1892,<sup>7</sup> and it was made before the construction of a new road across the centre of the village (FIG. 7). Therefore, it shows a part of the urban shape of Samos at the end of the 19th century, and before the great changes of the 20th century. The analysis of this earliest graphic source let us realise how the skeleton of the 17th-century village remains, at least partially, in this plot map. This fact can be easily verified if we read the descriptions of the book of demarcations and, at the same time, we look at the map of 1892. Finally, we decided to make a hypothesis of the shape of a building when we did not find any information on the demarcated property in other primary sources. However, we have to say that this happened in very few cases.

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FIGURE 7

The plot map of the centre of Samos in 1892 (drawing by the author from the original map which is preserved at Archivo General de la Administracion / General Administration Archive, 2015).

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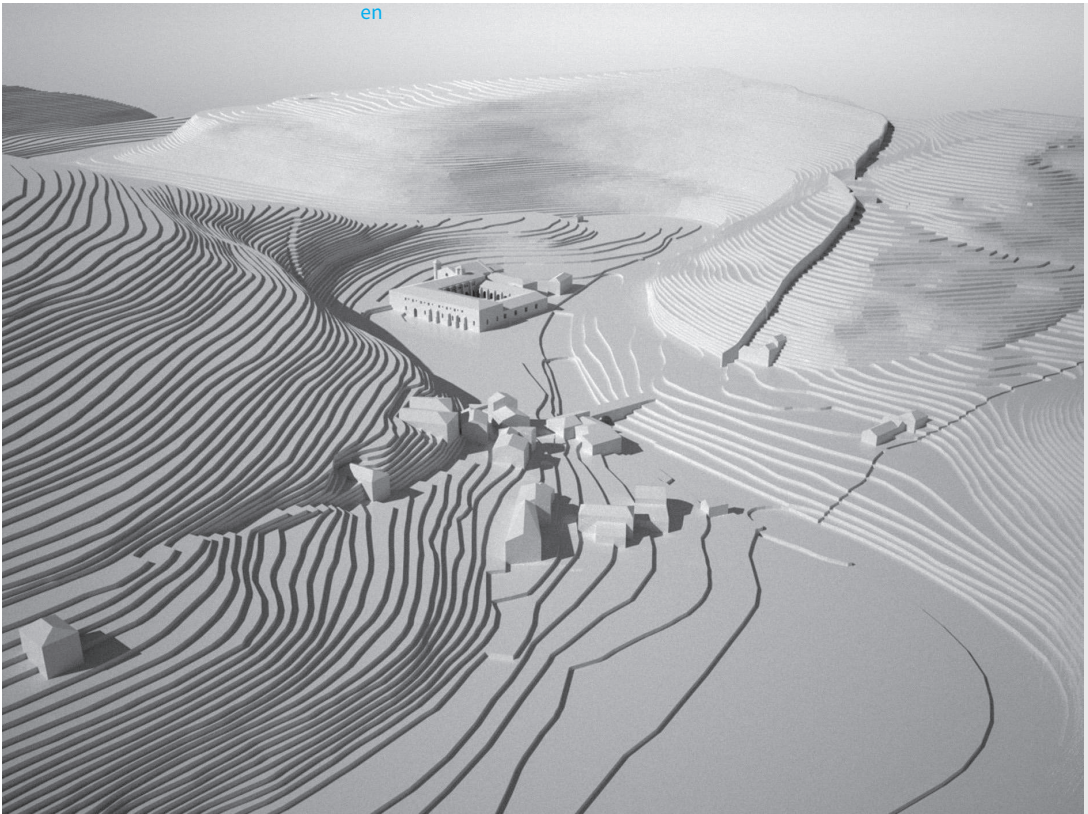


FIGURE 8  
3D model of Samos in 1660  
(model by the author, 2015).

When we dealt with a plot of land, the path we followed was different. The book of demarcations recorded the area of each demarcated plot of land. Therefore, drawing its real area was possible. However, the obstacle was that the scribe used ancient units of area, so we have to convert those into square meters.<sup>8</sup> Then, we draw the plots of land with their real size, but a hypothetic geometric shape yet. The last step was to identify the past plots of land among the present ones.

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With the sketch map of the urban tissue and the real measures of each demarcated property, it is then a direct process to visualise the former city from the map of the present one (FIG. 8). The last issue to be highlighted is that the thorough study of the present physical reality through an on-site investigation was another key point of this research. In fact, the visualisation of the 17th-century village was made over the latest cartographic map where the most recent layers were erased. For instance, we removed all the recent buildings and plots, the road that was built in the late 19th century, and all the transformations that were a consequence of the most recent urban development, among others.

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What results from this process is, on the one hand, how to manage a huge amount of historical written data to analyse and visualise one stage of the urban transformation process undertaken by this village. On the other hand, we also create a graphic tool to make accessible all the most important information that this unpublished book of demarcations recorded concerning the urban shape of Samos at some period in its past.

## Conclusions

In addition to that, the map we create to represent all the written data is a way to explore previous periods in the long history of this village, such as the medieval one. Moreover, the procedure we present in this paper to turn the written data into a map of a non-extant urban physical reality could be applied to study the urban tissue of other Galician villages, towns or cities in the 17th century, where the medieval skeleton remains or even some previous strata.

1 The research for this article is based on a part of my PhD dissertation entitled “The Monastery of San Julián de Samos (Lugo-Spain), A Study and Interpretation of the Monastic Space and Its Evolution,” presented in June 2015 at Universidade da Coruña. My PhD dissertation was partially

financed by Universidade da Coruña (Pre-doctoral Fellowship 2011–2012), and by Xunta de Galicia (Pre-doctoral Fellowship of Research, Innovation and Development Galician Plan 2011–2015 – IC2 Plan, cofounded with Social European Fund FSE-FEDER).

## Notes

n. 8  
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- 2 Archivo Histórico Nacional / National Historical Archive, *Apeos de la feligresía de Samos*. Fondo Instituciones Eclesiásticas, Clero secular-regular. Book 6513, accessed November 11, 2010. <http://pares.mcu.es/>.
- 3 Regarding this type of primary source we can see: Santos García Larragueta, “El Apeo, Documento Diplomático,” *Anuario de Estudios Medievales* 17 (1987): 617-633; *Real Audiencia de Galicia. Catálogo de Expedientes de Apeo*, (Santiago de Compostela: Xunta de Galicia/Dirección Xeral de Patrimonio Cultural, 1999).
- 4 Maximino Arias Cuenllas, *Historia del Monasterio de San Julián de Samos* (Samos: Monasterio de Samos, Diputación Provincial de Lugo, 1992), 93.
- 5 King Fruela I granted the monks of Samos a jurisdictional area of one mile and a half in the 8th century, which was maintained and enlarged by successive kings over the course of the following centuries. The privilege of having a jurisdiction was kept by the monks of Samos until the 19th century. Maximino Arias Cuenllas, “El Monasterio de Samos desde sus Orígenes hasta el Siglo XI,” *Archivos Leoneses* 70 (1981): 267-350. Arias Cuenllas, *Historia del Monasterio de San Julián de Samos*, 36-151, 406. M.<sup>a</sup> Carmen Pallares Méndez, “Los Cotos como marco de los Derechos Feudales en Galicia durante la Edad Media (1100-1500),” *Liceo franciscano* 91-92-93 (1978): 208-209.
- 6 Archivo Histórico Provincial de Lugo / Provincial Historical Archive of Lugo, *Feligresía de Santa Gertrudis de la Villa de Samos*. Catastro del Marqués de Ensenada. Catalogue numbers: 10333-09/10/11/12/13.
- 7 Archivo General de la Administración / General Administration Archive, *Expediente de expropiación forzosa en los términos de Sarria y Samos con motivo de las obras de dicha carretera de los años 1892 y 1893*. Catalogue number: 46/01436.
- 8 The conversion was possible through the work written by María Isabel Fernández Justo, *La metrología tradicional gallega. Aportación a los estudios sobre el medio rural* (Madrid: Instituto Geográfico Nacional, Centro español de metrología, 1986).

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Drawing the past shape of the monastic town of Samos and its immediate environment through an archival document of the mid-17th century

# Verwundet und wiederauferstanden – Dresdens Stadtgeschichte in 4D\*

Kristina Friedrichs

Die Stadt Dresden kann auf eine lange Geschichte zurückblicken, wie sie wechselhafter kaum sein könnte – ein spannendes Feld sowohl für Forscher als auch für die Besucher der Stadt. Das Ziel des Projektes „Urban History 4D“ ist es, einerseits die städtische Entwicklung im Lauf des 20. Jahrhunderts nachzuvollziehen, andererseits aber auch technische Unterstützungsmöglichkeiten für die kunsthistorische Forschung und Vermittlung zu entwickeln. Mit Hilfe eines 4D-Browsers und einer Augmented Reality-Anwendung sollen der beständige Wandel, die Brüche, Zäsuren, aber auch die Kontinuität der Stadt nachvollziehbar werden, das alte Dresden quasi virtuell zu neuem Leben erwecken.

Seit August 2016 besteht das Projekt „Urban History 4D“, ein vom deutschen Bundesministerium für Bildung und Forschung gefördertes Verbundprojekt der Technischen Universität Dresden und der Julius-Maximilian-Universität Würzburg. Es handelt sich um eine interdisziplinäre Nachwuchsforschergruppe, sich die aus den Bereichen Kunstgeschichte, Bildungs- und Informationswissenschaften, Geodäsie bzw. Photogrammetrie und Informatik rekrutiert. Gemeinsam sollen die sieben involvierten Nachwuchswissenschaftler bis Juli 2020 ein historisches Modell der Stadt Dresden erstellen, das der Forschung und Vermittlung stadthistorischer Inhalte dient.

Den Ausgangspunkt der Unternehmung bilden die umfangreichen Bildbestände der Deutschen Fotothek Dresden (DFD), die mehrheitlich bereits in digitalisierter Form vorliegen und den größten Fundus an historischen Fotografien der Stadt Dresden darstellen. Mit annähernd einer halben Million an Bildern aus anderthalb Jahrhunderten existiert somit eine profunde Basis sowohl für die kunsthistorische Analyse als auch für die technische Erprobung.

Dabei haben Fotografien mehrere Vorteile gegenüber anderem Quellenmaterial: Die Informationsdichte ist einerseits sehr hoch, andererseits lässt eine Abbildung weniger Interpretationsspielraum, als dies beispielsweise bei schriftlichem Material der Fall ist. Nicht zuletzt aus diesem Grund werden Fotografien auch heute noch zu dokumentarischen Zwecken eingesetzt, etwa wenn Denkmale oder archäologische Grabungen und ihr jeweils spezifischer Zustand aufzunehmen sind. Aus diesem Erfordernis heraus entwickelte sich bereits im 19. Jahrhundert ein Verfahren, das anhand von Fotografien den Standort und die dreidimensionale Form eines Gebäudes bestimmen kann, die Photogrammetrie.<sup>1</sup>

Wird ein Objekt, sei es ein Gebäude oder eine Ausgrabungsstätte, von mehreren Punkten her aufgenommen, kann durch die Inbeziehungsetzung der Bilder miteinander die räumliche Situation und die Form des Objektes

## Das Projekt

## Technisches Verfahren und Teilbereiche

## Photogrammetrie



in Höhe, Breite und Tiefe ermittelt werden. Im Rahmen des Projektes soll das structure-from-motion-Verfahren anhand historischer Bilder erprobt werden, bei dem aus dem zweidimensionalen Bildmaterial ein dreidimensionales Modell des Objektes in Form einer Punktwolke entsteht (ABB. 1). Bei zeitgenössischen Aufnahmen lässt sich dieses Verfahren mithilfe moderner, digitaler Mittel<sup>2</sup> deutlich beschleunigen und vereinfachen, etwa durch automatische Mustererkennung. Bei historischen Aufnahmen bestehen dagegen deutlich größere Hürden.

Bei diesen Fotografien ist meist die Geometrie der Kamera historisch nicht überliefert, was dazu führt, dass die Brennweite als eine wichtige Bezugsgröße im Rechenverfahren unbekannt bleibt. Es ist weiterhin mit Objektivbedingten Verzerrungen zu rechnen, mit unzureichender Bildqualität, mangelnden Kontrasten beispielsweise, und vor allem einer nicht genügenden Anzahl von Einzelbildern eines Objektes. Für die Erstellung eines dreidimensionalen Modells werden mehrere Bildpunkte benötigt, die in den Quellen gut genug erkennbar ausgeprägt sein müssen – eine zu geringe Anzahl an Bildern führt zu nur lückenhaften Ergebnissen. Hieran knüpft sich ebenfalls das Problem des zu wählenden Zeitintervalls an, das bei der Arbeit mit historischen Fotografien passend zu den verschiedenen Zeitschichten ausgewählt werden sollte. Häufig tritt jedoch der Fall ein, dass manche Zeitschichten mit einem üppigen Quellenbestand aufwarten können, andere hingegen nur wenig dokumentarisches Material aufweisen. An dieser Stelle ist darüber hinaus festzustellen, dass nicht jedes Foto einer Architektur auch für das structure-from-motion-Verfahren tauglich ist. Oftmals fokussieren beispielsweise Bilder aus der Pressefotografie auf Personen im Vordergrund, während die Architektur zur schlichten Hintergrundfolie wird. Damit sind zugleich oftmals die wichtigen photogrammetrischen Referenzpunkte überdeckt oder angeschnitten, können folglich nicht in die Modellerstellung einbezogen werden, trotzdem sie zweifellos als Quelle wichtig sind. Aus diesem Grund steht die Anwendung der structure-from-motion-Modellierung im Hinblick auf automatisierte Verfahren noch am Beginn ihrer Erprobung.<sup>3</sup>

Trotz der vielen offenen Fragen, die während des Projektes geklärt werden sollen, hat das angestrebte Verfahren einen entscheidenden Vorteil anderen Modellierungsansätzen gegenüber, der darin besteht, dass die Bilder unverfälscht als Quelle in das Modell einfließen und diese nicht im Prozess der Erstellung interpretativ bearbeitet werden.

Das daraus hervorgehende, vierdimensionale Modell soll in zwei darauf aufbauenden Teilbereichen eine Anwendung erhalten: zum einen als Forschungsplattform für Fachwissenschaftler, zum anderen als pädagogisches Vermittlungsinstrument stadtgeschichtlicher Inhalte.

Im Bereich der Vermittlung sollen das erstellte Modell und die Fotografien, auf denen es fußt, zu einem pädagogischen Einsatz gebracht werden. Oftmals werden solche vermittelnden Ansätze im touristischen Bereich gebraucht, sind dann jedoch in der Regel mit einem kommerziellen Hintergrund versehen, der die Buchung von Hotels, die Standorte von Restaurants oder Fahrzeiten öffentlicher Verkehrsmittel vordergründig behandelt. Eine mehr pädagogische Nutzung hingegen findet sich dagegen seltener. Das Projekt „Urban History 4D“ möchte dabei den Schwerpunkt auf die Nutzung von Augmented Reality (AR), also der Anreicherung der realen Umgebung durch virtuelle Informationen, legen (ABB. 2).

**Zur Vermittlung  
stadthistorischen  
Wissens**

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Gerade stadthistorische Inhalte sind hierfür von besonderem Interesse, denn durch den Einsatz von AR-Techniken wie beispielsweise der Überblendung werden Änderungen der Architektur und des dreidimensionalen Stadtraumes auch für Laien gut ersichtlich.<sup>4</sup> Eine inhaltliche Vermittlung kann zudem durch weitere angelagerte Informationen geschehen, klassischerweise durch Texte und Fotografien,<sup>5</sup> aber auch durch Video- oder Tonsequenzen, die den Ausflug in die Vergangenheit plastischer erlebbar machen. Spielerische Elemente finden in dieser Technologie ebenso Eingang, da sie in Abhängigkeit von der Nutzergruppe das Lernerlebnis und den Lernerfolg nachhaltig verbessern können.<sup>6</sup>

Das Projekt möchte in diesem Bereich vor allem untersuchen, welche Informationen durch welche Interaktionsmöglichkeiten mit einem mobilen, tragbaren Gerät besonders gut vermittelt werden können und wie diese dafür aufbereitet sein müssen.

Verlässt man den Bereich der Vermittlung, so soll in einem zweiten Strang auf eine wissenschaftliche Nutzung eingegangen werden. Hierbei werden innerhalb des Projektes zwei Schwerpunkte verfolgt, die sowohl das Modell selbst als Forschungsinstrument nutzbar machen, aber auch das Auffinden von Quellenmaterial für die kunsthistorische Arbeit erleichtern sollen.<sup>7</sup>

**Technologische  
Unterstützung  
der kunsthistorischen  
Forschung**

Wie oben angedeutet, wird zunächst angestrebt, die Quellen möglichst unverfälscht in das Modell einzubringen. Dieser Umstand stellt im wissenschaftlichen Diskurs oftmals den häufigsten Kritikpunkt seitens der kunsthistorischen Fachschaft dar, der dazu führt, dass computerbasierte Modelle häufig als wissenschaftlichen Kriterien ungenügend beanstandet werden. Da ein Modell, im Gegensatz zu einer verbalen Besprechung einer Architektur keine Unschärfen zulässt, sondern stets nur eine Lösung abbilden kann, geht seine Erstellung faktisch immer mit einem fortwährenden Entscheidungsprozess einher.

Dieser birgt aber auch ein besonderes Potential, da gerade unpräzise, unlogische oder unbekanntere Punkte während des Arbeitsprozesses offen zu Tage



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ABBILDUNG 1  
Punktwolke als Resultat  
des Structure-from-motion-Verfahrens  
aus historischen Bildern des Zwingers  
(foto: Theresa Vietze/ Agisoft PhotoScan).



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ABBILDUNG 2

Mögliche Optik der AR-Anwendung mit  
historischem Bildmaterial der Frauenkirche  
(foto: Sander Münster).

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treten. So mehren sich die Erkenntnisse während der Bearbeitung stetig und tragen zu einem besseren Verständnis von Detailfragen und des Bauwerks im Allgemeinen bei.<sup>8</sup> Andererseits, und an dieser Stelle ist die Kritik tatsächlich berechtigt, stellt man bei den digitalen Modellierungsprojekten oftmals fest, dass eine Dokumentation der getroffenen Entscheidungen entweder gar nicht oder nur ungenügend erfolgt.<sup>9</sup> Dabei wurden die notwendigen Entscheidungen in der Regel sogar anhand der in der kunsthistorischen Arbeitspraxis etablierten Methoden wie Analogieschluss, Stilkunde oder Proportionslehre getroffen und entbehren keinesfalls eines wissenschaftlichen Fundaments.<sup>10</sup> Allein an der Dokumentation mangelt es – oftmals, da die technischen Voraussetzungen hierfür nicht vorhanden sind.

Das Projekt „Urban History 4D“ möchte für diesen klar vorhandenen Bedarf einen Vorschlag zur Forschungsunterstützung erarbeiten, um den Geneseprozess eines computergestützten 3D-Architekturmodells transparent und den Anforderungen der Wissenschaft gemäß darzustellen. Angefangen bei Fragen der Detailtreue (LOD1 bis LOD3), über die Möglichkeit, Annotationen anzufügen oder Varianten für offene Fragen anzubieten, bis hin zur Integration der Quellen selbst reicht dieses Spektrum. Ein besonderes Anliegen besteht zudem darin, eine wissenschaftliche Diskussion anhand des Modells zu erlauben, die sich nicht nur in Publikationen entfaltet, sondern diese direkt am Modell zu ermöglichen; also eine partizipative Weiterentwicklung im Rahmen des Fachdiskurses.

An die Integration der Quellen knüpft der zweite Aspekt der technologischen Unterstützung kunsthistorischer Forschung an, der von der Konkretisierung einer Fragestellung wieder zum Ausgangspunkt, der Recherche, zurückführt. In der Regel stehen digitalisierte, historische Fotografien in online-Bildrepositorien wie etwa der Deutschen Fotothek zum Gebrauch zur Verfügung. Die Zahl an solchen Plattformen wächst nicht zuletzt auch Dank der verstärkten Digitalisierungsmaßnahmen der letzten Jahre beständig, so dass sowohl auf spezielle Themen beschränkte Bildarchive entstehen, andererseits aber auch an übergeordneten Meta-Plattformen gearbeitet wird. Ihnen allen ist gemein, dass sie in der Regel nicht von Kunst- oder Architekturhistorikern konzipiert, sondern meist von Informatikern oder Informationswissenschaftler erarbeitet werden. Dieser Umstand führt dazu, dass die Such- und Filterhandhabung nur bedingt dem entspricht, was Kunsthistoriker an tatsächlichen Erfordernissen an eine solche Datenbank stellen.<sup>11</sup>

Im Rahmen des Projektes „Urban history 4D“ sollen diese Bedarfe eruiert werden, jeweils in Abhängigkeit von einer jeweiligen Zielgruppe, denn auch innerhalb der Fachschaft und den verschiedenen Ausbildungsstadien gibt es deutliche Unterschiede. Erste Analysen haben gezeigt, dass alle Zielgruppen

eine intuitive Handhabung der Plattformen und ein übersichtliches Design erwarten. Je nach Professionalisierungsgrad und Forschungsfeld stehen jedoch andere Anforderungen im Vordergrund, so beispielsweise angemessene Such- und Filterfunktionen, die Ausgabe entsprechender Metadaten oder die Anreicherung mit weiterführenden Querverweisen, Normdaten oder ähnlich gelagerten Bildbeständen.

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Eine bislang selten genutzte Möglichkeit der Quellendarstellung ist die Visualisierung in einem Modell, obwohl gerade eine solche Aufbereitung ein besonderes Potential zur Erschließung großvolumiger Bildbestände birgt.<sup>12</sup>

Hierin können die oben bezeichneten Querverweise teilweise bereits optisch integriert werden, zudem ist die Einbeziehung von Zusatzinformationen möglich, beispielsweise der Kamerastandpunkt eines Fotos (ABB. 3).

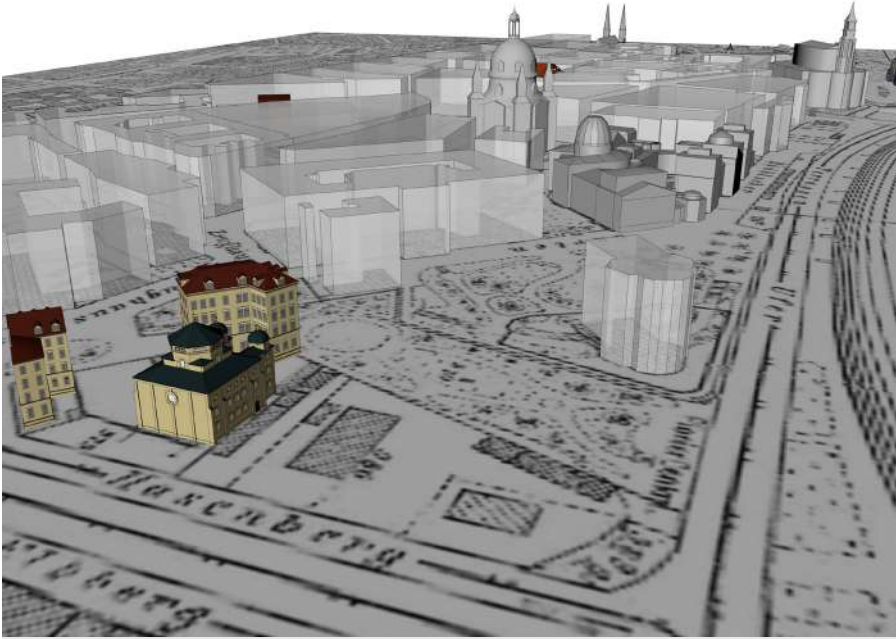
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Somit würde im Umkehrschluss das Modell mit den inkorporierten Quellen die Möglichkeit bieten, die Quellen zeitlich wie örtlich neu zu erschließen.

Gerade für die kunsthistorische Forschung bildet das soeben beschriebene neue Verfahren eine Chance, frische Themenbereiche zu erschließen, neue Fragestellungen zu entwickeln und sie mit den entsprechenden Hilfsmitteln gewinnbringend zu bearbeiten, zugleich aber auch eine methodische Fortentwicklung zu erzielen.

**Inhaltliche  
Aspekte**

Im Folgenden soll ein im Kontext des Projektes „Urban History 4D“ bearbeitetes Beispiel die Möglichkeiten und Herausforderungen für die Kunstgeschichte eingehend beleuchten. Die Stadt Dresden bildet für die zu untersuchenden Fragestellungen einen idealen Gegenstand, aus mehreren Gründen: Erstens – und dies aus praktischen Erwägungen heraus – verfügt die Deutsche Fotothek über einen umfangreichen Bestand an historischen Fotografien, von denen die meisten bereits digitalisiert vorliegen,<sup>13</sup> auch wenn im Hinblick auf qualitätsspezifische Erfordernisse der Photogrammetrie manche Aufnahmen retrodigitalisiert werden müssen. Zweitens war die städtische Entwicklung Dresdens im 20. Jahrhundert extrem wechselhaft,<sup>14</sup> so dass bestehende Kontinuitäten, vor allem aber die starken Veränderungen die Arbeit mit den verschiedenen Zeitschichten deutlicher unterstützen als dies bei einer Stadt mit nur wenigen Veränderungen im Laufe der Zeit der Fall gewesen wäre. Zum Dritten ist Dresden aber auch eine Stadt, die polarisiert: Der Mythos Dresden, also das dem faktischen Stadtbild gegenüberstehende ideelle oder mentale Stadtbild, bildet einen wichtigen Aspekt in der kunsthistorischen Untersuchung. Diese basiert demnach auf zwei Komponenten, einerseits der baulichen Entwicklung der Stadt, andererseits der Wahrnehmung jener Stadt – und eventuellen wechselseitigen Wirkungen von Abbildungskultur und baulichen Aktivitäten.



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ABBILDUNG 3  
Dreidimensionales Modell  
der Altstadt Dresdens, hier mit Fokus  
auf die ehemalige Synagoge  
(3D: Sander Münster).

ABBILDUNG 4  
Mögliche Verteilung  
der Häufigkeit von Fotomotiven  
zu einem bestimmten Zeitschnitt  
(map: Kristina Friedrichs).

Zu Beginn des 20. Jahrhunderts war Dresden eine kulturell wie wirtschaftlich höchst aktive und attraktive Stadt, Bildung, Künste, aber auch die Industrie machten es zu einer deutschen Stadt ersten Ranges. Das Stadtzentrum wurde einerseits geprägt von den historischen Bauten der vergangenen Jahrhunderte, der gotischen Sophienkirche, dem Residenzschloss aus der Zeit der Renaissance, vor allem aber den repräsentativen barocken Architekturen der so genannten augusteischen Zeit. Um die Frauenkirche George Bährs herum und auf dem Neustädter Elbufer gruppierten sich schmucke barocke Bürgerhäuser; doch es waren vor allem die Zeugnisse August des Starken und seines Sohnes Friedrich August II., die Dresden den Ruf einer Kunst- und Barockstadt einbrachten: Zwinger, Taschenbergpalais, Japanisches Palais und Hofkirche sind noch heute prominente Gebäude, die diesen Eindruck untermauern. Andererseits hatten auch die Jahre um die Jahrhundertwende Dresden geprägt: üppige historistische Bauten, Gründerzeithäuser und ungewöhnliche Architekturen wie die 1909 errichtete Tabakfabrik Yenidze bestimmten ebenso das Stadtbild.

Diesem homogen gewachsenen Stadtgefüge setzten die Bombenangriffe des Februar 1945 ein Ende.<sup>15</sup> Wie hunderte anderer deutscher Städte wurden das Stadtzentrum, aber auch angrenzende Bereiche durch die Luftangriffe schwerst beschädigt. Industrielle Anlagen wurden, trotz der eigentlich vordergründig hierauf abzielenden strategischen Überlegungen, nicht besonders in Mitleidenschaft gezogen, wie das Beispiel des Hauptbahnhofs belegt. Das Stadtzentrum allerdings wurde zu über 90 Prozent zerstört. In den folgenden Monaten und sogar Jahren stand zunächst die Beräumung der Trümmer im Vordergrund, seit den 1950er Jahren aber auch der Wiederaufbau der Stadt.<sup>16</sup> So wurden tatsächlich weite Bereiche der Altstadt niedergelegt, einerseits, da der bauliche Zustand keinen Wiederaufbau zuließ, andererseits um Platz für die neu entstehende sozialistische Stadt zu schaffen. Aus diesem Grund musste unter anderem die eingestürzte Sophienkirche weichen; ihre Ruine wurde 1962-1963 abgetragen.<sup>17</sup> Gerade in den ersten Jahren nach dem Zweiten Weltkrieg wurde intensiv darüber nachgedacht, wie jener Neuanfang gestaltet werden könnte: Von einer sozialistischen Architektur mit betont lokalen Wurzeln bis hin zu vorrangig sowjetischen Vorbildern, die jeweils mit architektur- und gesellschaftsuto-pischen Vorstellungen verbunden waren. In diese Phase fällt unter anderem die groß dimensionierte Anlage der Prager Straße, die zwischen 1965 und 1978 geschaffen wurde und den Hauptbahnhof mit dem alten Stadtzentrum verband, interessanterweise nach dem niederländischen Vorbild der Lijnbahn in Rotterdam.

Gerade der Wiederaufbau beziehungsweise die Rekonstruktion der historischen Bauten Dresdens wurde nur zögerlich in Angriff genommen: Während



das berühmte Kronentor des Zwingers schon 1951 repariert war, wurde an anderen Bereichen des Zwingers noch bis in die 1960er Jahre hinein gearbeitet. Das berühmte Opernhaus Gottfried Sempers wurde in den Jahren 1977 bis 1985 wieder hergestellt und das Dresdner Residenzschloss wird seit den 1980er Jahren bis zum heutigen Tag im großen Stil zu einem Museum ersten Ranges umgebaut.

Eine Sonderrolle, dennoch emblematisch, nahm die Frauenkirche des Dresdner Neumarktes ein:<sup>18</sup> Zunächst als Kriegsmahnmahl in ihrem ruinösen Zustand belassen, wurde sie ab 1994 rekonstruiert und im Oktober 2005 der Öffentlichkeit wieder übergeben. Sie steht bezeichnenderweise für eine Tendenz, die die Rückkehr zum historischen Stadtbild Dresdens erstrebt.<sup>19</sup> Es war vor allem ein starkes bürgerschaftliches Engagement, das nicht nur die Frauenkirche, sondern auch einen Kern der Stadt um den Neumarkt herum in historistischen Formen<sup>20</sup> wiedererstehen ließ – und noch immer lässt. Vor diesem Hintergrund wird klar, dass Dresden sich als Objekt kunsthistorischer Forschung in der oben bezeichneten doppelten Weise anbietet: Einerseits mit einem Fokus auf der tatsächlich materiellen Entwicklung der städtischen Architektur, andererseits mit einem Schwerpunkt auf der Wahrnehmungsperspektive, die Menschen der Stadt entgegenbringen. Mit den skizzierten Methoden soll es möglich sein, in dem historischen Stadtmodell die faktischen Änderungen nachzuvollziehen, woraus sich verschiedene Fragestellungen entwickeln können: Welche städtebaulichen Änderungen lassen sich beobachten? Wo gibt es, angesichts der enormen Zäsuren, Kontinuitäten und wie lassen sich diese begründen? Oder: Welche baulichen Aufgaben wurden wann als besonders dringlich erachtet? Die Reihe an möglichen Fragestellungen, die sich aus diesem historischen Stadtmodell ableiten lassen, ist natürlich beliebig erweiterbar und kann an den jeweiligen architekturhistorischen Fokus angepasst werden. Verlässt man nun aber den Bereich der faktischen Entwicklung, der durch die bisherige Forschung glücklicherweise bereits gut abgedeckt wird, gelangt man zu einer weiteren Metaebene.

### Stadtbild und Stadt-Bild

Es schließt sich hier nämlich ein noch neues Feld kunsthistorischer Forschung an, das sich erst seit einigen Jahren entwickelt: Untersuchungen zur Wahrnehmung der Stadt und wie diese reziprok die gegenständliche Entwicklung von Stadt beeinflussen kann.<sup>21</sup> Gerade die Stadt Dresden ist hierfür ein Beispiel par excellence, hat sie doch eine hochgradig emotionalisierende Wirkung auf Dresdner und Betrachter von außen.<sup>22</sup> Auch dieser Bereich soll an dieser Stelle mit einem Musterfall unterlegt werden. Stellvertretend für viele andere, unter anderem Abraham Pisarek, Erich Höhne, Renate Rössing oder Walter Möbius, soll der Fotograf Richard

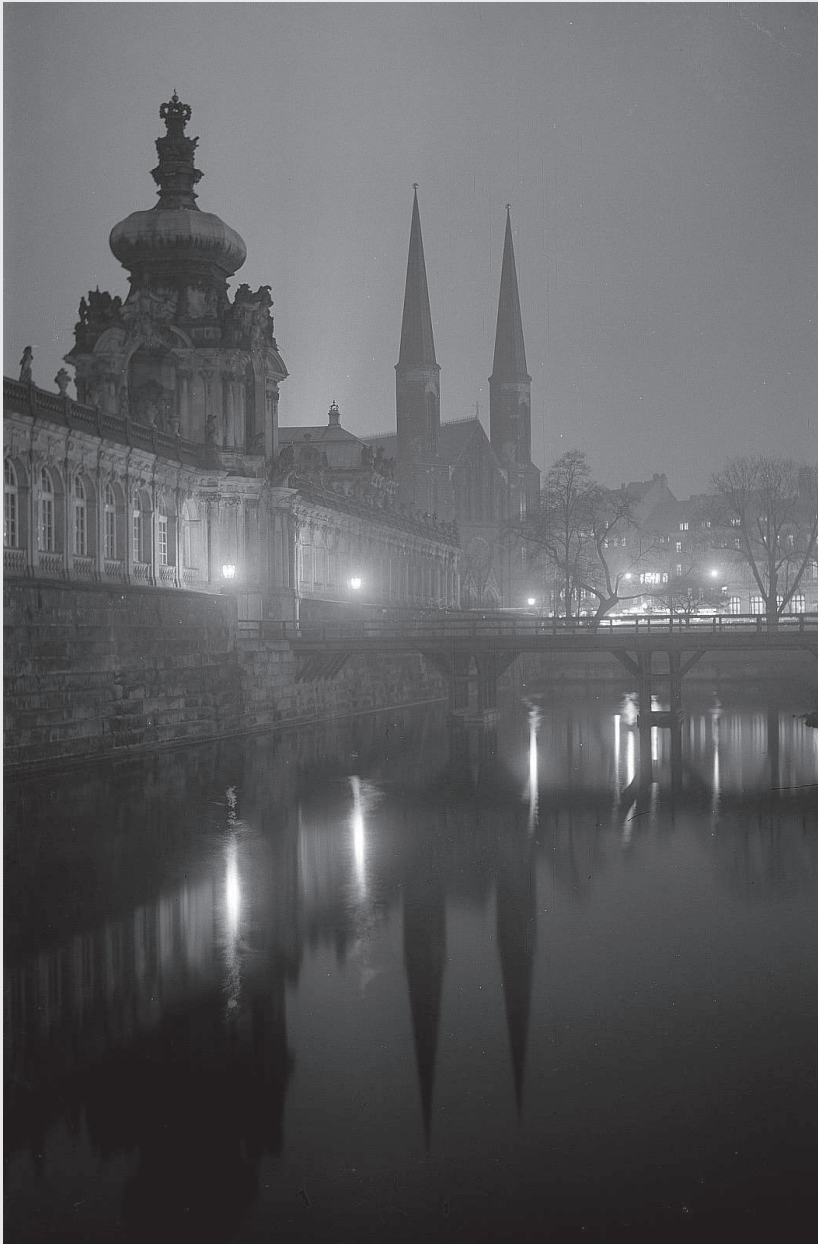


ABBILDUNG 5  
Richard Peter senior: Am Zwingerteich, 1932.  
(foto: SLUB/ Deutsche Fotothek,  
Richard Peter senior, CC-BY-SA 4.0)  
[http://www.deutschefotothek.de/  
documents/obj/88951137](http://www.deutschefotothek.de/documents/obj/88951137).

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Peter senior und sein Schaffen in und über Dresden vorgestellt werden.<sup>23</sup> Gerade im Hinblick die Wahrnehmung von Stadt kann dieses Beispiel wertvolle Hinweise auf mögliche Fragestellungen, aber auch auf Hürden der Untersuchung geben.

Richard Peter senior wurde 1895 im ländlichen Klein Jenkowitz geboren und arbeitete zunächst als Schmied und im Bergbau, bis er als Soldat in den Ersten Weltkrieg eingezogen wurde. Nach dessen Ende wurde er in Halle an der Saale ansässig und schloss sich dort der Arbeiterbewegung an, war zunächst Mitglied der USPD und seit 1920 Mitglied der KPD. Politisch engagierte er sich folglich überaus stark. Aufgrund seiner aktiven Teilnahme an Aufständen musste er schließlich aus Halle flüchten, wobei ihn sein Weg erst nach Wien, später nach Dresden führte. Für das fotografische Vermächtnis Dresdens war dies ein Glücksfall, denn von den 1920er Jahren bis zu seinem Tod 1977 würde er – von kurzen Intermezzi in Argentinien und Skandinavien abgesehen – der Stadt treu bleiben und sie immer wieder durch alle Phasen des Stadtwandels fotografisch dokumentieren.

Richard Peter senior arbeitete unter anderem als Pressefotograf, bildete vor allem aber immer wieder das Leben der Arbeiter bei ihrem Schaffen und im privaten Leben ab. Seine politische Einstellung führte zu einem zeitweiligen Berufsverbot in der NS-Zeit, doch nach 1939 durfte er zumindest wieder als Werbefotograf arbeiten. 1943 wurde er zum Dienst in der Wehrmacht verpflichtet und fand bei seiner Rückkehr aus der Kriegsgefangenschaft im September 1945 die Stadt und auch sein Atelier in Trümmern vor. Sofort machte er sich an die Dokumentation der Stadt. Seine ersten Bilder Dresdens in den 1920er und 1930er Jahren zeigen die Stadt als altehrwürdige, gediegene, elegante Kulturstadt. Ausgewogene Kompositionen herrschen vor, oft ohne Staffagefiguren, und der Fokus liegt auf den Bauten des historischen Stadtzentrums, die gern auch bei malerischer Nachtbeleuchtung abgebildet werden (ABB. 5) – Peter präsentiert Dresden klassisch.

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Daneben reiste er auch immer wieder und begeisterte sich für das Landleben: Etwas plakativ bildete er Hirten, Dörfer, Landschaften, ja sogar Bergsteiger in der Natur ab. Diesen Zug würde er über sein gesamtes Leben beibehalten; erst waren es die Alpen, Bilder seiner Fernreisen, später unter der sozialistischen Reisebeschränkung fotografierte er vorrangig Zakhopane oder Hiddensee.

Besonders beeindruckend und für den stadtgeschichtlichen Kontext von höchster Bedeutung sind Peters Fotos des zerstörten Dresden, die emotional noch heute als tief ergreifend und verstörend wahrgenommen werden. Der Fotograf arbeitete hierfür mit radikalen Kompositionen,

harten Gegensätzen und drastischen Motiven: Die Architekturaufnahmen bildeten das ganze Ausmaß an substanzieller Zerstörung ab, er dokumentierte aber ebenso die Verstorbenen, die durch den Seuchenschutz bedingten Massenverbrennungen. Im Thema ähnlich, jedoch subtiler funktionieren die Fotografien der Aushänge mit Aufrufen an die Vermissten, sich zu melden, stets vor der Folie der ruinösen Stadt. Die psychische Komponente dieser Fotografien ist unbestreitbar. Wenig überraschend ist es Richard Peter senior, aus dessen Kamera der Blick vom Rathausurm in Richtung des Hauptbahnhofs stammt, ein Bild, das zu einer Ikone der Fotografiegeschichte geworden ist (ABB. 6). Zu Recht, zeigt es doch auf höchst dramatische Weise die schwere Zerstörung, die der Krieg mit sich brachte. 1950 fasste der Fotograf die eindrucklichsten seiner Aufnahmen in einem Fotoband zusammen, dessen Titel für die Wahrnehmung der Stadt jener Jahre mehr als aussagekräftig ist: „Dresden – eine Kamera klagt an“.<sup>24</sup>

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Trotz dieser fatalistischen Bilder machte sich im fotografischen Schaffen Peters aber auch recht bald der Wiederaufbau bemerkbar: Dies beginnt mit Aufnahmen, die nur Spuren im Schnee als Zeugnis eines schüchtern zurückkehrenden Lebens in die skelettartigen Ruinen der Stadt zeigen. Doch bald wurden die Trümmerberäumung und der Neuanfang zum neuen Hauptthema des Fotografen (ABB. 7). Den Wiederaufbau portraitierte Peter mit Bildmitteln, die der Arbeiterfotografie eigneten: Sie nahmen den schaffenden Menschen in den Fokus, der stets bei einer praktischen Arbeit portraitiert wurde, etwa beim Weiterreichen von Baumaterial, dem Abbau von Stahl aus den Ruinen zur Wiederverwertung und ähnliches. Oft eignet diesen Bildern eine gewisse Dynamik, die auf der Bewegung, die der Arbeit eignet, beruht. Zudem fällt auf, dass der Betrachterstandpunkt häufig unterhalb gewählt wurde, so dass man zu den Personen, den Helden des Wiederaufbaus, aufschauen muss. Diese Motivwahl und Formensprache kultivierte Peter über die Zeit so weit, dass sie fast etwas pathetisch wirkt. Natürlich war diese Bildsprache ein Kind ihrer Zeit.

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Seine fotografische Arbeit brachte Richard Peter einerseits verschiedene redaktionelle Tätigkeiten ein, führte aber aufgrund seiner speziellen politischen Ansichten zugleich zum Ausschluss aus der SED im Jahr 1949. Daher blieben Bilder, die sich der politischen Reportage, Parteitagen, Umzügen und Kundgebungen widmeten, eher eine Ausnahme. Stattdessen arbeitete der Fotograf für Verlage und in der Werbung, blieb stets freischaffend.

So finden sich im Fundus von Richard Peter vor allem Bilder, die das Wachsen Dresdens zu einer richtigen Stadt verfolgen, einer sozialistischen



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ABBILDUNG 6

Richard Peter senior:

Blick vom Rathausturm nach Süden, 1945.

(foto: SLUB/ Deutsche Fotothek,

Richard Peter senior, CC-BY-SA 4.0)

<http://www.deutschefotothek.de/>

[documents/obj/88950028](http://www.deutschefotothek.de/documents/obj/88950028).

Stadt, geschaffen vom Arbeitervolk, dem er positiv gegenüberstand. Die technische Neuerung, Industrie und das Wiederkehren eines geregelten Lebens sind bei vielen seiner Bilder ein gängiger Gegenstand (ABB. 8). Sei es der Weihnachtsmarkt mit seiner festlichen Beleuchtung, die zunehmende Motorisierung oder das neu entstandene heile Stadtbild mit Cafés und vielen Menschen. Die Stadt als Lebensraum wurde ein ab den 1950er Jahren wiederkehrendes Motiv. Und selbst zu den barocken Bauten fand Peter zurück, interessanterweise in seiner alten Bildsprache der frühen Fotos, so beispielsweise im Rahmen umfangreicher Fotoserien des Zwingers und der Semperschen Gemäldegalerie.

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In den 1960er Jahren zeigte Richard Peter wiederholt Szenen des sozialistischen Wohnungsbaus, vor allem nach Fertigstellung der großen Dresdner Wohngebiete wie Striesen oder der Prager Straße, die vom Hauptbahnhof nach Norden zum ehemaligen Stadtzentrum führt. Stets wählte er hierfür gepflegte, neue und aufgeräumte Plätze, entweder mit angenehmen Grünanlagen oder dem erfrischenden Wasser von Springbrunnen. Und oft sind Kinder die präferierten Staffagefiguren dieser Schaffensperiode (ABB. 9), quasi eine Metapher für den Blick in die Zukunft. An dieser Stelle sei noch einmal an den ikonischen Blick vom Rathausurm erinnert. An diesen Ort würde Richard Peter noch öfter zurückkehren. Zum einen bot dieser Betrachtungsstandpunkt den Blick auf die neu entstandene Prager Straße und somit eine klassische Wiederholung seines vormaligen Trümmerbildes mit den Leistungen des Wiederaufbaus im Vordergrund. Zum anderen inszenierte Peter dieses Foto oft mit zusätzlichem Bildpersonal, etwa Ingenieuren oder Architekten, die hinüber auf die Prachtstraße weisen (ABB. 10). Noch deutlicher gestaltete er diese Bildaussage beispielsweise mit Kindern oder einer Familie, die von oben über das neu entstandene Stadtpanorama schauen.

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Mit diesem Abriss zum künstlerischen Schaffen eines exemplarischen Fotografen sollte deutlich werden, dass sich eine Stadt natürlich über die Jahre verändert, wächst, zerstört wird, Veränderungen unterworfen ist, und damit die Menschen beeinflusst. In diesem Prozess entsteht demnach auch ein mentales Bild von Stadt. Die Menschen bleiben aber hierbei allerdings nicht nur stille Beobachter, sondern prägen das Stadtbild ihrerseits weiter, stets vor dem Hintergrund ihrer eigenen Biographie und den gesammelten Lebenserfahrungen, geben selbst wichtige Impulse zur weiteren Entwicklung des Stadtraumes. Im aufgezeigten Beispiel geschieht dies anhand eines Fotografen aus dem linken Spektrum, doch beileibe nicht alle Fotografen waren der DDR so positiv zugetan. Somit muss eine kunsthistorische Auswertung von historischer Stadtfotografie in einem solchen Kontext überaus kontrastiert und differenziert vorgehen.





Verwundet und widerstandsfähig  
- Dresden's Stadtgeschichte m 45

ABBILDUNG 7  
Richard Peter senior: Muldenkipplore  
der Trümmerbahn, 1947.  
(foto: SLUB/ Deutsche Fotothek,  
Richard Peter senior, CC-BY-SA 4.0)  
[http://www.deutschefotothek.de/  
documents/obj/88956828](http://www.deutschefotothek.de/documents/obj/88956828) .

ABBILDUNG 8  
Richard Peter senior:  
Wohnungsbau mit Bagger, 1950.  
(foto: SLUB/ Deutsche Fotothek,  
Richard Peter senior, CC-BY-SA 4.0)  
[http://www.deutschefotothek.de/  
documents/obj/88953200](http://www.deutschefotothek.de/documents/obj/88953200) .

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Verwundet und wiederauferstehenden  
– Dresdens Stadtgeschichte in 100 Bildern

ABBILDUNG 9

Richard Peter senior: Ferienkinder  
im Hotelviertel Prager Straße, 969.  
(foto: SLUB/ Deutsche Fotothek,  
Richard Peter senior, CC-BY-SA 4.0)  
[http://www.deutschefotothek.de/  
documents/obj/88953122](http://www.deutschefotothek.de/documents/obj/88953122).

ABBILDUNG 10

Richard Peter senior:  
Blick vom Rathausurm, 1971.  
(foto: SLUB/ Deutsche Fotothek,  
Richard Peter senior, CC-BY-SA 4.0)  
[http://www.deutschefotothek.de/  
documents/obj/88952957](http://www.deutschefotothek.de/documents/obj/88952957).

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Die Analyse  
fotografischen  
Materials  
durch die  
Kunstgeschichte

Mit dem im Rahmen des Projektes „Urban History 4D“ entwickelten Modells und den zu erstellenden Unterstützungsoptionen für Forscher soll sich die Möglichkeit ergeben, solch umfangreiche Fragestellungen mit Hilfe computergestützter Auswertungen zu bearbeiten. Neben der rein faktischen Entwicklung der Stadt weitet sich der Fokus damit auf Fragen jenseits der gebauten Architektur. Mögliche Aspekte einer solchen Untersuchung könnten sowohl quantitativer als auch qualitativer Natur sein.

Beginnend bei einer eher statistisch veranlagten Analyse können Fragen der Popularität eines Ortes im Wandel der Zeit eine Rolle spielen: Zunächst wertneutral könnte man fragen, welche Bauten in welchen Zeithorizonten präferiert abgebildet wurden. Da Fotografie aber oft nicht neutral bleibt,<sup>25</sup> bliebe ebenso zu untersuchen, ob sich anhand der Baufunktion oder anhand inhaltlicher Aspekte eine Aussage zur Wichtigkeit eines Bauwerks für eine Stadt treffen lässt. Am Beispiel Dresden wäre hierbei etwa danach zu fragen, ob das Bild des barocken Dresden auch in die sozialistische Zeit nachwirkte, also Bauten wie der Zwinger, die Brühlsche Terrasse oder das Japanische Palais bevorzugt abgebildet wurden, weil sie die in den Köpfen bestehende Idee von Dresden bestärkten. Andererseits standen diese Bauten für das adelige, feudale Dresden, dem der sozialistische Staat ablehnend gegenüberstand. Wurden also vielleicht vor allem die neu entstehenden Großbauten abgebildet, die konform mit der vom Staat favorisierten Idee einer sozialistischen Stadt waren? Eine mengenmäßige Aufschlüsselung nach Motiven und den Entstehungsjahren der Fotografien kann bei solchen Fragestellungen einen ersten Aufschluss zum mentalen Stadtbild geben.

Zugleich setzt an dieser Stelle schon eine qualitative Analyse des Bildkorpus an, denn eine differenzierte Untersuchung kann in diesem Fall nicht allein auf Zahlen gestützt werden. Vielmehr gilt es, zusätzliche Informationen um die Entstehung einer Fotografie mit einzubeziehen. Wie zu zeigen war, sind die auf das Werden eines Bildes einwirkenden Parameter überaus mannigfaltig: Handelte es sich um einen professionellen Fotografen oder um einen Amateur? Entstand das Foto aus einem künstlerischen Impuls heraus oder handelte es sich um eine Auftragsarbeit, etwa ein Dokumentationsvorhaben der Denkmalpflege? Welchen Hintergrund hatte der Fotografierende, welche persönlichen, sozialen, politischen oder bildungsbedingten Aspekte flossen in sein Schaffen ein? Hier erfordert eine Auswertung also eine umfangreiche Recherchearbeit und die Möglichkeit, die genutzten digitalen Bildbestände entsprechend empirisch gebildeter Kategorien zu systematisieren.

Ein weiteres Anwendungsfeld basiert auf einem mehr ikonographischen Ansatz, wenn es um die engere kunsthistorische Auswertung der dargestellten

Sujets der historischen Fotografien geht. Mögliche Gesichtspunkte wären die Bildsprache, Komposition und Nutzung von Emblemen. Im angeführten Beispiel Richard Peter seniors fällt auf, dass er je nach abgebildetem Stadtraum einen unterschiedlichen Gebrauch von Staffagefiguren machte: Bei Motiven des klassisch barocken Dresden verzichtete er häufig auf Personen, die Stadtfolie der Trümmerberäumung und der Wiederaufbau wurde durchaus plakativ mit zentral platzierten Arbeitern besetzt und die moderne sozialistische Stadt bot den Schauplatz für Familien, junge Menschen und Kinder. Auch im Hinblick auf Kompositionen und symbolisch eingesetzte Mittel wie die Engelsfigur auf dem Rathausturm ist für die kunsthistorische Analyse eine weiterführende Annotationsfunktion am Modell und an den Quellenbildern notwendig.

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Zudem ist die performative Einbindung von Architektur in die Stadtnutzung ein historisch wie kunsthistorisch interessanter Aspekt: Welche Gebäude dienten für Kundgebungen, Wahlauftritte, oder aber für private Anlässe, Hochzeiten, etc. als Fond? Die Fragen an die Wahrnehmung und Wertschätzung, an den Gebrauch und die persönliche Aneignung von Stadt können an der Stelle durchaus noch erweitert werden.

Vor diesem Hintergrund lohnt es sich, an dieser Stelle auf die seit einiger Zeit intensiv geführte Debatte um die Potentiale der sich entwickelnden Digitalität – und des technischen Hinterherhinkens der Kunsthistoriker – zu verweisen.<sup>26</sup> Alle diese Untersuchungsschritte sind methodisch bereits im Kanon der kunsthistorischen Arbeit vorhanden:<sup>27</sup> Sowohl formale und stilscheidende Ansätze als auch inhaltsbetonte, ikonographische, ikonologische, geistesgeschichtliche Methoden kommen hierin zum Tragen. Gerade auf dem Feld der Stadtgeschichte, wo ein räumlich umfangreiches Untersuchungsfeld auf mehrere zeitliche Schichten trifft, bietet sich die Nutzung einer computergestützten Forschungsumgebung und von digitalen Instrumenten an. Die Kunstgeschichte mit ihrer langen Wissenschaftstradition kann diese Frage sehr wohl auch mit analogen Mitteln beantworten, was aber eine umständliche und zeitintensive Arbeit mit sich brächte, oder aber die Untersuchungsgegenstände müssten deutlich in ihrem Umfang beschränkt werden. Daher sollen mit dem Projekt „Urban History 4D“ auch anhand des praktischen Anwendungsbeispiels die Potentiale<sup>28</sup> der neuen Methoden und den angebotenen Hilfestellungen aufgezeigt werden.

Fazit

## Notes

- \* Das Vorhaben „Multimodale Zugänge zu historischen Bildrepositorien zur Unterstützung stadt- und baugeschichtlicher Forschung und Vermittlung“ (FKZ: 01UG1520) wird im Rahmen der Förderung von Forschungs- und Entwicklungsvorhaben aus dem Bereich der eHumanities vom Bundesministerium für Bildung und Forschung gefördert.
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  - 2 Günter Pomaska, “Zur Dokumentation und 3D-Modellierung von Denkmälern mit digitalen fotografischen Verfahren,” in *Von Handaufmass bis High Tech III: Erfassen, modellieren, visualisieren; 3D in der historischen Bauforschung; Interdisziplinäres Kolloquium vom 24.–27. Februar 2010*, ed. Katja Heine (Darmstadt: von Zabern, 2011), 79-84.
  - 3 Theresa Vietze, Danilo Schneider und Ferdinand Maiwald, “Eignung photogrammetrischer Methoden zur Erzeugung von 3D-Punktwolken aus historischen Bilddatenbeständen,” in 37. *Wissenschaftlich-Technische Jahrestagung der DGPF in Würzburg – Publikationen der DGPF*. 26/2017.
  - 4 Yu L. Chang et al., “Apply an Augmented Reality in a Mobile Guidance to Increase Sense of Place for Heritage Places,” *Educational Technology and Society* 18, Nr. 2 (2014): 166-178. Accessed March 2017, [http://www.ifets.info/journals/18\\_2/13.pdf](http://www.ifets.info/journals/18_2/13.pdf).
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  - 6 Krzysztof Walczak, Wojciech Cellary und Andrzej Prinke, “Interactive Presentation of Archaeological Objects Using Virtual and Augmented Reality,” in *On the road to reconstructing the past: Computer Applications and Quantitative Methods in Archaeology (CAA); proceedings of the 36<sup>th</sup> International Conference, April 2 - 6, Budapest 2008.*, ed. Erzsébet Jerem (Budapest: Archaeolingua, 2011), 406-412.
  - 7 Ute Versteegen, “Vom Mehrwert digitaler Simulationen dreidimensionaler Bauten und Objekte in der architekturgeschichtlichen Forschung und Lehre” (Regensburg, 16.03.2007).
  - 8 Hierfür genügt es, ein Beispiel exemplarisch herauszugreifen, so etwa die anhand computergestützter Modelle nachvollzogener Planungsphasen des Dresdner Zwingers. Peter H. Jahn und Dirk Welich, “Zurück in die Zukunft : Die Visualisierung planungs- und baugeschichtlicher Aspekte des Dresdner Zwingers,” *Jahrbuch Staatliche Schlösser, Burgen und Gärten Sachsen* 16 (2009): 51-72.
  - 9 Anna Bentkowska-Kafel, Hugh Denard und Drew Baker, *Paradata and transparency in virtual heritage* (Digital research in the arts and humanities. 2012).
  - 10 Mieke Pfarr-Harfst, “Dokumentationssystem für digitale Rekonstruktionen am Beispiel der Grabanlage Zhaoling, Provinz Shaanxi, China.” Dissertation TU Darmstadt, 2010. Accessed March 2017, <http://tuprints.ulb.tu-darmstadt.de/2302/>.
  - 11 Joan Beaudoin und Jessica Brady, “Finding Visual Information: A Study of Image Resources Used by Archaeologists, Architects, Art Historians, and Artists,” *School of Library and Information Science Faculty Research Publications*, 2011. Accessed March 2017, <http://digitalcommons.wayne.edu/slifrp/104>.
  - 12 Elías López-Romero, “Out of the box: Exploring the 3D modelling potential of ancient image archives,” *Virtual archaeology review* 5, Nr. 10 (2014): 107-116.
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- 17 Matthias Lerm, *Abschied vom alten Dresden: Verluste historischer Bausubstanz nach 1945* (Rostock: Hinstorff, 2000), 132-143 und 184-195.
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- 22 Matthias Lerm, "Denkmale in der Stadt – die Stadt als Denkmal: Dresden als Beispiel," in *Denkmale in der Stadt – die Stadt als Denkmal: Probleme und Chancen für den Stadtumbau*. Hrsg. von Hans-Rudolf Meier, (Stadtentwicklung und Denkmalpflege 1. Dresden: TUDpress, 2006), 41-49.
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New  
data collecting  
methodologies

VISU:  
il sistema informativo  
per lo studio della città  
*Alessandra Ferrighi*

Consciously  
uncontrolled:  
a psychogeographic  
approach to urban  
mapping  
*Nadia Bertolino*  
*Ioanni Delsante*  
*Shirin Haddadian*

Crowdsourcing  
historical information  
in a contested city:  
A Geo-live platform  
to spatialize Rijeka's  
overlapping layers  
and narratives  
*Vanni D'Alessio*  
*Brigitte Le Normand*  
*Jon Corbett*

**VISU:**  
**il sistema informativo**  
**per lo studio**  
**della città\***

Alessandra Ferrighi

Negli ultimi decenni del XX secolo gli storici hanno cominciato a vivere una nuova rivoluzione storiografica legata all'uso del computer e dell'informatica per il loro lavoro di ricercatori.<sup>1</sup> I nuovi strumenti sono presto diventati utili nei percorsi di ricerca e hanno contribuito a costruire e definire una nuova metodologia di analisi e interpretazione delle fonti documentarie.

Oggi giorno fare storia con il digitale significa molte cose. Nessuno storico può oramai sottrarsi all'accesso delle informazioni tramite la rete internet, per la ricerca bibliografica nei siti delle biblioteche del mondo e le ricerche archiviste attraverso la consultazione dei siti istituzionali degli archivi online. All'acquisizione delle riproduzioni dei documenti in formato digitale che gli archivi ormai predispongono, anche a fini conservativi dei preziosi materiali. Alla gestione e all'archiviazione negli hard disk dei computer delle fonti, dei documenti e dei libri digitali emersi dalle ricerche. Infine, alla pubblicazione e alla rapida diffusione dei risultati delle ricerche nelle riviste o nei libri elettronici.<sup>2</sup> Tutto questo ha generato un nuovo contesto entro cui opera lo storico nell'era digitale e, in breve, significa fare storia attraverso il mondo digitale. Vi è però una sostanziale distinzione tra "fare storia con il digitale" e la "storia digitale". La *Storia digitale* è una e vera propria disciplina che ha integrato il metodo tradizionale di fare storia con le tecnologie informatiche, innovando in maniera sostanziale il mestiere dello storico. Si tratta di nuova disciplina che usa la tecnologia informatica per aprire la ricerca verso nuove forme di conoscenza, che è in grado di porre nuovi quesiti, che crea un volano tra domanda e risposta, tra risposta e nuova domanda, arricchendo le forme della ricerca e degli esiti delle stesse.<sup>3</sup>

All'inizio di questa nuova era, con l'applicazione delle nuove tecnologie al metodo tradizionale, si sono poste alcune questioni epistemologiche: ci si è chiesti, ad esempio, se i nuovi prodotti ottenuti nell'era digitale avessero la stessa qualità scientifica di prima. Malgrado le prime resistenze, la rapida evoluzione delle tecnologie e la diffusione tramite la rete internet dei primi risultati raggiunti hanno reso tutto più pervasivo; lo scambio di esperienze tra gli studiosi è diventato così veloce che ha modificato nel giro di qualche anno mentalità e metodi, offrendo modalità innovative legate alla produzione storiografica e alla sua ricezione.

Il sistema informativo che si vuole descrivere in questo breve saggio rientra tra le sfide proposte in questi ultimi anni rispetto a un nuovo modo di fare storia della Città. È l'esito di alcune sperimentazioni cominciate nel 2010 in un progetto di ricerca internazionale, che prende il nome di *Visualizing Venice*, che coniuga la ricerca filologica e l'uso delle nuove tecnologie per lo studio delle trasformazioni della città di Venezia.<sup>4</sup>

Il gruppo di ricerca si è formato intorno a un piccolo nucleo di storici dell'arte e dell'architettura, in seguito coadiuvati da esperti di informatica e di

rappresentazione, che via via nel tempo ha assunto diverse configurazioni in relazione alle attività che venivano proposte anche da interlocutori esterni.<sup>5</sup> In un primo momento, all'interno del gruppo si è discusso su come poter trovare nuovi modi di comunicare la storia della città e come rendere disponibili gli esiti delle ricerche a un pubblico più ampio, non di soli specialisti. Il primo tentativo è stato quello di pensare a nuovi linguaggi attraverso la rappresentazione visiva dei fenomeni, attraverso immagini in movimento e dinamiche, rendendo più facile la comprensione degli eventi e avvicinandosi a un linguaggio più diretto e contemporaneo dell'informazione. Integrando di fatto la parola con l'immagine, coniugando la funzione cognitiva a quella percettiva, si è arrivati a inglobare le due tecnologie di comunicazione attraverso il mondo dei prodotti virtuali.<sup>6</sup> Subito dopo, si è reso necessario trovare un metodo di ricerca che mettesse a sistema le fonti documentarie e che queste, catalogate e riorganizzate, fossero messe a confronto in una sequenza temporale, come può essere fatto in maniera "intelligente" dai software che gestiscono enormi quantità di dati.

La ricerca si è sviluppata nel corso degli anni avvicinando sempre più gli storici della città e dell'architettura all'informatica, testando in diverse occasioni il metodo di ricerca. La prima è stata la realizzazione di una mostra dedicata alla ricerca, allestita nel dicembre del 2012 allo Iuav nello spazio Gino Valle dal titolo *Visualizing Venice. New technologies for urban history* (FIG. 1).<sup>7</sup> I pannelli realizzati per l'allestimento si sono rivelati nella loro concezione così versatili che la stessa mostra ha avuto molte edizioni, tra queste si ricordano quelle di Shenzhen in Cina durante la Bi-City Biennale of Urbanism/Architecture nel dicembre 2013 e di S. Pietroburgo alla European University nel maggio 2014.<sup>8</sup> Oltre ai pannelli sono stati realizzati e allestiti quattro modelli prototipati in gesso, di alcuni ambienti urbani in due fasi storiche precise;<sup>9</sup> due video sulle trasformazioni urbane e alcuni multimedia consultabili tramite iPad con interviste a studiosi e componenti del gruppo di ricerca sul rapporto tra la storia e l'uso delle nuove tecnologie. La mostra era organizzata in otto sezioni, una per ogni area studio. In ciascuna di queste vi era una doppia lettura a confronto: da un lato i documenti, dall'altro l'interpretazione attraverso la rappresentazione degli stessi (FIG. 2), tenuti insieme da una timeline che scandiva il tempo delle trasformazioni.

Altre occasioni, come i convegni dell'Associazione Italiana di Storia Urbana (AISU), dell'European Association for Urban History (EAHU) e del Centro Interdipartimentale di Ricerca sull'Iconografia della Città Europea (CIRICE), solo per citarne alcuni, hanno contribuito al confronto con altri ricercatori e alla diffusione della metodologia innovativa che si stava mettendo a punto del fare ricerca storica grazie all'uso delle nuove tecnologie. Anche

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FIGURA 1

Donatella Calabi e Alessandra Ferrighi durante la conferenza stampa di apertura della mostra *Visualizing Venice. New technologies for urban history* inaugurata il 4 dicembre 2012 a Venezia.



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FIGURA 2

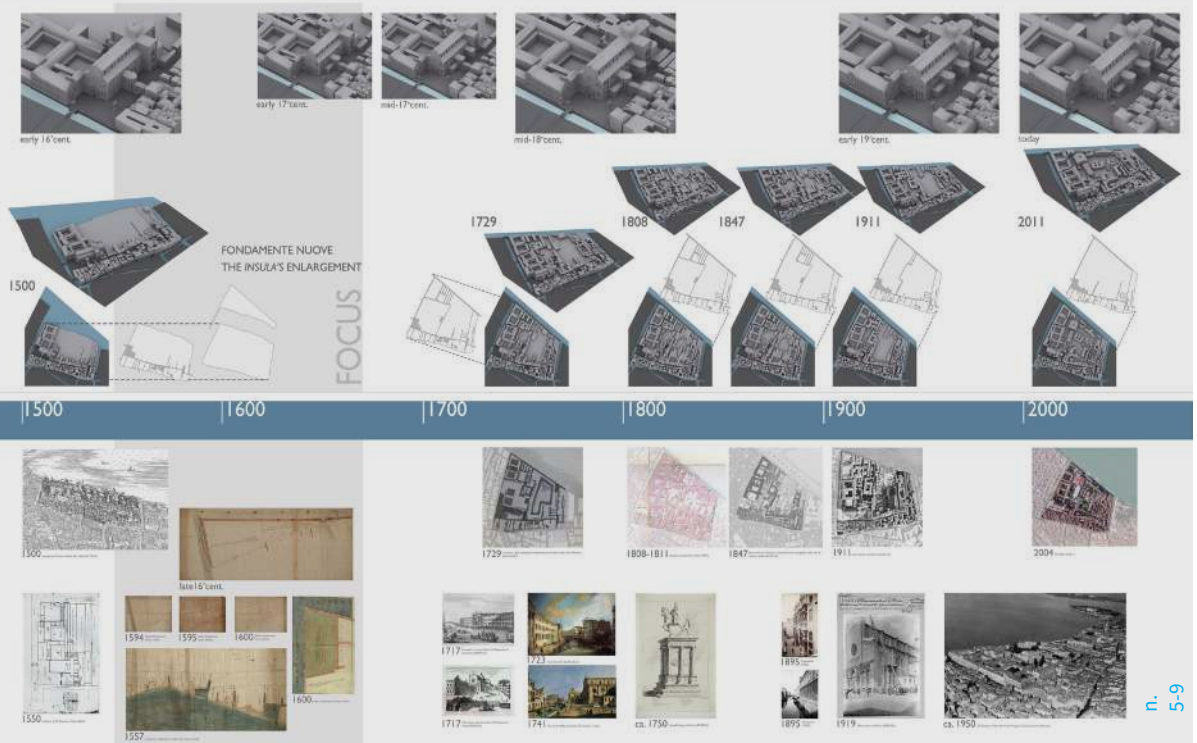
Uno dei pannelli della mostra del Caniere SS. Giovanni e Paolo. The *insula* of Zanipolo, the first case study.

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VISU: il sistema informativo per lo studio della Città

# SS. GIOVANNI E PAOLO

The *insula* of Zanipolo, the first case study



n. 5-9

### Venice: case study

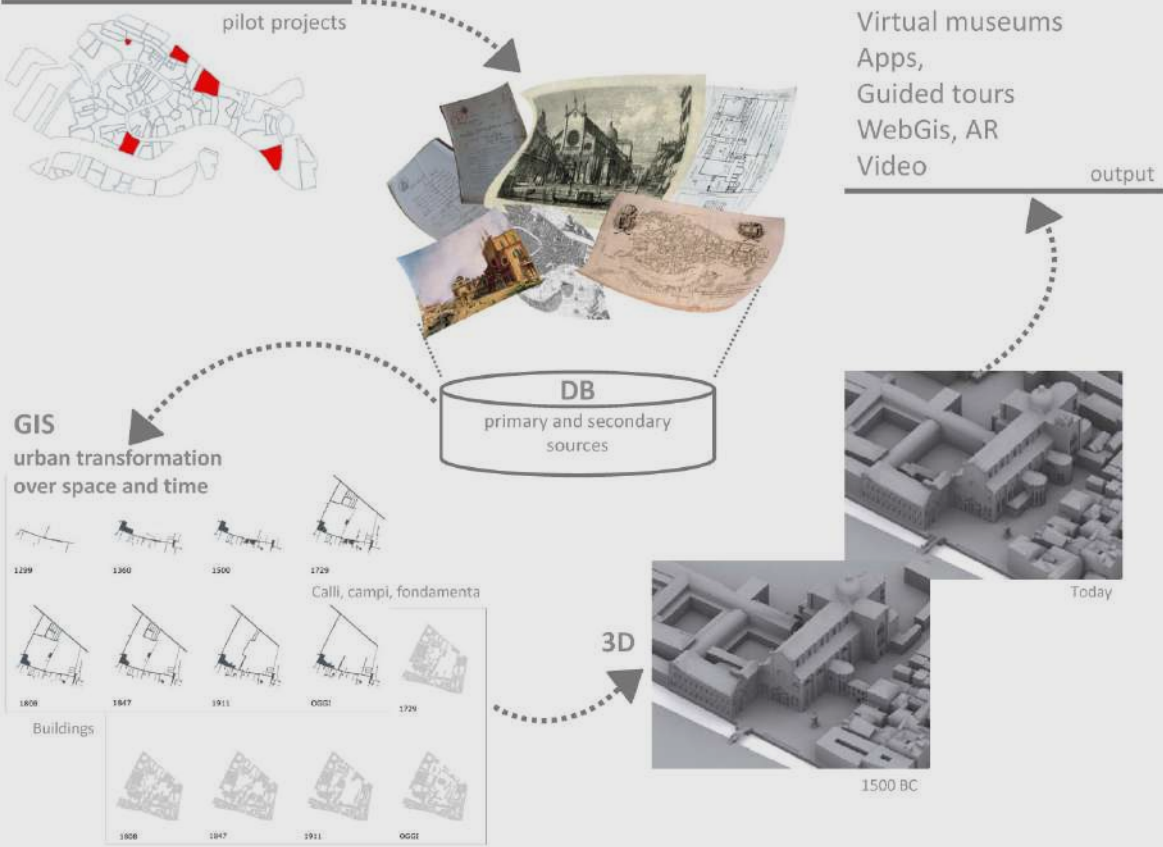


FIGURA 3  
Schema della metodologia  
di ricerca Visualizing Venice.

i workshop estivi di *Visualizing Venice*, organizzati alla Venice International University VIU di Venezia dal 2012, hanno disseminato idee e procedure per fare storia in modo innovativo.<sup>10</sup>

La metodologia di ricerca di *Visualizing Venice* è andata affinandosi negli anni, migliorando e perfezionando di volta in volta le tecnologie software adottate.<sup>11</sup> Per sperimentare il metodo sono state scelte alcune aree studio della città di Venezia (i “cantieri”, così definiti dal gruppo di ricerca) e a queste è stato applicato il metodo di studio e di analisi. Nella metodologia di ricerca sono state definite alcune fasi che hanno visto: 1) la **raccolta dei dati** tramite la costruzione di una banca dati alfanumerica (Database – DB) per le fonti documentarie e la realizzazione di una banca dati geografica (GeoDB), un Historical GIS (Geographical Information System) come base per lo studio delle trasformazioni; 2) l'**analisi critica** dei dati raccolti finalizzata alla conoscenza e rappresentazione delle trasformazioni, grazie alla produzione di immagini che potessero restituire in pianta, in alzato o tridimensionalmente gli stessi cambiamenti nel tempo e nello spazio; 3) la **comunicazione e la disseminazione** dei risultati delle ricerche legate alla storia urbana delle aree campione che è avvenuta tramite *storytelling* create *ad hoc* e rese disponibili attraverso brevi video.

Se scendiamo più nel dettaglio e descriviamo ogni singola componente, arriviamo a una figurazione dell'insieme della metodologia (FIG. 3).

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La banca dati alfanumerica (Database – DB) è stata pensata per raccogliere le fonti documentarie testuali e iconografiche necessarie alla comprensione dei fenomeni storici dei luoghi scelti come casi studio, sia alla scala urbana che architettonica. Il DB, finalizzato alla raccolta mirata delle fonti, è stato costruito pensando all'informatizzazione e archiviazione delle stesse, mettendo in evidenza tutte le trasformazioni urbane, come la realizzazione di una nuova strada (calle, fondamenta, campo), l'apertura o interrimento di un canale, la sopraelevazione o ampliamento di un edificio.<sup>12</sup> Per questa ragione è stato proposto un elenco precompilato nelle maschere d'inserimento dell'applicativo web al fine descrivere in modo univoco la tipologia d'intervento contenuta nella fonte (costruzione, demolizione, interrimento, ecc.). Ogni singolo ricercatore ha avuto la possibilità di entrare nella banca dati tramite l'applicativo in rete, loggarsi, vedere le maschere per l'implementazione dei dati e compilare i record sulle fonti relative al “cantiere” su cui stava lavorando. Il sistema è stato predisposto al fine di avere diverse modalità di accesso in modo tale che ogni ricercatore potesse vedere il lavoro degli altri senza però modificarlo. La tecnologia utilizzata è stata Microsoft SQL Server per la realizzazione della banca dati online, che ha al suo interno diverse tabelle relazionate, come quella principale sulle fonti archivistiche, altre sugli archivi e la bibliografia.



## Entity GeoDB

## Buildings

**EN\_BuildingComplex**

-ID\_EN\_BuildingComplex: Integer  
 +Shape  
 +Layer: Char  
 +Specie: Char  
 +Denominazione: Char  
 +Start: Date  
 +End: Date

**EN\_Building**

-ID\_EN\_Buildings: Integer  
 +Shape  
 +Layer: Date  
 +Specie: Char  
 +Denominazione: Char  
 +Start: Date  
 +End: Date

**EN\_BuildingUnit**

-ID\_EN\_BuildingUnit  
 -Shape  
 -UV\_QGronda: Integer  
 -UV\_QColmo: Integer  
 -Start: Date  
 -End: Date

1

\*

1

\*

\*

**EN\_Perimeter**

-ID\_EN\_Perimeter: Integer  
 +Shape  
 +Layer: Char  
 +Specie: Char  
 +Denominazione: Char  
 +Start: Date  
 +End: Date

1

\*

## Islands/Waterways/Ways

**EN\_Island**

-ID\_EN\_Island: Integer  
 -Shape  
 +Layer: Char  
 +Numero: Char  
 +Denominazione: Date  
 +Start: Date  
 +End: Date

**EN\_Way**

-ID\_EN\_Walkway: Integer  
 +Shape  
 +Layer: Char  
 +Specie: Char  
 +Denominazione: Char  
 +Start: Date  
 +End: Date

**EN\_Waterway**

-ID\_EN\_Waterway: Integer  
 -Shape  
 +Layer: Char  
 +Specie: Char  
 +Denominazione: Char  
 +Start: Date  
 +End: Date

## Regions

**EN\_Province**

-ID\_EN\_Provincia: Integer  
 -Shape  
 +Layer: Char  
 +Codlstat: Char  
 +DenominazioneProvincia: Char  
 +SiglaProvincia: Char

1

\*

**EN\_ComuniPerimeter**

-ID\_EN\_ComunePerimeter  
 Integer  
 +Shape  
 +Layer: Char  
 +Codlstat: Char  
 +DenominazioneComune: Char  
 +Provincia: Char

1

\*

**EN\_Cities**

-ID\_EN\_City: Integer  
 +Shape  
 +Layer: Char  
 +NameCity: Char

1

\*

1

1

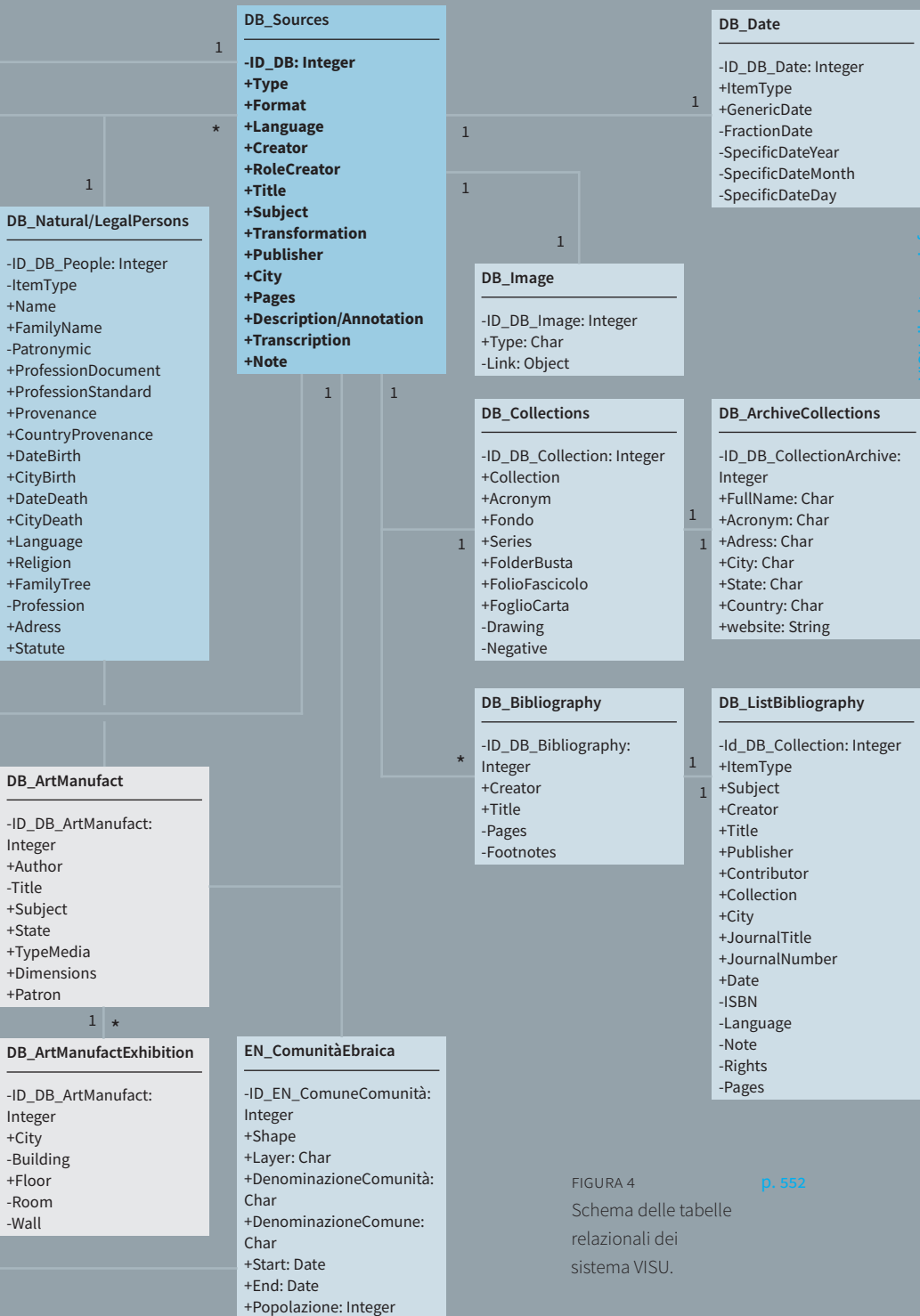
**EN\_CentriStorici**

-ID\_EN\_CentriStorici: Integer  
 +Shape  
 +Layer: Char  
 +Codlstat: Char  
 +DenominazioneComune: Char  
 +Località: Char  
 +Provincia: Char

**EN\_CanalsRivers**

-ID\_EN\_Canals: Integer  
 +Shape  
 +Layer  
 +Tipo: Char  
 +Denominazione: Char

Sources



VISU: il sistema informativo per lo studio della Città

FIGURA 4 [p. 552](#)  
 Schema delle tabelle relazionali del sistema VISU.

Il GeoDB è stato costruito a partire dalla cartografia digitale dello stato attuale, attraverso il quale si è implementato l'HGIS, il sistema geografico che ha consentito la gestione dei dati spaziali, sia qualitativi che quantitativi, sulle trasformazioni nel tempo e nello spazio. La banca dati geografica è stata costruita su dati esistenti, derivanti dalla cartografia attuale della città di Venezia, come detto, e realizzata grazie al software ArcGIS di Esri<sup>13</sup> in dotazione all'Università Iuav di Venezia. Per costruire il GeoDB sono stati selezionati, tra i molti disponibili nell'Infrastruttura di dati Territoriali di Base (ITB),<sup>14</sup> solo gli strati relativi agli edifici, alle unità di volume, alle strade, ai corsi d'acqua, a canali e isole, ovvero sono stati individuati tutti quegli strati attraverso i quali è stato possibile tracciare i cambiamenti delle entità geografiche e localizzare le informazioni provenienti dal DB alfanumerico. Con i layer, opportunamente selezionati, si è costruito il GeoDB contenente le entità geografiche, reso disponibile tramite il servizio server di ArcGIS e dialogante con la banca dati alfanumerica sulle fonti documentarie (DB). Nel GeoDB sono stati modificati e perfezionati gli attributi delle diverse tabelle; sono stati creati due nuovi attributi relativi alla datazione, *start* (da compilare quando è cominciata una certa azione, come ad esempio l'apertura di una calle) ed *end* (quando è terminata l'esistenza della stessa calle oppure sono subentrate alcune trasformazioni, come la riapertura di un canale al posto della calle). I due nuovi attributi aggiungono la cosiddetta quarta dimensione al GeoDB, ovvero la dimensione temporale che traccia, layer su layer e oggetto dopo oggetto le trasformazioni, datandole attraverso le informazioni che derivano dalle fonti documentarie. Tale caratteristica distingue questo particolare GeoDB da tutte le altre banche dati geografiche perché, aggiungendo la dimensione temporale, si possono visualizzare le trasformazioni nel tempo (FIG. 4).

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Nelle due basi di dati, alfanumeriche e geografiche, finalizzate alla raccolta dei dati, le tabelle relazionali sono costituite da campi che individuano le categorie di informazioni contenute nelle fonti. Grazie all'intreccio delle informazioni e al lavoro continuo tra l'implementazione nel DB e l'editing nel GeoDB si sono ottenute le mappe tematiche sulle trasformazioni e nello stesso tempo le relazioni tra fonti documentarie e luoghi delle trasformazioni.

Le fonti cartografiche storiche sono state georeferenziate e ridisegnate andando a ritroso nel tempo (dall'oggi alla fase più antica), sempre con gli strumenti di ArcGIS, con ArcMap in particolare. Queste nuove carte sono state integrate con dati provenienti dalle fonti documentarie (DB) e sono state utilizzate per ridisegnare e definire le trasformazioni. In questo modo è stato possibile ricostruire le entità della morfologia della città (edifici, strade, canali, insulae) nel tempo, tali da divenire la base cartografica digitale in 2D per la ricostruzione tridimensionale dei luoghi urbani, al fine di creare dei modelli 3D alle diverse scale.

In particolare, per ottenere le trasformazioni in pianta (2D) nel tempo, sono state scelte alcune carte storiche a varie scale di rappresentazione della città. Venezia possiede un *corpus* di carte manoscritte o stampate di notevole ricchezza e precisione, che riproducono gli oggetti rappresentati trasmettendo l'immagine della città a cominciare dalla veduta di Jacopo de' Barbari pubblicata nel 1500 fino ad arrivare ai catasti storici ottocenteschi e alla ripresa fotografica del 1911 da pallone aerostatico.<sup>15</sup> Il lavoro di ridisegno delle *Insulae* nel tempo è avvenuto a ritroso, come già detto, a cominciare dalla fonte cartografica più vicina a noi. La carta di base derivante dall'ITB (nel tempo  $T^n$ ) è stata "integrata" comparandola con la carta della fase precedente dopo aver ottenuto una sovrapposizione ritenuta soddisfacente tra le due carte, grazie alla georeferenziazione della carta storica. Da questo primo confronto si è ottenuta una pianta dell'Isola, con tutti gli oggetti geografici contenuti nel GeoDB, coerente con la fase della carta storica: ovvero una pianta digitale di quella fase (nel tempo  $T^{n-1}$ ). Questa nuova carta è stata utilizzata per realizzare la sua fase precedente, e così via fino all'ultima fase che per la città di Venezia corrisponde quasi sempre con la veduta di Jacopo de' Barbari, già citata.<sup>16</sup>

A titolo d'esempio, si descrive il lavoro svolto per definire la configurazione del Ghetto di Venezia<sup>17</sup> prima dell'apertura delle porte dello stesso Ghetto avvenuta per decreto napoleonico nel 1797.<sup>18</sup> L'area dove si era sviluppato il Ghetto, nel suo insieme di Nuovo, Vecchio e Nuovissimo, è stata profondamente modificata nel corso degli ultimi due secoli, in particolare durante l'Ottocento per diverse ragioni. Volendo restituire l'immagine del Ghetto nella sua massima espansione e visualizzare la configurazione in pianta e in alzato è stata seguita e adottata la stessa metodologia di ricerca. Sono stati selezionati i catasti storici ottocenteschi e, ridisegnando a ritroso, si è arrivati con precisione alla pianta corrispondente al catasto napoleonico che è sostanzialmente coincidente con quella del 1797. Questa ha messo in evidenza, rispetto all'oggi, il recinto di edifici porticati che si affacciavano nel Ghetto nuovo e tante altre modifiche, come le calli del Ghetto vecchio che sono state aperte o chiuse (FIG. 5).

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La struttura dei dati così organizzata ha consentito di mettere in relazione le entità del DB e quelle del GeoDB. Durante il processo si è trattato di compiere continui passaggi da una banca dati all'altra. Quando una fonte documenta un evento – ad esempio, un edificio modificato dopo la demolizione di un portico su strada, – si devono compilare i record relativi a quell'evento nel DB e andare a modificare in pianta gli oggetti geografici coinvolti nel GeoDB, compresi i layer geograficamente contigui, come gli spazi aperti, le strade, ecc., collegando tutti i dati.

1808

p. 553



1838



1867



FIGURA 5  
Piante del  
Ghetto di Venezia,  
con l'edificato e le calli  
corrispondenti alle fasi  
dei tre catasti  
ottocenteschi.

L'integrazione di più strumenti digitali (DB, HGIS, modellazione 3D) ha consentito di raccogliere e analizzare più efficacemente le tracce della storia. Ogni volta che si opera disegnando una linea per restituire un'immagine reinterpretata del passato, ci costringiamo a ragionare intorno a molti problemi. Tra i primi la verifica dell'obiettività e dell'esattezza delle fonti cartografiche che disposte virtualmente, per sovrapposizione una sopra all'altra, dopo la georeferenziazione, consente un'efficace lettura comparata delle fasi temporali; l'integrazione tra le fonti cartografiche e quelle documentarie che offrono una datazione più circostanziata e precisa delle trasformazioni, consentendo un approccio migliore dei processi storici nel tempo.

Il sistema VISU, brevemente descritto, non serve solo per fare storia nell'era digitale, per misurarsi da storici con il passato attraverso gli strumenti tecnologici, ma anche per trovare nuove forme di comunicazione che siano maggiormente efficaci ed esaustive, facilmente accessibili anche ai non esperti. Quello che sta avvenendo ancor più nell'era digitale è che le discipline si sono integrate tra loro e le competenze degli storici si sono evolute, si sono adottati nuovi strumenti, ma soprattutto è cambiato il linguaggio della comunicazione e il modo di comunicare. È sempre più frequente il ricorso a modelli tridimensionali, prototipati o virtuali, all'interazione tra questi e le informazioni testuali, audio o video che guidano chi osserva nell'assimilazione dei processi della storia e del passato. Ciò che è lontano nel tempo non muta, ma ciò che può cambiare è la conoscenza che può trasformarsi e perfezionarsi alla luce dei nuovi metodi storiografici che avanzano.

Tra gli obiettivi della ricerca VV vi erano la creazione di nuovi strumenti d'indagine, di conoscenza e di comunicazione delle trasformazioni urbane della città di Venezia. Quello che si voleva realizzare era la possibilità di indagare con maggiore facilità i fenomeni legati alla storia urbana tramite l'uso di un sistema informativo, che legasse lo spazio e il tempo, le due entità imprescindibili che fanno la storia.

\* Questo articolo è stato scritto per il progetto *Dubrovnik: Civitas et Acta Consiliorum. Visualizing Development of the Late Medieval Urban Fabric* (DUCAC-UIP-11-2013-9492), finanziato dalla Croatian Science Foundation, offrendo una metodologia comparativa per lo studio della città, sviluppata nel progetto *Visualizing Venice*.

- 1 La prima rivoluzione storiografica è legata agli storici francesi Lucien Febvre e Marc Bloch che hanno fondato nel 1929 la rivista *Annales d'histoire économique et sociale*, cfr. Peter Burke, *Una rivoluzione storiografica* (Bari: Laterza, 1992).
- 2 Tra le prime riviste online si cita *Cromohs - Cyber Review of Modern Historiography* dell'Università degli Studi di Firenze,

Note

- ultimo accesso Marzo 22, 2017. <http://www.fupress.net/index.php/cromohs/index> e la rivista *DigitCult - Scientific Journal on Digital Cultures*, nata nel 2016, ultimo accesso Marzo 31, 2017. <http://digitcult.lim.di.unimi.it/index.php/dc/index>.
- 3 Cfr. Serge Noiret, *Storia digitale o storia con il digitale?* Ultimo accesso Marzo 22, 2017. <https://dph.hypotheses.org/448>.
  - 4 Il progetto di ricerca *Visualizing Venice* ([www.visualizingvenice.org](http://www.visualizingvenice.org)) è nato da un'idea di Caroline Bruzelius (Duke University, NC-USA) e Donatella Calabi (Università Iuav di Venezia, Italy).
  - 5 A titolo d'esempio si cita lo studio dell'area della Carità nell'isola omonima che è stato sollecitato dalla Soprintendente Arch. Renata Codello al fine di realizzare un video sulla storia urbana di quell'area urbana, da allestire in un videowall all'interno delle Gallerie dell'Accademia.
  - 6 Cfr. Francesco Antinucci, *Parola e immagine. Storia di due tecnologie* (Roma-Bari: Laterza 2011).
  - 7 Cfr. Alessandra Ferrighi, ed., "Visualizing Venice. New technologies for urban history," *Giornale Iuav* 123 (2012), ultimo accesso Marzo 22, 2017. <http://www.iuav.it/Ateneo1/chi-siamo/pubblicazi1/Catalogo-G/pdf-giorna/Giornale-Iuav-123.pdf>
  - 8 Vedi il link Events / Exhibitions nel sito della ricerca *Visualizing Venice*, [www.visualizingvenice.org](http://www.visualizingvenice.org), ultimo accesso Marzo 22, 2017. [http://www.visualizingvenice.org/visu/?page\\_id=1256](http://www.visualizingvenice.org/visu/?page_id=1256).
  - 9 I modelli prototipati erano relativi alle aree urbane del campo dei SS. Giovanni e Paolo nelle fasi dell'inizio del Cinquecento e dell'Ottocento e della chiesa e scuola grande di S. Maria della Carità nel Settecento e della fase attuale.
  - 10 La VIU si trova a Venezia nell'isola di S. Servolo, ultimo accesso Marzo 31, 2017. <http://www.univiu.org/>. Ha partecipato all'edizione del workshop 2013 anche la dottoressa Ana Plosnić Škarić, principal investigator del progetto di ricerca *Dubrovnik: Civitas et Acta Consiliorum - DUCAC*.
  - 11 Cfr. Alessandra Ferrighi, "Cities over Space and Time: Historical GIS for Urban History," in *Handbook of Research on Emerging Digital Tools for Architectural Surveying, Modeling, and Representation*, ed. Stefano Brusaporci (Hershey: IGI Global, 2015), 425-445.
  - 12 Cfr. Alessandra Ferrighi, "VISU. Il sistema informativo integrato sulle trasformazioni urbane di Venezia," *Geomedia* 3/XX (2016), 44-49.
  - 13 È stato utilizzato ArcGIS for desktop, cfr: <http://www.esri.com>.
  - 14 La carta tecnica di Venezia, definita Infrastruttura di dati Territoriali di Base (ITB), è stata realizzata dal sistema informativo dell'Amministrazione comunale e resa disponibile per la ricerca *Visualizing Venice*.
  - 15 Cfr. Ennio Concina, Italo Pavanello, and Egle Trincanato, *I Catasti storici di Venezia: 1808-1913* (Roma: Officina 1981); Susanna Biadene, and Camillo Tonini, ed. *A volo d'uccello: Jacopo de' Barbari e le rappresentazioni di città nell'Europa del Rinascimento* (Venezia: Arsenale 1999).
  - 16 Alessandra Ferrighi, "VISU. Il sistema informativo integrato sulle trasformazioni urbane di Venezia," *Geomedia* 3/XX (2016): 44-49.
  - 17 La mostra *Venezia, gli Ebrei e l'Europa 1561-2016*, curata da Donatella Calabi, tenutasi a Palazzo Ducale dal 19 giugno al 13 novembre 2016, è stata l'occasione per riprendere alcuni studi sul logo fisico di Venezia dove gli Ebrei furono obbligati a vivere confinati. Alla sottoscritta è stato attribuito il compito di produrre un video sul tema de *Il Ghetto dopo il Ghetto*, descrivendo ciò che era avvenuto in quel contesto urbano dopo l'apertura delle porte, che è stato allestito nella sezione della mostra: *Napoleone, l'apertura delle porte e l'assimilazione*.

18 Il decreto è del 7 luglio 1797 (19 Messidor) al cui titolo V si legge il seguente testo: “V. Le porte del Ghetto dovranno prontamente

essere levate, onde non apparisca una separazione tra essi, e gli altri Cittadini di questa città”.

557

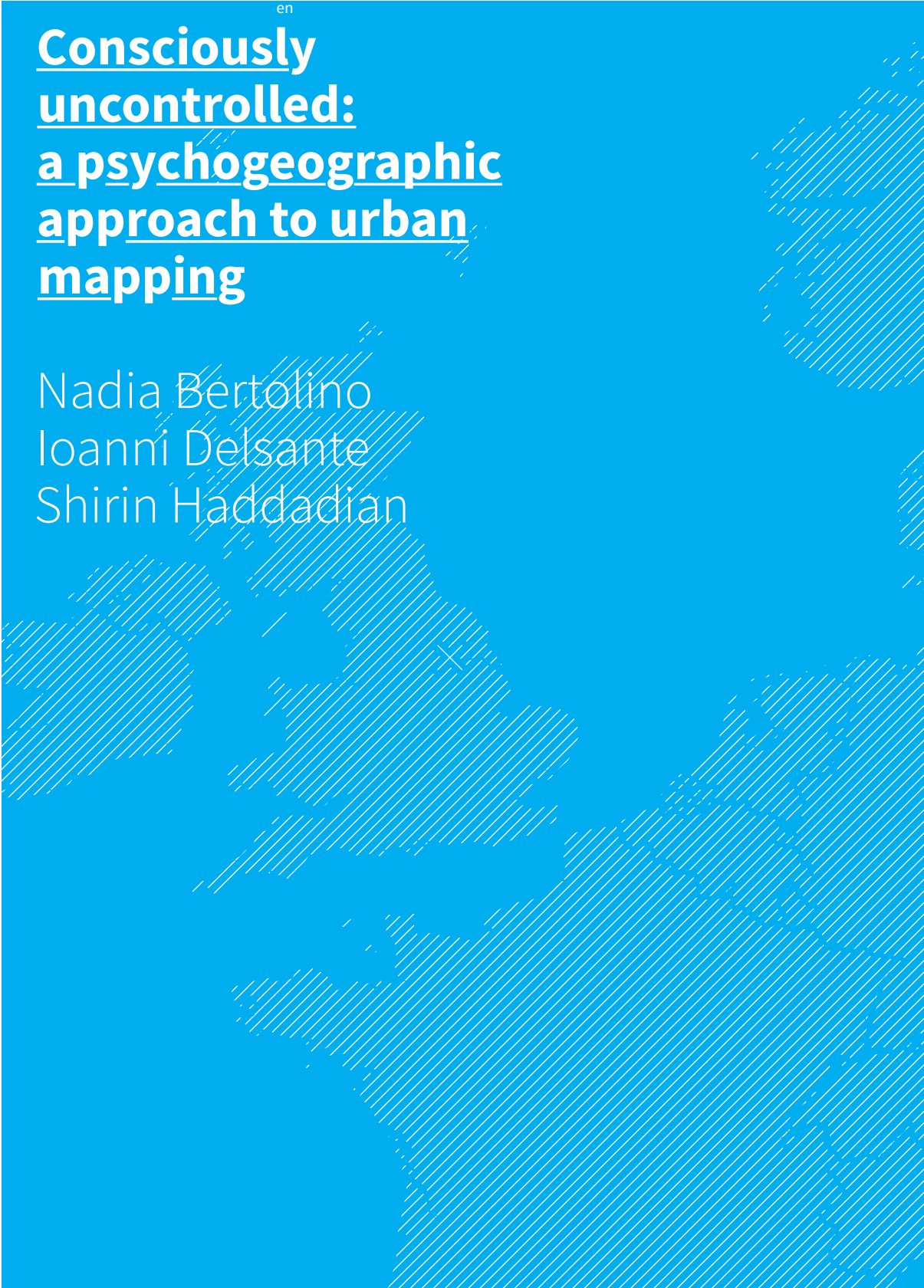
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# Consciously uncontrolled: a psychogeographic approach to urban mapping

Nadia Bertolino  
Ioanni Delsante  
Shirin Haddadian



This chapter focuses on the potentialities of mapping urban spaces through the *consciously uncontrolled* action of walking, observing, recording a place which is unknown. In particular, we first introduce a reflection about a particular technique developed by some postgraduate students at Sheffield School of Architecture<sup>1</sup> in 2015/2016 to interpret Debord's theory of *dérive* as a qualitative tool for mapping the "unexpected" within the post-industrial neighbourhood of Holbeck, in Leeds. In particular, the mapping technique developed by Haddadian and Yang as a critical application of Debord's theory onto a real case study is discussed: how can we use our body as a recording device and what is the value of such experience to map the urban space? The chapter will finally introduce a reflection on the possibilities and challenges to use the data collected through this method to shape the design thinking.

As a necessary premise, we first aim to clarify what is our understanding of *mapping* and what is the theoretical framework which suggests to define it as a creative agency. Mapping is here intended in opposition to the action of "tracing": "the map does not reproduce an unconscious closed in upon itself ... it fosters a connection between fields".<sup>2</sup> Thus, we assume that the agency of mapping can be an interpretative tool for the situations of daily life: it follows that it is "a way of re-presenting those situations, (...) of communicating a plot, of revealing a situation".<sup>3</sup> In fact, the purpose of narrating urban "situations" through mapping puts forward the question about "what" and "how" to map, fostering the reflection on the interdisciplinary nature of mapping agency. Taking for granted that the urban cannot be narrated only through the visualisation of its spatial features, the methodology discussed here aims at integrating environmental and socio-cultural data, as seen and perceived by the observer. In so doing, we tended to "operate horizontally – surveying a field, examining the fissures and boundaries, the folds and overlaps, the tears and rips, the points where disciplines fall apart and come together".<sup>4</sup> Our hypothesis is that critically reading Debord's theory and translating it into an original, yet non-literal, methodology to map the urban space allow "to reveal and realise hidden potential"<sup>5</sup> of the place we investigate.

The original technique of mapping of Holbeck can tell a different spatial story, enabling the narration from multiple perspectives. Thus, we eventually aim to define a sense of the place, its atmosphere and relations through the exploration of "another spatiality which defies the codes of architectural tools, and another textuality within the discourse about architectural space".<sup>6</sup> The drifting-inspired mapping technique allowed then to record not only the fixed architectural and urban elements related to the character of the

**Mapping as a creative agency: theoretical framework**

Consciously uncontrolled:  
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physical space, but also those elements that determine considerably the atmosphere of the place and its transformation process over time. Seminal studies in Urban Geography<sup>7</sup> suggest the value of walking through the city as a research method. In particular, walking for urban research can be defined as “a self-conscious, reflective project of wandering around to better understand an area’s physical context, social context, and the spatial practices of its residents”.<sup>8</sup> Lefebvre offered an extensive call for a study of urban rhythms which included those of walking as a practice to understand space and time towards the comprehension of everyday life.<sup>9</sup> Moles, for example, reflecting on her research on a public park, argued that walking as method “allowed me to really connect with the park; it allowed me to spend long amounts of time getting to know my research subject”.<sup>10</sup> Drawing on these premises, this chapter questions what happens when the action of walking becomes *consciously uncontrolled*, where the term “consciously” refers to the preparatory studies<sup>11</sup> done before the urban exploration and “uncontrolled” refers to the action of walking through an unknown place, with no site maps nor destinations. Secondly, we reflect on how the data gathered through this method can be mapped, questioning what might be the most appropriate mode of visualisation able to narrate the complexity of the urban scene.

**Unveiling hidden meanings: a dèrive-inspired fieldwork exercise**

Walking as urban data collection method has a long history in scholarship. The *flâneur* is first described by Baudelaire as an individual wandering the urban crowd with no destination, nor purposes: *La foule est son domaine, comme l’air est celui de l’oiseau, comme l’eau celui du poisson. Sa passion et sa profession, c’est d’épouser la foule. Pour le parfait flâneur, pour l’observateur passionné, c’est une immense jouissance que d’élire domicile dans le nombre, dans l’ondoyant dans le mouvement, dans le fugitif et l’infini*.<sup>12</sup> Benjamin describes *flâneurie* as an open-ended, curiosity-driven process through which “true” patterns of human behaviours are observed and understood over time.<sup>13</sup> Furthermore, according to Benjamin, being able to lost themselves in the city “requires some schooling”,<sup>14</sup> and he continues that: “Street names must speak to the urban wanderer like the snapping of dry twigs, and little streets in the heart of the city must reflect the times of day, for him, as clearly as a mountain valley”.<sup>15</sup> Interestingly, this emphasises that the process of discovering the urban space, as a synthesis of geographical and social facts, “comes from being in, but not of, social interactions”.<sup>16</sup> Although the archetype figure of the *flâneur* was introduced and became iconic in the 19th century, it was the work of the Situationists in the late ‘50s which enabled walking as a means of radical engagement with the urban.

Guy Debord's theory, first presented on *Internationale Situationniste* in 1958, suggests the *dérive* as "a mode of experimental behaviour linked to the conditions of urban society: a technique of rapid passage through varied ambiances".<sup>17</sup> It is an unplanned exploration through the urban landscape, in which participants let their everyday relation fall and allow themselves to "be drawn by the attractions of the terrain and the encounters they find there".<sup>18</sup> Although solo *dérives* are possible, Debord suggests that the best numerical arrangement consists of several small groups of two or three people with the same level of awareness. The dialogue across different groups allows sharing impressions, decreasing the degree of subjectivity towards more objective conclusions. Debord provides also recommendations on the average duration of each urban exploration, considering one day as the typical time for it,<sup>19</sup> while the starting and ending time are not seen as relevant factors determining the success of the experience. It follows that the *dérive* was to be more than just wandering: "it was a combination of chance and planning, an 'organised spontaneity', designed to reveal some deeper reality to the city and urban life".<sup>20</sup> The spatial field might be precisely delimited or vague "depending on whether the goal is to study a terrain or to emotionally disorient oneself" by moving to unfamiliar terrain. The spatial field might be a city, a neighbourhood or even a single building. One might explore a fixed spatial field, or one could start from a "possible rendezvous" (when the aim was disorientation rather than exploration), engaging strangers in conversation and creating various "situations" throughout the exploration. Debord gives some typical examples, such as going quietly into houses undergoing demolition, getting a ride in a transport strike without a destination, wandering in spaces forbidden to the public etc. The *dérive* is thus seen as a "kind of elaborate game, but one that leads to a radical reading of the city".<sup>21</sup> It follows that such radicalization of the urban is strictly related to the search of alternative ways to effectively visualise such experiences, where old maps and aerial photographs can only work as a support for a different kind of representation. The new urban maps, drawing on a different way to look at the city, will be characterised by "inevitable imprecision" which, according to Debord, "is no worse than that of the earliest navigational charts. The only difference is that it is no longer a matter of precisely delineating stable continents, but of changing architecture and urbanism".<sup>22</sup> The new urban cartography derives from "the subsequent 'mapping' of an un-routed route which, like primitive cartography, reveals not so much randomness and chance as spatial intentionality".<sup>23</sup> As noted by Jenks and Neves, the urban seen through the lenses of psychogeography takes on the characteristics of a map of the mind.

In an attempt to relate urban theory and mapping methods, a fieldwork exercise has been conducted in Holbeck (Leeds) with MA students in Architectural Design at Sheffield School of Architecture. More specifically, it focuses on experiments with Debord's theory as a tool of critical urban exploration and mapping. Organised in small groups, their practices included first a subjective interpretation of the theory of the *dérive* and secondly the activity of walking through the city as a means of exploration and consciousness-raising with the intent to look at, record and map urban places from an alternative perspective. Translating Debord's theory into fieldwork practices for students arises many interesting challenges. The key principle here is that "students are fully involved in the process of critically examining alternatives and working up practical possibilities themselves".<sup>24</sup> This relates closely to the possibility to unveil hidden meanings of the place, and consequently to map those spaces, aspects and atmospheres which are not typically represented (nor recorded). In Debord's words: "The sudden change of ambiance in a street within the space of a few metres; the evident division of a city into a few zones of distinct psychic atmospheres; the path of least resistance which is automatically followed in aimless strolls (and which has no relation to the physical contour of the ground); the appealing or repelling character of certain places; all this seems to be neglected".<sup>25</sup>

### **Holbeck transformation and urban form**

Holbeck is placed on the south side of Leeds city centre and river Aire, and its urban history matches with specific features in terms of urban form, so supporting an interpretation of its urbanisation through four main phases. Historically composed by a small village well separated from the town centre (phase one, the historic village), from the 18th century a process of urbanisation took place due to very rapid industrialisation. The development continued till the first decades of the 20th centuries, even if various changes in terms of factory specialisation and land uses took place (phase two, rapid urbanisation). Heavy industry and high density contributed to the development of various issues, especially in terms of public health and social sustainability. From the 1930s "slums clearance" took place, leaving many areas unbuilt (phase three, urban decay). After the Second World War, the decline of heavy industries and a progressive process of de-industrialisation took place, accompanied by a huge decrease in its population. Even if some of the former industrial buildings and warehouses were reused for small scale manufacturings such as printing and pottery, many others were abandoned: Holbeck, the area to which the city owed its reputation for almost a century, was described as "wasteland".<sup>26</sup> Subsequently, in 1999, Leeds City Council entitled to part of Holbeck as "Holbeck Urban Village" (HUV) and produced a planning framework

setting out the visions and broad planning intentions for the area (phase four, urban regeneration). Some masterplans were designed (e.g. Urbed on Marshall's Mills) providing heritage conservation, mixed uses and some focus on public realm and permeability. Meanwhile, the northeastern part of Holbeck was designated as conservation area (2005) in order to safeguard and enhance the industrial heritage that had fallen to decay or disrepair. Envisaged as a "strategic housing and mixed-use site",<sup>27</sup> HUV is nowadays home to engineering and creative businesses, bars, cafes, restaurants and residential complexes, even if some criticism has been raised in terms of affordability and social cohesion. Following the 2008 financial crisis and the lack of any new development in the last 8 years, Leeds City Council in 2016 published a Supplementary Planning Document that provides a more integrated overview of Holbeck, its landmarks and industrial heritage together with potential areas of development.

An urban morphology analysis, delivered through a timeline provided by the availability of historical maps, shows phases and features of the urbanisation process in Holbeck. The 1837 and 1851 maps witness the presence of two settlements, the historical village on the west of the railway track, and the newly development industrial site (e.g. Temple Works) on the east (corresponding to phase one, and early phase two). The construction of the railway infrastructure largely influenced the urbanisation process, due to the presence of the river (e.g. height), the closeness of Leeds main train station and also by the opportunity of providing direct access to large factories estates. Anyway, the increasing densification of the area is consistently shown through maps till 1910, where large housing estates surround the industrial factories (phase two). High density is also witnessed by housing typologies like "back to back" terraced houses largely built on the area and around factories (e.g. Derwent Street). Even if the urban morphology shows a lack of overall planning vision as well as strong monofunctional areas, urban form reaches here its peak in terms of continuity and connection across the infrastructures. However, following "slums clearance" policies and de-industrialisation process, from the 1950s the area inevitably shows a lack of density, coherence and continuity (phase three). Large brownfields remain undeveloped, while others are not used. Recent developments (probably linked to land prices) focused on the area previously occupied by the historic village, completely demolished and replaced by malls, trade and light industries buildings and infrastructures. Recent plans and developments focused on some of the most renowned industrial estates (e.g. Holbeck Urban Village, Marshall's Mills) delivering a balanced mix of re-use and new development, but without addressing the overall vision and the real-estate led form of development.

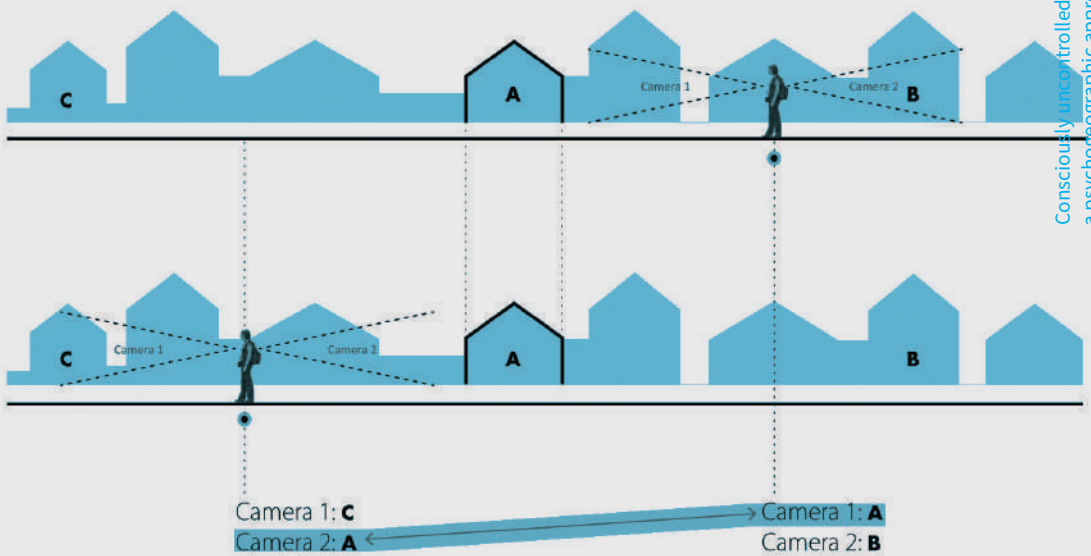
In conclusion, Holbeck area went through very rapid industrialisation and de-industrialisation processes over a period of around two centuries (late 18th to mid-20th century). Relevant industrial and economic achievements were paired with huge social, public health and sustainability issues. Four main phases can be identified in this process, from the historic settlement to recent urban regeneration processes. The shift from one phase to another has been extremely rapid, and in most cases, we can assume, with the lack of governance, planning and long-term assessment. Multiple shocks have been superimposed to urban form and its cohesion, with an evident link to social and environmental matters. Even nowadays, 18 years after the HUV initiative (and the Urban Renaissance age), a mix of clusters and wasteland live side by side in this “broken” archipelago.

**Mapping  
technique:  
the body as a  
recording device**

Among the six *dérive*-inspired fieldwork exercises delivered in Holbeck by the students, the method developed by Haddadian and Zhang seems particularly relevant to the subject of this chapter. The students had no previous knowledge of the site in order to allow them a purely personal experience of encountering the place. As we read in Haddadian’s exercise commentary:<sup>28</sup> “For us, it was important to keep a distance from the more practised ways of psychogeography such as following the CCTV cameras and urban signage or entering the forbidden zones. As Guy Debord writes, the drifters should let themselves ‘be drawn by the attractions of the terrain and the encounters they find there’. So did we. We entered the place with mindlessness, having no clear purpose or assumption about what we should follow or be attracted to”.

It is interesting to notice that, consistently with Sadler, the two students slipped into the site, deliberately (“consciously”) denying some of the most frequent drifting techniques. Psychogeography was thus seen “as a sort of therapy, a fetishisation of those parts of the city that could still rescue drifters from the clutches of functionalism, exciting the senses and the body”.<sup>29</sup>

All the groups involved in the fieldwork exercise were asked to record their experience, and produce an original map of Holbeck. In fact, the common task allowed the critical comparison across the different outputs and fostered the peer-to-peer understanding of the site. However, the team, consistently with their interpretation of Debord’s theory, has decided which recording technique would be appropriate. Concerning Haddadian and Yang’s work, they noticed that: “(..) while using a camera could help us record our experience, there was also the risk of distraction. Holding a camera in our hands and moving it towards different directions not only could make our movement difficult but also, distract us from the surrounding environment. To overcome this limitation, instead of holding



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FIGURE 1

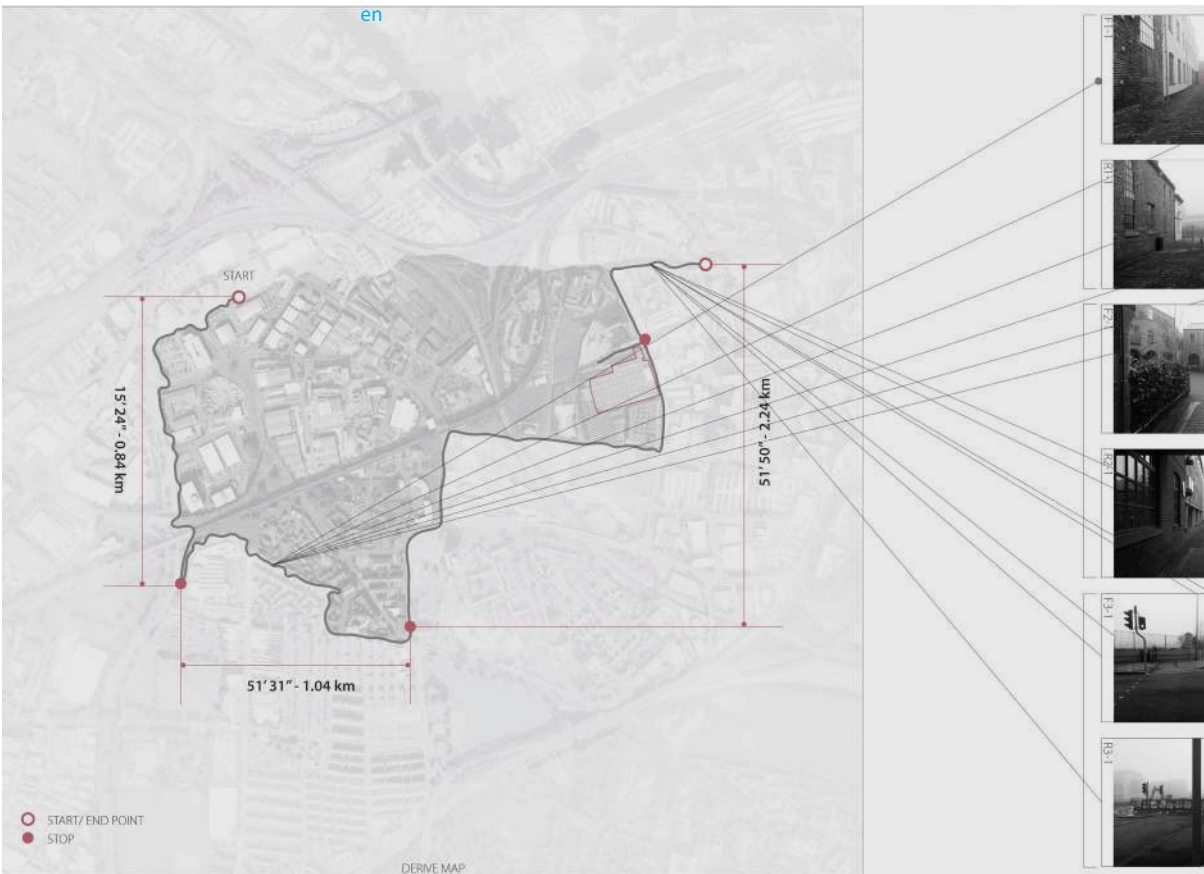
Fieldwork exercise in Holbeck (Leeds). Haddadian walks through the place, while double-recording spaces, encounters, scenes with the front and rear cameras.

FIGURE 2

A diagram showing how the agency of walking through and double-recording spaces allowed to introduce the concept of “temporality”.

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FIGURE 3  
Holbeck psychogeography-inspired map, based on the authors' fieldwork exercise. It is interesting to notice the attempt to overlap their critical understanding onto an existing cartography to provide a comprehensive multi-perspective urban image.



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the recording device with hands and controlling it, we decided to attach it on our forehead, like a helmet cam (FIG. 3). This could help us move freely without worrying about the captured scenes. The camera was providing a video footage from its wearer's perspective, moving in accordance with the movement and speed of the body".

The body thus became the main device to collect visual data, where the final aim was to produce a movie able to narrate their complexity of the urban experience. The agency of recording and then editing the movie was considered by the authors an essential part of their urban exploration. Through using film as research they argued for the "emergence of a more creative and visual research culture",<sup>30</sup> which enabled the narration from multiple perspectives. However, the movie was conceived as a critical tool, a non-literal translation of what had been recorded through the authors' experience of the place. In fact, being inspired by an artistic technique, the movie allowed visualising "a series of layered exchanges between the image, its resemblance and hyper-resemblance".<sup>31</sup> However, the concept underpinning the movie required the authors a further reflection on what kind of data were worth visualising: "However, using only one camera was not enough to get us to our desired point. This camera, attached to the forehead, was recording the data that we had found interesting or worth exploring. Yet, this was not all that we were after. We were interested in recording those sort of elements that had remained unnoticed or unseen. Inspired by Marx quotation in Debord: "Men can see nothing around them that is not their own image, everything speaks to them of themselves", we realised that we were looking for an image different from our own or in other words: the other side of what we were seeing. The solution was to use two cameras strapped to different parts of the body: one on the forehead and one attached to the upper back. The result yet was worth thinking about. While the front camera was recording images and scenes preferred by the holder, the rear camera was not focusing on anything deliberately. This status of not being consciously controlled lead us to see things that we rarely pay attention to or actually never do. While the front footage was showcasing the glory of a building, the one recorded by the rear camera was a close up of brick texture. Using the rear camera helped us to see things differently or from another perspective (FIG. 1)".

The movie based on this technique was a way to record Haddadian and Yang's psychogeographic experience of Holbeck, which allowed the introduction of a further variable, "time", in the process of mapping urban spaces (FIG. 2): "Things that due to their long distance to us were part of the future gradually came to shape the present and then became part of the past. The movies encouraged the viewer to remember the scenes that were replaced every

second by the rush of new ones. Watching the two recordings simultaneously, we noticed that the movies created a constant challenge for the viewer's mind, making it to retain and remember information at the same time". 569

As seen previously, psychogeography "demanded new forms of cartography, capable of representing states of consciousness and feeling".<sup>32</sup> Debord in his popular map of Paris *Discours sur les passions de l'amour* sought to map out *unités d'ambiance*, or places characterised by special qualities. Yet the emphasis focussed more on the mutable elements of urban space as perceived by the observer. Interpreting the role that maps played in Situationists studies, Haddadian and Yang sought to visualise the "data" collected during their *dérive* in Holbeck first by the movie (recorded on field using the double-camera technique, and edited later) and then by graphically mapping their experience onto a neutral cartography of the place (FIG. 3). If the movie, on one hand, was a clear representation of their experience and resulted in an efficient tool to narrate the complexity of factors analysed (including time), on the other hand, the graphic map resulted in a less effective output in terms of urban research. A matter of rigour occurs in fieldwork activities inspired by Debord's position, which is only partially solved by the critical comparison with other wanderers' experiences. However, what seems to be particularly relevant in terms of spatial analysis is the multiple positions offered by this kind of representation. In fact, the subjectivity underpinning the map allows for new critical readings of the place and foster a radical understanding of the spatial and social dynamics in the process, which otherwise might be lost or underestimated.

Limits and potentials of psychogeography -inspired maps in spatial research

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- 1 In particular, the chapter introduces and discusses the outputs developed within the research-based design studio *After Belonging: stories of transitional space*, led by Dr. Nadia Bertolino in the first semester of the academic year 2015/2016 at Sheffield School of Architecture, Masters of Art in Architectural Design.
- 2 Gilles Deleuze and Felix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia* (New York: Continuum International Publishing Group Ltd., 1980), 13.
- 3 Igea Troiani and Tonia Carless, "'in-between': architectural drawing as interdisciplinary spatial discourse," *The Journal of Architecture* 20/2 (2015): 273.
- 4 Jane Rendell, "Working Between and Across: Some Psychic Dimensions of Architecture's Inter- and Transdisciplinarity," *Architecture and Culture* 1/1 (2013): 131.
- 5 James Corner, "The Agency of Mapping: speculation, critique and invention," in *Mapping*, edited by Denis E. Cosgrove (London: Reaktion, 1999), 213.

Notes

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- 6 Mirjana Lozanovska, "The Problematic of Representing the Everyday," *Space and Culture* 5/2 (2002): 141.
- 7 Joseph Pierce and Mary Lawhon, "Walking as Method: Toward Methodological Forthrightness and Comparability in Urban Geographical Research," *The Professional Geographer* 67/4 (2015): 655-662; Alexander J. Bridger, "Psychogeography and feminist methodology," *Feminism & Psychology* 23/3 (2013): 285-298; Chris Jenks and Tiago Neves, "A walk on the wild side: Urban ethnography meets the Flâneur," *Cultural Values* 4/1 (2000): 1-17; Keith Bassett, "Walking as an Aesthetic Practice and a Critical Tool: Some Psychogeographic Experiments," *Journal of Geography in Higher Education* 28/3 (2004): 397-410; Henry Lefebvre, *Rhythmanalysis: Space, time and everyday life* (London: Continuum, 2004); Iain Sinclair, *Lights out of the territory* (London: Granta Books, 1997).
- 8 Pierce and Lawhon, "Walking as Method," 656.
- 9 Lefebvre, *Rhythmanalysis*, vii.
- 10 Katy Moles, "A walk in thirdspace: Place, methods and walking," *Sociological Research Online* 13 (2008): 7.
- 11 The preparatory studies in this case did not include any cartography-based analysis of the site, as it is usually done in architectural design. Instead, it was a purely theoretical work during which the students have been invited to reflect on the meaning of Debord's theory and the potentials of wandering through Holbeck to gather original data.
- 12 Charles Baudelaire, "L'artiste, homme du monde, homme des foules et enfant," in *Le peintre de la vie moderne III* (Paris: La Pléiade, 1863), 1156.
- 13 Walter Benjamin, *Illuminations*, trans. Harry Zohn (New York: Harcourt Brace, [1940] 2007), 25.
- 14 Walter Benjamin, *Berlin childhood around 1900*, trans. Howard Eiland (Harvard: Harvard University Press, [1932] 2006), 1.
- 15 Benjamin, *Berlin childhood*, 1.
- 16 Pierce and Lawhon, "Walking as Method," 656.
- 17 Guy Debord, "Theory of the Dérive" ["Théorie de la dérive," *Internationale Situationniste* 2 (Paris, December 1958)], in *Situationist International Anthology*, trans. Ken Knabb. Revised and Expanded Edition, 2006. <http://www.bopsecrets.org/SI/2.derive.htm>, accessed April, 2017.
- 18 Debord, "Theory of the Dérive".
- 19 However, Debord explains clearly that the duration of each *dérive* may vary significantly and it is a factor which is difficult to plan in advance: "But more importantly, a *dérive* often takes place within a deliberately limited period of a few hours, or even fortuitously during fairly brief moments; or it may last for several days without interruption"; Debord, "Theory of the Dérive".
- 20 Bassett, "Walking as an Aesthetic Practice," 400.
- 21 Bassett, "Walking as an Aesthetic Practice," 401.
- 22 Debord, "Theory of the Dérive".
- 23 Jenks and Neves, "A walk on the wild side," 8.
- 24 Bassett, "Walking as an Aesthetic Practice," 403.
- 25 Debord, "Theory of the Dérive".
- 26 Giorgia Aiello, "From wasteland to wonderland: The hypermedia(tiza)tion of urban regeneration in Leeds Holbeck Urban Village," *First Monday* (2010), DOI: <http://dx.doi.org/10.5210/fm.v18i11.4957>, accessed online on 1st April 2017 via: <http://firstmonday.org/ojs/index.php/fm/article/view/4957>.
- 27 Leeds City Council, *Holbeck Conservation Area Appraisal*, 2005.
- 28 The following excerpts are from: Shirin Haddadian, "After Belonging: Stories of transitional spaces- Design studio portfolio" (Sheffield School of Architecture, 2016).
- 29 Simon Sadler, *The Situationist City* (London: MIT Press, 1999), 80.

- 30 Alison Kahn and Igea Troiani, "Connecting Narratives: Film as Research" (introduction paper at the one-day symposium Connecting Narratives: Film as Research, Oxford Brookes University, July 10, 2015).
- 31 Igea Troiani and Alison Kahn, "Film as Architectural Theory," *Architecture and Culture* 4/3 (2016): 488.
- 32 Bassett, "Walking as an Aesthetic Practice," 402. The idea was also introduced by Debord in 1955: "(...) a renovated cartography seems appropriate for immediate utilization. The production of psychogeographical maps (...) can contribute to clarifying certain wanderings that express not subordination to randomness but total insubordination to habitual influences". Guy Debord, "Introduction to a Critique of Urban Geography" ["Introduction à une critique de la géographie urbaine," *Les Lèvres Nues* 6 (September 1955)], in *Situationist International Anthology*, trans. Ken Knabb. Revised and Expanded Edition, 2006. <http://www.bopsecrets.org/SI/urbgeog.htm>, accessed April, 2017.

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# Crowdsourcing historical information in a contested city: A Geo-live Platform to spatialize Rijeka's overlapping layers and narratives

Vanni D'Alessio  
Brigitte Le Normand  
Jon Corbett



As oral history has shown, we are all repositories of the past. Personal memories both of public and private places fill in the gaps of more traditional histories drawn from archival materials, with all their limitations, and in some cases, can be instrumental in challenging dominant narratives.<sup>1</sup>

The work on which this paper comes out of the scholarly project *Cities and Regions in Transition after the Second World War*. In the context of this project, which is supported by the Social Science Research Council of Canada and is based at the University of British Columbia Okanagan with the collaboration of the University of Rijeka, we have created an interactive historical map using the Geolive web platform, a participatory mapping tool that utilizes the Google Maps API.

We designed the map to address a set of scientific questions. Primarily, the map is conceived as a tool to investigate the spatial dimensions of Rijeka's modern history and to address the level of integration, the intersections, and conflicts of various social, linguistic and religious groups which cohabited in this city in the last two centuries. Our intention is open the map to a wide range of individuals and communities, giving them the possibility to follow but also to contribute to the project. The categories "contributors" and "users" of the map, which will be explained further on, include ourselves and possibly other academic researchers, but also other profiles such as students and teachers in local schools and at the university, local history *aficionados*, tourists, former inhabitants of the city or their descendants, as well as other possible participants from Rijeka or elsewhere. Anyone wishing to share their own memories and the first or second hand stories they have collected about localised events and places in Rijeka's past and present, can register or log in and put a marker on the map, which can be navigated using a time-bar, layers and keywords. Markers can contain texts, pictures, audio and video files, providing audio-visual enrichment to the map visualisation. The purpose of the map is to crowd-source the knowledge of Rijeka's transnational and sometimes conflicting historical narratives, and the overlapping layers of the city, in order to visualise intersections and interrelations in time and space. The map has the potential to provide a platform for respectful discussions on different transcultural experiences and views of the past of a city which has gone through many political transitions from the early 19th to the end of the 20th centuries, and whose buildings, monuments, schools, industries, and streets have repeatedly changed name, profile, identity and scope. The map also aims to produce new insights for scholars, which become possible when spatializing data, by highlighting such phenomena as proximity and segregation as well as temporal spatial change. Beyond this, it is a useful teaching tool, enabling students themselves to showcase their research on a virtual platform, and allowing scholars to share their findings.

**Multiethnic,  
layered, and  
contested cities**

Our professional aim is to investigate as historians the numerous layers of Rijeka as a case of a contested city. Thus, the current focus of the map, reflected in the chronological framing of the time-bar, is the 19th and 20th century, the age of nation-state building and successive redrawing of national boundaries in Central Europe, which had important repercussions for Rijeka. In modern times, with the growth of national identifications, European cities started to set the scene for political movements and conflicts in which the national aspect played a significant role. In the European areas governed by empires or at the margins of national states, all along the 19th century and for a good half of the 20th century, very mixed and often ethno-nationally contested cities were more of a norm than an exception.<sup>2</sup> Many cities remained ethno-nationally mixed even after the disappearance of European empires in the aftermath of the First World War and the forced population transfers that took place at the end of the Second World War.<sup>3</sup> A good number of European cities have retained and increased their diversity after World War II, especially in the Soviet Union and socialist Yugoslavia, although demographic changes have taken place following the end of the cold war, and the 1990s Yugoslav wars provoked a dramatic and violent decrease in the degree of multi-ethnicity in that area.<sup>4</sup>

Through the new waves of 20th and 21st century migrations, metropolises and eventually smaller cities and towns across Western Europe have come to face the challenges of ethnic and cultural diversity. Among cities characterised by ethnic, cultural, linguistic and religious diversity, are cases of divided cities.<sup>5</sup> Divisions can be the result of many factors, from political and internal administrative and jurisdictional boundaries to socio-economic or self-segregation. Divided cities are characterised by ethnic niches as well as by “interfaces” or zones where different groups meet, overlap, and sometimes clash. In many cases, clashes between groups have happened during and after the collapse or separation of empires or multinational states, as in the case of Trieste and Mostar, or due to competing projects for sovereignty on the margin of empires, as in the case of Belfast.<sup>6</sup>

As a case study, Rijeka, known in Italian and Hungarian as Fiume, embodies the different aspects of being or having been, a multi-ethnic city, a layered city, a divided city, as well as a contested city. It has been a multi-ethnic city of long date, from Habsburg times to the present day, although the ethnicities and linguistic groups have changed over time as the result of political upheaval and forced migration as well as labour migration. It was a divided city from its annexation to Italy in 1924 until the end of the Second World War and subsequent annexation to socialist Yugoslavia, when the Italian city of “Fiume” fused with the urban settlement on the east bank of the river Riječina named Sušak, and with its Western rural periphery, Zamet,

both already part of Yugoslavian monarchy. In fact, the city had a history of division even before the First World War, when Zamet was part of the Istrian Margraviate belonging to the Western part of the Habsburg Monarchy, while “Fiume”, a *Corpus separatum* of the Hungarian Crown, and Sušak, a town of the Croatian Kingdom, were both located in the Transleithanian and Eastern part of the Monarchy.<sup>7</sup>

These various border shifts were accompanied by demographic changes. After the First World War, Rijeka was annexed to Italy and lost most of its Hungarian and German speaking population, apart from those families who integrated into the Italian state and culture, while the Croatian language became less and less visible. After World War II and its annexation to Yugoslavia, most of its Italian speaking population left, but following this “unmixing of peoples”,<sup>8</sup> a new re-mixing happened with the influx of population to the new Yugoslav industrial and transportation hub. These people were coming from Rijeka’s rural outskirts and islands, from the Croatian hinterland – mostly from Gorski Kotar, but also from Lika and inland Dalmatia, which were already mixed Croatian and Serb – and then from farther inlands in former Yugoslavia, such as Bosnia, Macedonia, Serbia and Kosovo.

Thus, the various changes in regime and in national or multinational sovereignty that Rijeka has traversed have led to the succession of diverse populations on its territory – some who left, and some who have remained, and yet others who have arrived. It has also led to overlapping and sometimes conflicting mental maps – in particular, the Fiume of the Italian *esuli* (“exiled”) and the Rijeka of present-day predominantly Croatian inhabitants presenting alternative visions of the “true essence” of the city. Finally, the physical form of the city has evolved, with parts of the city destroyed in the Second World War, changes and expansion in industrial and port activities, and the construction of new housing settlements and commemorative monuments, to name only a few developments.

Our wish is that the map, through the contribution of independent scholars, students, amateurs, will contribute in revealing the many layers of Rijeka’s storied past. Some facets of this project include tracing political and administrative border changes, which were so significant for the transformation of the city. The map can highlight significant places, which are still present in the landscape or as a part of cultural memory, that have become hard to notice in the urban landscape. It can also make visible traces of the past that have vanished, been made invisible, or become illegible or incomprehensible. The proliferation on the map of markers containing personal and public memories, along with material traces still visible or, alternatively, hard or impossible to visualise, will allow users to



FIGURE 1

Participatory web-mapping application designed and programmed by the Spatial Information for Community Engagement (SpICE) Lab at the University of British Columbia Okanagan, Canada (Geolive, running on the Google Maps API): <https://rijekafiume.geolive.ca/themap>.

FIGURE 2

Keyword word cloud that allows users to call up markers associated with particular themes. The size of the word is proportional to the number of associated entries. Participatory web-mapping application designed and programmed by the Spatial Information for Community Engagement (SpICE) Lab at the University of British Columbia Okanagan, Canada (Geolive, running on the Google Maps API): <https://rijekafiume.geolive.ca/themap>.

encounter a multifaceted representation of the city, in which different and possibly conflicting memories and interpretations of the past are found side by side. The city councils, the Corso/Korzo and other streets and squares, the theatres, the jail and the marketplaces, the sports arenas, to name a few, have been along the decades some of the places of people meeting, integrating, socialising and clashing.

One of the map's greatest assets is that it is accessible from everywhere: the living room of a second or third generation immigrant family in Italy, a classroom of pupils engaged by their teacher, the office of a researcher, a library, a museum, or anywhere with internet access. Aside from scholars who have expertise on the history of Rijeka, and their students, our idea is to reach out to different repositories of memory. These repositories can be related to family and literary memories and to more personal experiences and encounters with the city, although individual and family memories too are influenced by standardised historical narratives. The manner in which institutionalised and socialised commemorative practices have a strong impact on individual memories is well known.<sup>9</sup> Nevertheless, the process of collectivization of individual narratives is not unidirectional. Arguably, the historical narratives that we see as being standardised are in fact in constant re-negotiation as individuals seek to make sense of them in the context of their family's lives. Moreover, the standardised narratives themselves are multi-layered, incorporating and re-interpreting elements that are acquired from elsewhere, and shared with competing historical narratives. The historiographies of Rijeka are a product of the stratifications of Hungarian and German imperial narratives, Italian irredentist, fascist, socialist and new national narratives, Yugoslav pre-socialist and socialist narratives, Croatian and Slovenian national narratives. The presence and interaction of various linguistic and religious groups in Rijeka, from the eighteenth to the twentieth centuries allowed the development of many ways in which the city was lived and perceived.

Language and linguistic community, in particular, plays an important role in experience, perception, and narration of place. Here, it should be noted that Rijeka should not be understood as an Italo-Yugoslav, Italo-Croatian or Romance-Slavic binary and opposition. Rather, Rijeka is best understood as being at a crossroads between Central Europe, Southeastern Europe ("Balkans"), and Southern Europe and the Mediterranean. Other cities share this feature, like Trieste, but Rijeka's inclusion in Yugoslavia made of this city an attractive pole for various "Western Balkanians" or former Yugoslavs. After the Second World War and until the collapse of Yugoslavia, Rijeka was again a site of intertwining and "mixing of peoples" of different

## Mental Maps

religious origins and mother tongue, from Albanian and Serbian speakers to Roma and Bosnian Muslim communities, to local Italian and Croatian speakers, traditionally using their *Fiuman* (Venetian) or Čakavjan vernaculars and compelled to integrate through mixed marriages and everyday contacts which, especially in the urban center, saw a standard version Croatian language prevail.

In post-Yugoslav Rijeka, the huge majority of inhabitants are Croats, with 82.52% of the total population in the 2011 census. The transition to independent Croatia has brought to the establishment of twenty-two organised and recognised national minorities among the former Yugoslav nationalities, along with other national, linguistic and religious communities. The biggest minority are Serbs (6,52%), followed by Bosniaks (2.06%), Italians (1.90%), Slovenes (0.85%), Albanians (0.69%), and Roma (0.67%). The first pilot use of the usage of the map has actually focused on the physical presence of the national minorities in town. This trial run was carried out during a course at the Faculty of Philosophy and Human Science, and will be discussed in a separate section of this paper.

#### **Geolive** – a short history

The platform through which we seek to interact with repositories of memory as well as scholars and students has been built using the Geolive mapping tool. Geolive is a participatory web-mapping application designed and programmed in the Spatial Information for Community Engagement (SpICE) Lab at the University of British Columbia Okanagan, Canada. The tool was designed to be a flexible and extendable framework to facilitate the crowdsourcing (or citizen contributions) of spatial information; specifically, to support communities' ability to capture, manage and communicate their own locational information. The map acts as a medium through which registered users can share their own multimedia information and experiences about a specific place.

Geolive offers a range of distinct functions – among others, it allows multiple users to simultaneously contribute data to a map; it features tiered access permissions, meaning that different types of user have access to specific map data while other data remains hidden; it emphasizes making large amounts of data manageable and meaningful; and it allows administrators to access and download project datasets and repurpose them using other database software, such as Geographic Information Systems. Geolive is a versatile tool that we have used to support a number of participatory mapping projects, ranging from small, simple maps displaying marker pins, lines and polygons, through to complex projects with strict user groups and access permissions. To date Geolive has been applied to over 30 projects from as wide afield as Palawan in the Philippines to local forest fire issues in the Okanagan Valley in

British Columbia, Canada. The tool has received substantial media interest and has been featured extensively in Canadian media, including the Globe and Mail newspaper, on television as well as on CBC radio.

The Rijeka Fiume project provided the opportunity and impetus for the SpICE lab to incorporate a chronological dimension to the existing spatial functionality of the Geolive system. In other words, we programmed from scratch the ability for contributors to locate their information in both space and time. This in turn provided us with several interesting and novel ways to both filter, display and visualize community-contributed information. For example, the project's historians identified six clear time periods that the project was interested in examining. As users contributed their information using a very structured input wizard, one of the data field requirements was the date of significance to be linked to the contributor's marker pin. This temporal information was then used to automatically position the information in the site's time bar, which in turn displayed the six time periods. The time periods on the bar were active, meaning that visitors to the site could click on one of these time periods to filter the map and display all marker pins from that particular time period. This provided an engaging way to visualise the board level changes to Rijeka's urban form across the very different socio political periods.

Anyone can access the website, which has been open to the public since the beginning of 2016, and place a marker by registering on the site and then logging in. The registration process is intended to be as straightforward as possible: users can log in with their Facebook or Google accounts. They can also choose to create an account through a traditional registration process (i.e. providing a username, email address and password). Markers remain anonymous in principle (unless contributors choose to identify themselves in the description). Super-administrators have the possibility to intervene in the case of inappropriate or offensive content. The administrators can also intervene in case the markers show evident factual errors, but our intention is to limit the administrative intervention as much as possible, leaving to the academic and non academic contributors freedom in placing markers and interpreting a segment of Rijeka's multilayered, complex and contested history.

The process of placing a marker is simple. After logging in the contributor has the option of simply placing a marker in space using the drag and drop function, or else entering a specific address in the search bar. The next step is for the user to decide on the category of marker he/she is placing, in turn, this step places the markers within a specific map layer. The categories of markers that we have chosen are functional in nature, describing the type

## How the Map Works

Crowdsourcing historical information in a contested city: A Geo-live Platform to spatialize Rijeka's overlapping layers and narratives



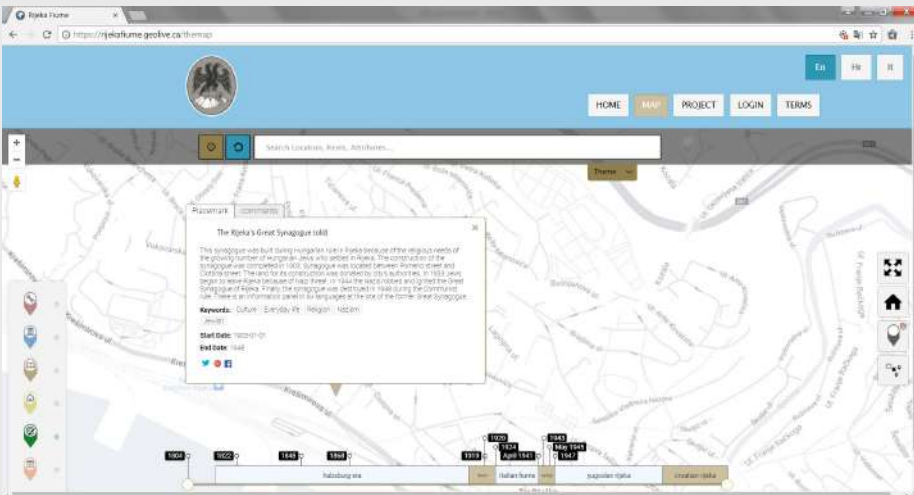
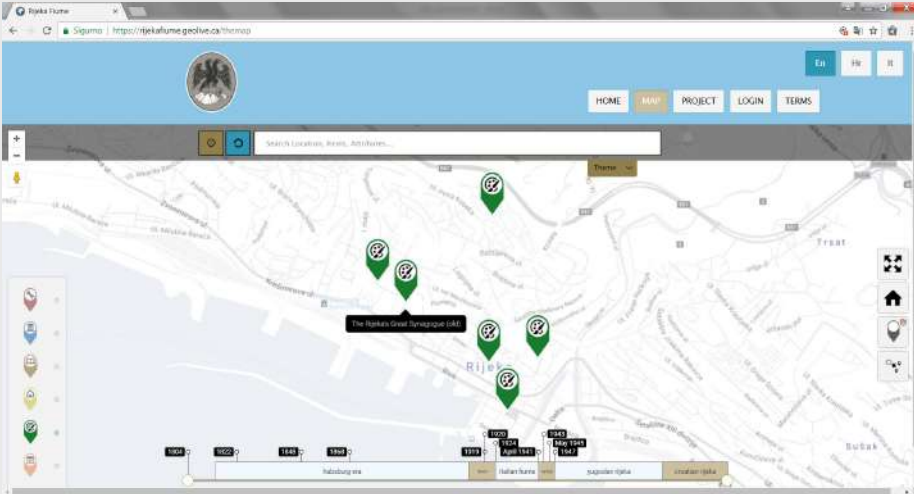


FIGURE 3  
 Marker filtering results for for Theme: Jewish. Participatory web-mapping application designed and programmed by the Spatial Information for Community Engagement (SpICE) Lab at the University of British Columbia Okanagan, Canada (Geolive, running on the Google Maps API): <https://rijekafiume.geolive.ca/themap>.

FIGURE 4  
 Placemark: The Rijeka's Great Synagogue (old). Participatory web-mapping application designed and programmed by the Spatial Information for Community Engagement (SpICE) Lab at the University of British Columbia Okanagan, Canada (Geolive, running on the Google Maps API): <https://rijekafiume.geolive.ca/themap>.

of activity that a space would be primarily associated with. Categories include: commercial and industrial; government and military, educational and cultural; residential; and public space and monuments. We also added one more layer for events. It is possible to show and hide layers, so that you can see only commercial and industrial spaces, for example, or to examine the relationship between residential space, on the one hand, and public space and monuments, on the other.

It should be noted that a given location could be ascribed to a different layer category by different users. For example, a building can have both residential and commercial functions, and buildings can change their functionality over time. Our general policy is to allow contributors to select the categories that make the most sense. While super-administrators have the possibility of correcting factual errors, in practice we defer to users' judgment. For example, if a monument is placed into the military category, the user may have decided to do deliberately to stress the link of that marker with the history of the military presence in town.

Users are also asked to input keywords for each marker. Common keywords are suggested, but contributors may also suggest new keywords. If a keyword is suggested multiple times, a super-administrator may choose to add them to the list of suggested keywords, allowing contributors to shape the tool. The frequency of keywords influences the size of the keywords that populate a word-cloud (see image), allowing users to visualise this frequency of its usage. Users may click on a keyword in the word-cloud, or in a marker description, to filter the map to show all markers containing this keyword. Thus, a user can click on "Italian" or "fascist" or "everyday life." For each marker, the contributor enters in a description, and has the option of adding audio-visual media as well. For example, a contributor can input a present-day or historic photograph of a building; a family photo; a sound recording of an interview with their grandmother; or video of a special event. As noted above, users can visualise the contributed information in different ways. They can choose to view functional layers or isolate markers relating to a particular keyword. They can also view markers according to a particular "slice" of time. That is because contributors are asked to enter in start and end dates for their markers. The intention behind this step is to establish when a place was built and destroyed, or at very least when it began to be used for a particular purpose. Users can move the "start" and "end" cursor on the time-bar at the bottom of the map to see only places and events associated with that period – for example, to see only markers dating from the Habsburg era, or only markers for the period between 1945 and 1955. In this fashion, the map can be used to track the change in the city over time.

## How the Map has been used

The map has a three-fold audience. As indicated above, the initial intention behind the map was to engage directly with repositories of memory. Thus, we announced the tool using social media, to the *Nova Riječka Enciklopedija – Fluminensia* and to *Slobodna Država Rijeka/Stato Libero di Fiume/Free State of Rijeka* Facebook communities, which is made up of people both in Rijeka and outside of it who are fascinated by its history, primarily as a result of being inhabitants, or having longer-term family connections. We have not thus far been successful in getting the attention and participation of these kinds of contributors, and we are both engaging in this direction contacting other groups<sup>10</sup>, but we are also exploring new approaches to this challenge.

We have been far more successful in reaching the second target-audience, which is students, who have acted as a sort of “pilot group” allowing us to refine the tool and explore its utility. As we already mentioned the first group to be engaged was the 2016 course of Multi-ethnic cities in Contemporary history (*Multietničnost gradova u suvremenoj povijesti*) at the Faculty of Humanities of Social Sciences of the University of Rijeka. As fieldwork engagement this first group of students was asked to connect with members of the communities and upload on the map what these representatives felt to be their most relevant physical and symbolical places, in particular, buildings. Historical buildings, present day associations, old churches, cemeteries or another place of historical significance for the presence of the main linguistic communities in town appeared on the map. The students uploaded twenty-eight markers related to the Serb, Slovenian, Macedonian, Montenegrin, Jewish, German, Turkish, and Slovak minorities. The students chose which community to work with and, as might be expected, no one chose the Italian minority. This did not come as a surprise, as tracking historical traces of the Italian community, as also of the Croatian community, is a rather complicated business. Partly this is because of the huge number of historical traces which can be linked to either the Italian or the Croatian presence in town, such that a place might be characterised as Italian prior to 1945, or Croatian before and especially after that date. Moreover, another difficulty is that apart from some crucial periods, like during the Croatian administration of the city from 1848 to 1868, the Croatian presence west of the river was much less visible than the Italian, which was a dominant language in politics, commerce and culture. Towards the end of the Habsburg sovereignty Croatian culture became more and more visible also in the *Corpus Separatum* era, but right after the Great War, the D’Annunzio occupation, and after Italian annexation, the fascist dictatorship deliberately obscured each public manifestation of Croatian culture in town. After the annexation to Yugoslavia, the socialist government

granted various schools and cultural institutions to Italians, but, after being initially celebrated, the regime downplayed the importance of the Italian local presence in the narrative of place. With the gradual decrease in Italian speakers, many traces of Italian presence slowly disappeared from the public space. Nevertheless, markers indicating the presence of Italian schools, associations, palaces, or linked to the past life of Rijeka in Italian have started to be placed by other users.

As examples of the work of the first group of students, we can mention the markers on the Serb and Jewish communities. As previously mentioned, the Serbs are the largest ethnic minority in town, but they suffer from a problem of under-representation in the public space. Serbs are in fact far less visible than, say, Italians, Slovenes, Bosniaks and Macedonians. This may be because, although they declare themselves as Serbs in the national census, Serbs are very well integrated in the city as Croatian speakers, but it is also likely a conscious coping strategy they have adopted. The problem of social stigma is definitely present, as it was for the Italians after the liberation of the city from fascism and Nazism, following the end of World War II. Although Rijeka has not experienced a military occupation and the tragic divisive violence of 1990s war, and in general is known to be a tolerant city towards all kind of minorities, there are small radical pockets of the local public opinion that have negative feelings against the Serbs. Besides these more or less favourable attitudes towards them, many people would assume the local Serbian population is a product of the immigration policies of Socialist Yugoslavia. In fact, though many Serb families effectively arrived from Bosnia or Serbia as military or police corps or public employees or workers during the 1950s-1970s demographic growth of Yugoslav Rijeka, the Orthodox community is actually celebrating this year its 300 years of presence in this town. The students of the first trial year have placed markers on the most famous local places associated with Serbs, the two well-known Orthodox churches in town,<sup>11</sup> but they were not capable of finding other significant traces of the Serb community, other than the local section of the cultural organization of the Serbs in Croatia “Prosvjeta”.<sup>12</sup> A student from the most recent class on Multi-ethnic cities in Contemporary History engaged in finding less obvious and well-known cultural and historical traces in town and discovered the less known 18th century Orthodox cemetery, which was transformed into a park already in the middle of the 19th century.<sup>13</sup>

If the Serbs' presence in Rijeka is not easy to spot, another challenge for students was the local Jewish community, which also shares a long history in town, and has instead almost completely vanished. Very few people are left of what was once a strong and transnational community in town, but

also traces are not easy to identify. Only the modern (smaller and out of the route) of the two synagogues in town has survived the Second World War since the Nazis blew up Rijeka's main Jewish temple. Both synagogues have been marked on the map.<sup>14</sup> A well-known local trace of the Jewish presence noted by students is the Jewish cemetery at the main city cemetery in Kozala, preserved as a historical monument, but a less known spot is the Old Jewish Cemetery in town.<sup>15</sup> Another marker related to Jewish historical presence in a location which is not marked in the city (and today is the site of an elementary school), is the area where Jews who were passing through the city stayed in the 15th century known as "Zuecha/Zudecca" (as marked on the map).

This year the students of Multi-ethnic cities course have generally engaged themselves in less known or obvious sites in Rijeka. Some of the examples from this year's class are the less known cemeteries or some single tombs in the more known cemetery; Rijeka's former border crossing places, which are all interesting in order to visualize the specificities of Rijeka as divided city; the marketplaces and theatres, which are key places to address the question of people's attitudes in socializing along and across ethnic boundaries; Rijeka's military strongholds built on the rocks; examples of interwar architecture (markers can be found on the map: *Mali neboder*, *Kuća Kauzlarčić*, *Kuća Alga (Kezele)*, *E.A.C.E.P. naselje*, *Radničko naselje R.O.M.S.A.*, *Casa Nave*) Another history class of undergraduate students worked on marking the presence of distinguished personalities of Rijeka, but with somewhat less enthusiasm, while the students of a class on digital humanities in the study program of Cultural Studies have strongly engaged themselves in recording Rijeka's soundscape, among which: the students' cafeteria (*Restaurant "Kampus"*), the regular street musician under the city tower (*Ulicni svirac pod urom*), the sounds from the local Opera theatre (*HNK – Rijeka sounds*), the sounds at the local busses station (*KD Autotrolej d.o.o.*), and the *Sound in front of Governor's palace*.

The third audience for the map is scholars, who can interact the tool for different purposes. First, they can act as contributors who can use the platform to share their findings to a broader audience and visualise these findings spatially, hopefully leading to new insights and ideas. Second, they can use the map as an object of study – as a kind of laboratory for observing the construction and interaction of different mental maps. To date, we have presented the mapping tool to scholars primarily through academic conferences aimed at different audiences as well as invited talks. The potential of the map as an object of study will obviously increase as the number of markers on the map grows.

The mapping tool is still in many ways a work in progress. Having reflected on our first efforts to popularise it and employ it, we are in a position to make a few observations.

First, we are eager to continue reaching out to the many different groups that might be interested in sharing their stories: the exiles and expatriates, the so-called lokalpatrioti or “local patriots” who have intense loyal pride, minorities whose stories tend to be elided and erased; as well as older generations whose memories will be lost once they pass. We are considering engaging with local middle and high schools in Croatian and Italian languages, to work thoroughly on the traces of the main historical community in town. Other ideas that are currently being considered are: intergenerational workshops where youth interview their grandparents and record their memories on the map; and collaborations with media (radio and newspaper) to promote the map by encouraging their listeners and readers to post memories around specific themes. We have also approached the municipality of Rijeka as well as museums in Rijeka to explore ways of reaching potential contributors, such as user stations in museum spaces. A more intensive engagement with social media may also offer better results. The problem, at its source, is this: how do you get people to want to spend time inputting their stories on the map interface? Part of the solution may lie in improving the tool’s functionality. We are currently working on providing the users with the possibility of instantly sharing their markers on social media, which will increase the visibility of the map and perhaps give an extra incentive to take part.

The other potential users of the map are scholars, who may be interested in spatially visualising their research on Rijeka. Consequently, we are working on a tool that would allow users to isolate the data that they have contributed to the map. If scholars have an incentive to use the map, this will contribute another voice to the polyphony of spatialized knowledge, allowing scholars to share their findings with broader communities than academia.

1 The case of indigenous oral histories is instructive. See for example, Neal McLeod, *Cree narrative memory: From treaties to contemporary times* (Saskatoon: Purich Publishing, 2007) or Angela Wilson, “Decolonizing the 1862 death marches,”

*American Indian Quarterly* 28/1-2 (2004): 185-215.

2 On this see James Anderson, “From Empires to Ethno-National Conflicts: A framework for studying ‘divided cities’ in ‘contested states,’” *Divided Cities, Contested*

Notes

n. 1-2  
n. 14-15

- States (Working Paper No.1, 2008); Anthony C. Hepburn, *Contested Cities in the Modern West* (Basingstoke: Palgrave-Macmillan, 2004).
- 3 Philipp Ther, and Ana Siljak, eds., *Redrawing Nations: Ethnic Cleansing in East-Central Europe, 1944-1948* (Lanham: Rowman & Littlefield, 2001); Gregor Thum, *Uprooted: How Breslau Became Wrocław during the Century of Expulsions* (Princeton: Princeton University Press, 2011); Theodore R. Weeks, "A Multi-ethnic City in Transition: Vilnius's Stormy Decade, 1939-1949," *Eurasian Geography and Economics*, 47/2 (2006): 153-175.
  - 4 John J. Czaplycka et al., eds. *Cities after the Fall of Communism: Reshaping Cultural Landscapes and European Identity* (Baltimore: Johns Hopkins University Press, 2009); on former communist countries; Marco Buttino, *Samarqanda. Storie in una città dal 1945 a oggi* (Roma: Viella, 2015); Vanni D'Alessio, "Divided and Contested Cities in Modern European History. The Example of Mostar, Bosnia-Herzegovina," in *Beyond the Balkans: Towards an Inclusive History of Southeastern Europe*, ed. Sabine Rutar (Münster: LIT Verlag, 2013), 447-476.
  - 5 Scott A. Bollens, *Cities, Nationalism, and Democratization* (London-New York: Routledge, 2007); Jon Calame and Esther Charlesworth, *Divided Cities: Belfast, Beirut, Jerusalem, Mostar, and Nicosia* (Philadelphia: University of Pennsylvania Press, 2009).
  - 6 Hepburn, *Contested Cities*; Anderson, "From Empires to Ethno-National Conflicts." On the inner logics of separation see:
    - 7 Ghislaine Glasson Deschaumes and Rada Iveković, *Divided Countries, Separated Cities: The Modern Legacy Of Partition* (Oxford University Press, 2004).
    - 7 Danilo Klen, ed., *Povijest Rijeke* (Rijeka: Skupština općine, Izdavački centar Rijeka, 1988); Ilona Fried, *Fiume, città della memoria* (Trieste: Del Bianco, 2004).
    - 8 Rogers Brubaker, *Nationalism Reframed: Nationhood and the National Question in the New Europe* (Cambridge: Cambridge University Press, 1996).
    - 9 Tammy A. Smith, "Remembering and Forgetting a Contentious Past," *American Behavioral Scientist* 51/10 (2008): 1538-1554.
    - 10 Among them we are already in contact with: *Lokalpatrioti; Ho Fatto le scuole italiane a Fiume; Un fiume di Fiumani; Volim grad koji teče; Forum Fiume; Fasemo conoscer con le nostre foto i nostri paesi e le nostre bellezze; BCR: basta coi rancori.*
    - 11 Markers: "Pravoslavna crkva sv. Nikole / Orthodox Church saint Nicholas"; Pravoslavna crkva sv Georgija i Pravoslavni hram velikomučenika (Orthodox Church), in: <https://rijekafiume.geolive.ca/themap>.
    - 12 "Srpsko kulturno društvo Prosvjeta Zagreb – Pododbor Rijeka (Serb cultural organization)", in: <https://rijekafiume.geolive.ca/themap>.
    - 13 "Orthodox Cemetery", in: <https://rijekafiume.geolive.ca/themap>.
    - 14 "The Rijeka's Great Synagogue (old)"; "The Modern Rijeka Synagogue"; in: <https://rijekafiume.geolive.ca/themap>.
    - 15 See the markers "Kozala cemetery" and "Jewish cemetery", in: <https://rijekafiume.geolive.ca/themap>.

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# Notes on contributors

**YOAV ARBEL, ISRAEL ANTIQUITIES AUTHORITY.** Graduated in Classical Archaeology and African Studies, Hebrew University, Jerusalem (1995). Received his MA and PhD degrees in Anthropology from the University of California, San Diego (2005). His PhD dissertation, “The Historical Impact and Archaeological Reflection of Intense Religious Movements” and the book based on it are cross-disciplinary studies involving the interpretation of texts and material evidence with anthropological theory. Guest lecturer at the University of California, San Diego (2005). A staff member in archaeological projects in Israel and in sites in the UK, Germany, Tanzania, Turkey and Jordan. Since 2005 works for the Israel Antiquities Authority as director of large-scale salvage excavations – many of which in the historical city of Jaffa. His focus of interest is the late Ottoman period. With Jaffa as the main case study, he investigates architectural remains and local or imported artefacts as reflective of urban growth, city planning, changing landscapes, foreign influences, and the involvement and impact of political and religious institutions. The author of various articles on the history and archaeology of Jaffa and presents the results of his studies in conferences and workshops in Israel and abroad.

**Yoav Arbel**  
yoar07  
@gmail.com

**DUNJA BABIĆ, FACULTY OF CIVIL ENGINEERING, ARCHITECTURE AND GEODESY, SPLIT, CROATIA.** Born in Zagreb in 1979. In 2006 she graduated from the History of Arts and French Language and Literature at the Faculty of Philosophy in Zagreb. In 2015 she did PhD with the thesis “The suburb of Trogir on the island of Čiovo in the context of the development of the island until the 19th century“. From 2006 to 2009 worked in the Municipality of City of Trogir as an expert assistant in the field of culture, tourism and international cooperation. From 2009 employed at the Faculty of Civil Engineering, Architecture and Geodetics in Split. With the support of the French Embassy in Croatia and French Ministry of European and Foreign Affairs finished in 2007. in France an expert training in management plans for historical cities. She held presentations at many conferences in Croatia and abroad about the protection of historic nucleus especially of Trogir. Speaks English and French, Italian and Russian.

**Dunja Babić**  
dunja.babic  
@gradst.hr

**JOSIP (JOŠKO) BELAMARIĆ, INSTITUTE OF ART HISTORY, SPLIT, CROATIA,** received his MA and PhD degrees from the University of Zagreb, where he studied Art History and Musicology. In 1979 he began working for the monument protection services in Split, and between 1991 and 2009 he served as the director of the Regional Office for Monument Protection. Since 2010 he has been the head of the newly established Cvito Fisković Center at the Institute of Art History in Split. He is also a professor at the Department of Art History, University of Split. He has published a number of books and

**Josip Belamarić**  
jbelamar@ipu.hr

articles about the urban history of Dalmatian cities, as well as medieval and Renaissance art. Belamarić's recent honours include the fellowships from Villa I Tatti (The Harvard University Center for Italian Renaissance Studies), where he was Robert Lehman Visiting Professor in the second semester of the 2015-2016 academic year. Bibliography link: <http://www.ipu.hr/suradnici/znanstvenici/62/Josko-Belamaric>

**Irena Benovsky Latin**  
 irenabenovsky  
 @yahoo.com

**IRENA BENOVSKY LATIN, CROATIAN INSTITUTE OF HISTORY.** Born in 1970 in Zagreb. She graduated History at the University of Zagreb and defended MA thesis at Medieval Studies, CEU. As a Fulbright visiting fellow, she spent 1999 at Stanford University. In 2002, she defended her PhD dissertation at University of Zagreb on "Social Determination of the Urban Development: Trogir, 1250-1450". She participated in workshops of the Venetian International University in 2001/2002 (Medieval Urbanism Workshop) and 2013 (Digital Visualization Workshop). Since 1997, she has been working at the Croatian Institute of History, since 2012 as a senior researcher. She is PI of the research project *Cities of the Croatian Middle Ages: Urban Elites and Urban Space* (<http://urbes.s2.novenaweb.info/>). She teaches courses in medieval and urban history at Universities of Zagreb and Dubrovnik (since 2012 as Associate Professor). She is representative of Croatia in the *International Commission for Urban History* and organizer of *Triennale on Towns and Cities in Medieval Croatia*. The author of *Medieval Trogir: Space and the society* (2009) and co-author (with D. Zelić) of *Book of Communal Properties and Leases in Dubrovnik* (2007). Her research focuses on the medieval urban history of the Eastern Adriatic coast (especially Trogir and Dubrovnik), urban social topography and the development of institutions.

**Nadia Bertolino**  
 nadia.bertolino  
 @northumbria.  
 ac.uk

**NADIA BERTOLINO IS A RESEARCH FELLOW AT NORTHUMBRIA UNIVERSITY, UNITED KINGDOM,** where she works on the research project *Place and belonging* funded by the Arts and Humanities Research Council. She has previously worked at Sheffield School of Architecture where she was the director of the Master in Architectural Design. Nadia has a PhD in Architectural Design from the University of Pavia, Italy. She joined Northumbria University in 2016, having previously taught at the University of Sheffield, University of Pavia and Polytechnic of Milan. She has been a guest lecturer and studio reviewer at a number of international schools including Oslo School of Architecture, Tongji University, University of Seville, Polytechnic University of Catalonia and University of Padua. She has been the keynote speaker at the University of Lisbon, Harbin Institute of Technology, and Indian Education Society in Mumbai. Nadia has exhibited her previous works at 5th and 6th Shenzhen and Hong Kong Biennale of Urbanism (2014 and

2016) and Huddersfield Art Gallery (2016). In 2010, she co-curated the event *Metropolis/Antimetropolis* at the Venice Biennale. She has edited books, authored chapters and technical papers on architectural theory and design, with a common focus on the definition of architecture as a social product.

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**FRANCESCO BETTARINI** is archival assistant and research fellow at **NEUBAUER COLLEGIUM – UNIVERSITY OF CHICAGO, UNITED STATES OF AMERICA**, since 2014. He graduated in 2005 in Medieval History at the Università di Firenze, and gained his PhD in 2009 under joint supervision with the Université Paris IV – Sorbonne. He has been fellow at Fondazione Giorgio Cini in Venice. In 2012-2013, he was Sessional Lecturer at University of Reading. His research focuses primarily on the study of the deployment of the Florentine merchant network in Venice and Eastern Europe in the late Middle Ages. He has published dozens of papers and three books: *Contabilità e diversificazione degli affari: i libri di conto del notaio Andrea Bertelli da Prato (1373-1453)*, Fondazione Internazionale di Storia Economica “F. Datini”, Prato, 2012, (Quaderni di ricerca, 1), *La comunità pratese di Ragusa (1414-1434). Crisi economica e migrazioni collettive nel Tardo Medioevo*, Olschki, Firenze, 2012; *L’Arte dei notai di Prato e lo statuto del 1332, Notariorum Itinera*, Genova, Società Ligure di Storia Patria, 2016.

**Francesco Bettarini**  
frbetta@gmail.com

**IVANA HANIČAR BULJAN, INSTITUTE OF ART HISTORY, ZAGREB, CROATIA.** In 1996, she graduated from the Faculty of Architecture, University of Zagreb. Since 1996, she has been working at the Institute of Art History in Zagreb as an associate researcher in the field of architecture. Since 2011, she has been an assistant to the Head of the Institute of Art History. Participated in various field projects of architectural documentation of historical buildings, held under the auspice of the Institute. She has co-authored two books (with Ratko Vučetić): *Nuštar: Dvorac Khuen-Belassy, arhitektonska, povijesno – umjetnička, restauratorska istraživanja* and *Darda: Dvorac Esterhazy, Povijesno-građevinski razvoj, valorizacija i prijedlog konzervatorskih smjernica*.

**Ivana Haničar Buljan**  
ihanicar@ipu.hr

**THOMAS COOMANS** is an architectural historian and building archaeologist, professor at the **UNIVERSITY OF LEUVEN (KU LEUVEN), BELGIUM**, Faculty of Engineering Science, Department of Architecture, and staff of the **RAYMOND LEMAIRE INTERNATIONAL CENTRE FOR CONSERVATION**. He holds a PhD in archaeology and art history from the Université Catholique de Louvain. Since more than 25 years his research and numerous publications on church and monastic architecture, from medieval to early 20th-century, combine architectural historical methods with building archaeology, construction history, and conservation issues (including the adaptive reuse of

**Thomas Coomans**  
thomas.coomans@kuleuven.be

churches). He supervises the research project *Redeveloping the City. Urban Transformation and 'Heritagization' after the Secularisation of Religious Houses in Belgian Towns at the Dawn of the Modern Age* (FWO-Research Foundation Flanders). His academic cursus includes: postdoc at Leiden University; associate researcher at the Canada research chair on urban heritage, Université du Québec à Montréal; associate professor at the Free University Brussels, assistant professor at the Chinese University of Hong Kong; senior researcher at The Netherlands Institute for Advanced Studies, visiting professor at École Nationale des Chartes Paris Sorbonne, The Peking University Institute of Humanities and Social Sciences, etc.

**Jon Corbett**

jon.corbett  
@ubc.ca

**JON CORBETT** is an associate professor in Community, Culture and Global Studies at **UNIVERSITY OF BRITISH COLUMBIA, OKANAGAN, CANADA**; the director of the **INSTITUTE FOR COMMUNITY ENGAGED RESEARCH**, and the director of the **SPATIAL INFORMATION FOR COMMUNITY ENGAGEMENT (SPICE) LAB**. Jon's community-based research investigates Cartographic processes and tools that are used by local communities to help express their relationship to, and knowledge of, their land and resources.

**Alessandro Corsi**

alessandro.corsi  
@unicatt.it

**ALESSANDRO CORSI**, PhD candidate in Science of the Person and Education, curriculum: History and Literature of the Modern and Contemporary Age, **UNIVERSITÀ CATTOLICA DEL SACRO CUORE OF MILAN, ITALY**, where he is working on his thesis "Research studies towards literary academies in Milan (XVI-XVIII century)" under supervision of Prof. Danilo Zardin. He holds BA in History and MA in Modern Philology (Erudite culture in the Milan of the Counter-Reformation: the Gesuato Paolo Morigia 1525-1604), both at Università Cattolica, Milan. In 2012/2013 he spent a semester at Department of Ancient History, the University of Vienna within the Erasmus Exchange. He is a collaborator at "milanoassociazioni" database, Università Cattolica – Golgi-Redaelli Foundation, Milan and a collaborator at *Rivista di Storia della Chiesa in Italia, Vita & Pensiero*, Milan.

**Melita Čavlović**

melita.cavlovic  
@gmail.com

**MELITA ČAVLOVIĆ, FACULTY OF ARCHITECTURE, UNIVERSITY OF ZAGREB, CROATIA**, is an architect who graduated from the Zagreb Faculty of Architecture in 2007. During her studies, she was active in the work of **ARCHIsquad** NGO through the preparation of a series of lectures titled *Out of Focus: Architecture of Giving*. She has working experience in local and international architecture offices and has collaborated as an independent architect in two award-winning competition projects. From 2009 to 2011 she worked as a researcher at the Faculty in Zagreb on the scientific project *Atlas of 20th-century Croatian architecture* led by Andrej Uchytíl. In 2014 she was part of the team of

authors that represented Croatia at the Venice Biennale with the *Fitting Abstraction* exhibit. She authored numerous published essays and articles and a chapter in the book dealing with the legacy of the Adriatic motels designed by Ivan Vitić in 2016. She is currently a PhD candidate at the same institution completing her thesis on the inter-relationship of the transformations of post-WWII architectural practice and the realised work in the case of Zagreb. She is the co-author and the executive editor of the upcoming *atlasarhitecture.org* digital database intended as an interactive an open interface of the aforementioned research project.

**VANNI D'ALESSIO** is assistant professor at the Department of History of the **UNIVERSITY OF RIJEKA, CROATIA**, and Research Fellow at the Department of Social Sciences of the **UNIVERSITY OF NAPLES, ITALY**. He has written a monograph on the birth of Croatian and Italian nationalisms in late Habsburg Istria (*Il Cuore Conteso, Il nazionalismo in una comunità multiethnica: L'Istria asburgica*) and several essays on the social and cultural history of Istria and the Upper Adriatic in the 19th and 20th centuries. He has also written on the divided city of Mostar after the war in Bosnia Herzegovina, on which he filmed a short documentary film (*Around Mostar, The Bridge and Bruce Lee*, with Sanja Puljar). Since the early 2000s he has taught a number of history courses in various universities (L'Aquila, Naples Federico II, Naples Suor Orsola Benincasa, and Rijeka), among which: Modern Europe, Modern South-Eastern and Central Europe, European National Movements, Nationalisms in the Adriatic, Modern and Contemporary Multiethnic cities, and Modern Croatian-Italian cultural links. Vanni D'Alessio was the Editor-in-Chief of the *West Croatian History Journal / Časopis za povijest zapadne Hrvatske* (A journal from the University of Rijeka).

**IOANNI DELSANTE** is currently reader in Urban Design at the **UNIVERSITY OF HUDDERSFIELD, UNITED KINGDOM**. Prior to this, he was assistant professor in Architectural and Urban Design at the University of Pavia. Course leader for MA Urban Design at the University of Huddersfield, he previously taught at University of Pavia, Politecnico di Milano and the Tongji University of Shanghai. He is a member of the Advisory Committee of the PhD program in Arquitectura at the Escuela Técnica Superior de Arquitectura, University of Sevilla (Spain), and since 2015 member of the British Council Science Research Reviewer Panel. Chair of the Urban Futures and Design Lab at the University of Huddersfield, he is currently chartered member of the RIBA, Academician of the Academy of Urbanism, a member of the Urban Design Group and Royal Town Planning Institute Affiliate. Associate editor of the *Journal of Urban Planning and Development* (ASCE) he acts as peer reviewer

**Vanni D'Alessio**  
dalessio@ffri.hr

**Ioanni Delsante**  
i.delsante  
@hud.ac.uk

for various journals and research councils. His current research interests deal with: urban morphology and its links with planetary urbanisation; forms of alter-urbanisation and alternative urban transformations, through the lens of urban commons, design agencies and creativity.

**Heidi Deneweth**

heidi.deneweth  
@vub.ac.be

**HEIDI DENEWETH** (1961) is a postdoctoral fellow of the Research Foundation Flanders (FWO) and teaches “Urbanisation in Early Modern Europe” at **VRIJE UNIVERSITEIT BRUSSEL (VUB), BELGIUM**. She is a member of the research team HOST (Historical Research into Urban Transformation Processes) that investigates the interaction of economic, social and urban change in the Early Modern Low Countries. She is also a member of the research groups BCUS (Brussels Center on Urban Studies) and CHSB (Brussels Research Centre for Construction Histories). She has previously worked on the interaction between housing, neighbourhood life, real estate and finance (PhD, 2008), on the interaction between labour markets, migration and social policy (VUB 2008), and on household finance, the composition of wealth and social mobility in early modern cities in the Low Countries (Utrecht University 2009-2012, VUB 2012-2013). Since 2013, she investigates the interaction between urban development, real estate markets and the construction sector, with a specific focus on entrepreneurial strategies of building contractors and the ways in which they dealt with risks and opportunities in the construction sector (Low Countries, 1500-1900).

**Alessandra**

**Ferrighi**

ferrighi@iuav.it

**ALESSANDRA FERRIGHI** is an assistant professor of History of Architecture at the **UNIVERSITÀ IUAV DI VENEZIA, ITALY**, where she has been a researcher since 1998 and teaches “Digital History. Visualizing Cities” since 2014. She graduated with honours from the Istituto Universitario di Architettura di Venezia (now Università Iuav di Venezia). She received a Master in Protection and Preservation of Cultural Heritage from the Scuola Normale Superiore in Pisa in 1999 and a PhD in Building and Environmental Conservation from the Università degli Studi di Genova in 2005. Ferrighi has coordinated the Visualizing Venice team since 2011. She was a team member at the project *Dubrovnik: Civitas et Acta Consiliorum. Visualising Development of the Late Medieval Urban Fabric*. She curated the exhibition “Visualizing Venice, new technologies for urban history,” which opened at Spazio Gino Valle at the Iuav in December 2012 and has since travelled to Zagreb, Zara, and Split (Croatia); Florence, Shenzhen (China), and Saint Petersburg (Russia). She is currently working on an Information System to track urban transformation over space and time. She has collaborated with Donatella Calabi organising the exhibitions: 1) “Venezia acqua e cibo. Storia della laguna e della città” in 2015; 2) “Venezia, gli Ebrei e l’Europa. 1516-2016” in 2016. Her recent

publications on the subject are *Cities over Space and Time. Historical GIS for Urban History*. In S. Brusaporci (Ed.), *Emerging Digital Tools for Architectural Surveying, Modeling, and Representation* (pp. 425-445). Hershey, PA: IGI Global (2015), and *VISU. Il sistema informativo integrato sulle trasformazioni urbane di Venezia*. In *GEOmedia* 3 (2016).

**KRISTINA FRIEDRICH** is a researcher and lecturer at **JULIUS-MAXIMILIANS-UNIVERSITÄT WÜRZBURG, GERMANY**, and participates in the joint project *Urban history 4D – Multimodal access to large-scale image-repositories*. Before, she worked as a researcher at the Technical University of Dresden in a project on the architectural history of the baroque Japanese Palais in Dresden, and as museum assistant for the State-Owned Castles, Palaces and Gardens in Saxony at the Albrechtsburg Meißen. She received her PhD in 2013 on a work dedicated to the artistic and architectonic representation of the early Christian popes which had been granted a DFG scholarship at Ludwig-Maximilians-Universität Munich. It was awarded the best PhD thesis at the Faculty of Philosophy of the University of Dresden and received a publication grant by the Görres Gesellschaft. After having studied in Dresden and Pisa, she obtained an M. A. degree in art history and romance languages, the thesis also being awarded the faculty's price.

**Kristina**

**Friedrichs**

kristina.friedrichs

@tu-dresden.de

**NADA GRUJIĆ** has been teaching since 1990 courses on urbanism, architecture and Renaissance theory topics at the Department of Art History, Faculty of Humanities and Social Sciences, **UNIVERSITY OF ZAGREB, CROATIA**; was teaching and supervising dissertations at the Doctoral studies of the same department, and was its Director 1997-1999. She was also teaching at the Doctoral studies of Interuniversity centre Dubrovnik; at Doctoral studies Scuola Studi Avanzati, Venice and since 2002 at Master Europeo in Storia dell'Architettura, Roma, founded by Università degli Studi Roma Tre, Université Paris 8, Universidad Politécnica de Madrid i Université de Provence-Aix-Marseille 1. Since 1984 she is at CESR – Université François Rabelais, Tours, and since 2003 a collaborator at Centre André Chastel, INHA Paris. She held lectures at the University J. W. Goethe, Frankfurt, University of Genève, Lausanne and Pavia. From 1964 to 1990 she was a researcher at the Institute of Art History conducting studies and research on more than 1500 churches, monasteries, public buildings, systems of defence, residential buildings and residential assemblies as well as on urban development and the changes of the urban tissue in the numerous towns on the Eastern Adriatic coast and especially in Dubrovnik. As a leader and coordinator, she conducted the conservational studies in Dubrovnik after the earthquake 1979 and the war 1991-1995 to facilitate the quality

**Nada Grujić**

nada.grujic

@zg-t-com.hr



renovation of the urban tissue. She was Pi of several scientific projects and a member of the project *Dubrovnik: Civitas et Acta Consiliorum. Visualising Development of the Late Medieval Urban Fabric*.

**Shirin Haddadian**  
shirin.hdd  
@gmail.com

**SHIRIN HADDADIAN** is an architect and independent researcher. Shirin achieved her BA in Architectural Engineering at Islamic Azad University of Tehran (2012) and got her Masters Degree in Architectural Design from The University of Sheffield (2016). Shirin's research interests focus on alternative ways of understanding the urban space and the role of "imagination" in architecture. Her work about the creative mapping of the postindustrial neighbourhood of Holbeck has been exhibited in Shanghai at the "Open Your Space" exhibition (2016), as part of the 6th Shenzhen-Hong Kong Biennial of Urbanism/Architecture. Shirin currently works as a project manager at EBA[M], an architectural company in Tehran, where she is involved in various projects including design of a social housing project and revitalisation of old and disadvantaged neighbourhoods of Tehran through proposing new programs and interventions. She is also part of a research group, undertaking a study of the role of religion in the urban development of Tehran and possible relationships between religion and urban innovations happening in Tehran.

**Reinout Klaarenbeek**  
reinout.  
klaarenbeek  
@kuleuven.be

**REINOUT KLAARENBEEK** is a historical geographer, PhD student at the **UNIVERSITY OF LEUVEN (KU LEUVEN), BELGIUM**, Faculty of Engineering Science, Department of Architecture. Since October 2014 he works on the research project *Redeveloping the City. Urban Transformation and 'Heritagization' after the Secularisation of Religious Houses in Belgian Towns at the Dawn of the Modern Age*, supervised by prof. Th. Coomans (KU Leuven), prof. J. De Maeyer (KU Leuven) and prof. I. Bertels (VUB), and financed by FWO-Research Foundation Flanders. R. Klaarenbeek holds a Bachelor degree in Geography from the University of Utrecht, and a Master degree in Heritage Studies from the Free University of Amsterdam. His previous works include: project manager of historical geographic research in favour of preventive archaeological policy, at RAAP Archaeologic Consultancy B.V. Leiden; independent researcher on mapping related to urban history and historical geography in the Netherlands, with contributions to publications, exhibition, and policy reports; scientific staff member at the University of Antwerp, Centre for Urban History, working in the team of prof. Tim Soens on developing GISHistorical Antwerp, a geographic information system for research in urban history ([www.uantwerp.be/gistorical-antwerp](http://www.uantwerp.be/gistorical-antwerp)). He published several articles and attended international conferences at ESSHC Vienna, Lisbon, etc.

**SIMON KNOWLES** is a lecturer in the Department of Art History at **UNIVERSITY COLLEGE CORK, IRELAND**. Alongside conference papers presented in Ireland, the United Kingdom and the United States, he has published a number of articles on the representation of London and its suburbs during the second half of the nineteenth century. These include: “Pavement, Gutter, Carriageway: Social Order and Urban Spaces in the Work of W. P. Frith,” *Victorian Literature and Culture*, vol. 39, no. 2 (2011); “Suburban Identity in Paul Maitland’s paintings of Cheyne Walk,” *Journal of Victorian Culture*, vol. 19, no. 1 (2014); and “Railway Visions: William Hyde’s re-imagining of London as a networked space,” *The London Journal* (May 2017). The primary focus of his research is the correlation between urban development, the social function of space and the role played by representation. This has been further developed in a book, nearing completion, titled *Beyond the Smoke: Representing the London Suburb in the nineteenth century*. This study offers an alternative to the predominant emphasis on the experience of the urban centre by directing attention to the significance of the suburbs and the problematics of securing place identity within these rapidly evolving spaces.

**Simon Knowles**

s.knowles

@ucc.ie

**ANA KONESTRA, INSTITUTE OF ARCHAEOLOGY, ZAGREB, CROATIA**. Holds an MA in Cultural Heritage Conservation – Archaeology from the Faculty of Philosophy of the University of Udine, and from 2016 a PhD in Archaeology from the Department of Archaeology of the University of Zadar. Her thesis was dedicated to the distribution of early Imperial fine wares of Italic provenience in the Kvarner region. From 2012 is a young researcher at the Institute of Archaeology, participating in projects regarding the Northern Croatian Littoral and Istria, from 2016, leading the project Archaeological topography of the Island of Rab. From 2014 she is a team member of the Croatian Science Foundation’s project *RED – Roman economy in Dalmatia: production, distribution and demand in the light of pottery workshops*. She has participated in and lead numerous archaeological excavations and surveys in the coastal area of the north-eastern Adriatic. Her interests include Roman pottery distribution on the eastern Adriatic in the light of commercial and economic reconstruction, pottery production facilities, techniques and practices. Combining this topics with landscape archaeology, she focuses part of her research on the role of rural settlement and resource exploitation on the eastern Adriatic in Antiquity.

**Ana Konestra**

ana.konestra

@gmail.com

**ZEHRA LAZNIBAT** graduated from the Faculty of Architecture, the University of Sarajevo in 1988. Since 1989 she has been employed at the Institute for the Protection of Cultural Monuments and Nature in Dubrovnik, as well as the **CONSERVATION DEPARTMENT IN DUBROVNIK, CROATIA**, as a senior advisor

**Zehra Laznibat**

zehra.laznibat

@gmail.com

to Immovable Cultural Property. In 1999 she completed postgraduate studies “Building Heritage” at the Faculty of Architecture, University of Zagreb. Since 2016, she has been attending PhD studies at the Faculty of Architecture in Zagreb. The areas of her scientific interests are urban integration and revitalization of the archaeological heritage in the historical whole of Dubrovnik. Her work in the field includes all forms of protection and preservation of cultural heritage from the documentation, research, elaboration of conservation works, and reconstruction projects to conservation supervision on the execution of works. During her professional career, she has participated in various architectural projects of preservation and reconstruction of historical buildings and spatial planning documentation.

**Ward Leloup**

ward.leloup  
@vub.ac.be

**WARD LELOUP** (1991) studied history at the KU Leuven and graduated in 2013 with an MA dissertation on the foundation and morphological development of the late medieval port town of Sluis. As an independent researcher, he was involved in the *MAGIS Brugge* heritage project, helping with the digital deconstruction of the 1562 bird’s-eye view of Bruges by Marcus Gerards. In 2014, he was appointed as a research fellow at **GHENT UNIVERSITY, BELGIUM**, where he works on the interdisciplinary research project *Medieval Bruges and its outports* investigating the spatial, social, and economic history of the medieval portuary network along the Zwin and its constituting towns. Furthermore, since 2015, he works as a teaching assistant at the **VRIJE UNIVERSITEIT BRUSSEL, BELGIUM**, where he is also affiliated to the Centre for Historical Research into Urban Transformation Processes (HOST). As of 2016, he prepares a doctoral thesis (joint PhD Vrije Universiteit Brussel – Ghent University) under the supervision of Profs. Drs. Heidi Deneweth and Jan Dumolyn on the evolution of the socioeconomic topography of Bruges and Mechlin between the fourteenth and sixteenth centuries.

**Brigitte  
Le Normand**

brigitte.  
lenormand  
@ubc.ca

**BRIGITTE LE NORMAND** is assistant professor of History and director of Urban Studies at the **UNIVERSITY OF BRITISH COLUMBIA, OKANAGAN, CANADA**. She holds a PhD in History from the University of California, Los Angeles. Her research focuses on the profound transformations of Yugoslav society during the communist period, paying close attention to Yugoslavia’s engagement with global trends. Her first monograph (*Designing Tito’s Capital: Urban Planning, Modernism, and Socialism*), examined the evolution of planning ideology in Belgrade between 1945 and 1972. She has also published several articles on this topic. She is currently working on two projects. The first, a study of the relationship between Yugoslavia and its migrant workers during the later Cold War, is the subject of a forthcoming monograph. The second is an investigation of the ways in which the city of Rijeka changed after the

Second World War as a result both of border changes and the establishment of state socialism. She is also interested in examining to what extent these changes parallel similar processes elsewhere in Europe. This project is funded by a Social Science and Humanities Research Council of Canada Insight Development Grant.

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**GORANKA LIPOVAC VRKLJAN**, is a research associate at the **INSTITUTE OF ARCHAEOLOGY ZAGREB, CROATIA**. She graduated archaeology at the Faculty of Philosophy of the University of Zagreb, from which she obtained her PhD as well. She has been working at the Institute of Archaeology as a researcher since 1990, leading projects regarding the Northern Croatian Littoral in Antiquity, such as *Northern Croatian Littoral in the context of the antique defence system* and exploring pottery production sites at Crikvenica and on the Island of Rab. Within these projects she has dealt with production facility setup and organisation, amphorae and ceramic building materials production and distribution, archaeometry and experimental archaeology. In 2013 she started the project *Archaeological topography of the Island of Rab* in collaboration with the Conservation department in Rijeka, and from 2014 in cooperation with the Conservation department in Gospić, the project *Archaeological topography of the sub-Velebit coast*. Since 2014 she is the PI of the project *RED – Roman economy in Dalmatia: production, distribution and demand in the light of pottery workshops* of the Croatian Science Foundation. She organized numerous international congresses, workshops and round tables on the topic of Roman economy and pottery production.

**Goranka  
Lipovac Vrkljan**  
gorankalv  
@gmail.com

**ESTEFANÍA LÓPEZ SALAS** is a professor at the **SCHOOL OF ARCHITECTURE, UNIVERSITY OF A CORUÑA, SPAIN**, and she is a member of the Research Group of Architectonical Composition and Heritage (GICAP). She is an architect (2009) and she received a PhD in Architecture and Restoration from the University of A Coruña (Spain) in 2015, as well as an MA in Architectural Restoration from the same university in 2010. Her dissertation title was “The Monastery of San Julián de Samos (Lugo),” a study and interpretation of the monastic space and its evolution. She was granted a Pre-doctoral Fellowship from the University of A Coruña (March 2011 – December 2012), and a Pre-doctoral Fellowship of the Research, Innovation and Development Galician Plan 2011-2015 – IC2 Plan, financed jointly with Social European Fund (FSE-FEDER), (December 2012 – August 2015). She has presented conference papers in national and international congresses in Spain, Portugal, United Kingdom, Poland and USA. Her research work has been published in a number of journals and books on the topics of monastic architecture and sacred landscape evolution over the course of centuries.

**Estefanía  
López Salas**  
estefania.lsalas  
@udc.es

**Lana Lovrenčić**

lovrencicl  
@gmail.com

**LANA LOVRENČIĆ** is an activist and researcher with degrees from Zagreb Faculty of Humanities and Social Sciences in Philosophy and Art History. Her research interests and areas of expertise include the history of architecture and urbanism, sculpture and photography. Through her work, she concentrated on the study of modernism and modernisation processes, the history and politics of socialism, and the theory of heritage conservation practices. She co-authored a series of exhibitions, including “Tošo Dabac Within the Frame” and “Territory as Notation – Figures of South Zagreb”, both in 2016, “On Revolution Road: Memorial Tourism in Yugoslavia” in 2015 and “Monuments in Transition: The destruction of Post-War Monument in Croatia” in 2012. She was a researcher and author on the *Unfinished Modernisations* international project where she authored a study on the history and economic impact of the Zagreb international fair in 2012. Additionally, she co-lead the *(In)Appropriate Monuments* international research platform dealing with the current conditions and conservation practices of post-WWII monuments in former Yugoslavia. She co-organised two international conferences: *War, Revolution and Memory: Post-War Monuments in Post-Communist Europe* (2017) and *Socialist Monuments and Modernism* (2015).

**Ana Marinković**

anamarink  
@gmail.com

**ANA MARINKOVIĆ** is an assistant professor at Art History Department, Faculty of Humanities and Social Sciences, **UNIVERSITY OF ZAGREB, CROATIA**, with PhD in Medieval Studies (CEU, Budapest). She participated in the following projects: *Centre and Periphery: The Papal Penitentiary Registers and Central-Eastern Europe* (2002-2007), *Figural Art in Dalmatia in the Late Middle Ages* (2007-2013), *Pontes Adriatici: Network of Cultural Exchange in the Adriatic* (2014), *Dubrovnik: Civitas et Acta Consiliorum. Visualizing Development of the Late Medieval Urban Fabric* (2014-2017) founded by Croatian Science Foundation. She is the president of Croatian Hagiography Society Hagiotheca, a member of the management committee of COST Action *New Communities of Interpretation: Contexts, Strategies and Processes of Religious Transformation in Late Medieval and Early Modern Europe*, and a member of the Management Plan Board for the historical city of Dubrovnik. She collaborates with the Department for Cultural Heritage Preservation (Croatian Ministry of Culture) and the Croatian Conservation Institute on projects related to Dubrovnik architectural heritage (archival research), and with Art Radionica Lazareti on programmes related to urban heritage.

**Matko Matija Marušić**

matkomati-  
jamarusic  
@gmail.com

**MATKO MATIJA MARUŠIĆ** (1990) is a junior researcher at the **INSTITUTE OF ART HISTORY, ZAGREB, CROATIA**, and a member of the Croatian-Italian team on the project *Dubrovnik: Civitas et Acta Consiliorum. Visualizing Development of Medieval Urban Fabric* founded by the Croatian Science Foundation.

He holds bachelor's degree in Philosophy and master's degree in Art History, both obtained at the University of Zagreb. During his studies, he participated in the student exchanges at the universities of Naples and Pisa. He is currently a PhD candidate at the Postgraduate programme of Medieval studies of the University of Zagreb working on the urban history and urban development of late medieval Dubrovnik.

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**RENATA NOVAK KLEMENČIČ**, assistant professor at Department of Art History, Faculty of Arts, **UNIVERSITY OF LJUBLJANA, SLOVENIA**, studied art history at the University of Ljubljana. In 2000, she finished her master studies with a thesis on the 15th-century sculptor Pietro di Martino da Milano and his work in Dubrovnik. In 2006, she presented her dissertation "Architects, Stonemasons, and Sculptors of the First Half of the 15th Century in Dubrovnik." At the Department of Art History, she is currently a member of the research program *History of Art of Slovenia, Central Europe and the Adriatic*. Her research work is dedicated mostly to the 15th-century art and architecture of the Adriatic rim, especially to the architectural and stonemasons' practice, patronage and artistic exchange in Dubrovnik as well as in the Adriatic region. She conducted research in the archives of Dubrovnik, Venice, Naples, and Vienna, and studied at various research institutes and universities in Florence, Venice, and Padua. In 2007 she was awarded a grant from the Francis Haskell Memorial Fund for her research in the archives of Naples and Dubrovnik.

**Renata Novak  
Klemenčič**  
renatanovakkle-  
mencic  
@gmail.com

**ANA PLOŠNIĆ ŠKARIĆ** is a senior research associate at the **INSTITUTE OF ART HISTORY, ZAGREB, CROATIA**. She holds BA in Art History and Latin language and literature, and an MA and a PhD in Art History from the University of Zagreb, Croatia. She was a team member at the projects *Artistic Heritages from Antiquity to Early modern age* (2000-2006) and *Medieval Architecture and Urban Development in Croatia* (2007-2014). From 2014 until 2017 she was a Principal Investigator of the project *Dubrovnik. Civitas et Acta Consiliorum. Visualizing development of the Late Medieval Urban Fabric* funded by the Croatian Science Foundation. Since 2011 she is a member of the Editorial Board of the *Radovi Instituta za povijest umjetnosti / Journal of the Institute of Art History*. Her research interests are medieval urban history, archival sources, urban development and changes of urban tissue, typology and architectural forms of residential architecture. She has published a number of articles and presented conference papers, and currently working on a book of transcriptions of documents recording stonemasons and builders in late medieval Trogir.

**Ana  
Plošnić Škarić**  
aplosnic  
@ipu.hr

**Ilario Principe**  
principarte14  
@gmail.com

**ILARIO PRINCIPE**, (born in Argusto, Catanzano, in 1940) Laureato in Economia e Commercio all'Università di Firenze, after having held various professional positions as an international expert for the industrial and economic development at the United Nations and the European Community, he was dedicated to teaching first in Regional planning and then in Urban and territorial history at Università di Firenze, Reggio Calabria e Cosenza, Italy. In Università della Calabria at Cosenza, he has taught subjects like Film studies, Fashion and costume history, Labor movement and peasant history, remaining tied to History of architecture and related disciplines, mainly Urban history. He is retired from 2010; in this time he completed two big research: an essay to draw a theory of prehistoric art, and an innovative lecture of Christian art. His knowledge of Dubrovnik urban history dates back from 1984 when he met, during a touristic journey in formerly Jugoslavia, Ivana Burđelez in National Archive at Sponza Palace: she become the main cultural referent for the many times he returned in different opportunities, even during the war of independence. In 1991 Ivana translated for Matica Hrvastka his important paper regarding three unpublished maps of Dubrovnik, examined also in the present contribution.

**Antun Sevšek**  
antun.sevsek  
@gmail.com

**ANTUN SEVŠEK** is a freelance architect and independent researcher who graduated from the Zagreb Faculty of Architecture in 2006. He has worked in leading local architectural offices where he participated in numerous award-winning projects. He was part of the curatorial team of the international research project *Unfinished Modernisations* and an editor of the subsequent publication in 2012. In the following year, he curated, designed and edited a series of exhibitions and a book titled *Spaces of Co-Operation* dealing with the recent history of spatial planning of Zadar County in Croatia along with Maroje Mrduljaš and Damir Gamulin. This project was awarded in 2016 the Neven Šegvić prize for best published, research or theoretical work in architecture. He has designed numerous exhibitions and projects for cultural institutions. Among them, he recently realised the new *Memorial Centre Lipa Remembers* museum together with Damir Gamulin. He is a longtime member of *Platforma 9,81*, an NGO for research and education in architecture and urbanism. Since 2014 he has been active in the *Right to the City* organisation in Zagreb where he is engaged with the topics of urban and national spatial planning. He is currently employed in the *Alliance Operation city* NGO.

**Angeliki Sioli**  
asioli1@lsu.edu

**ANGELIKI SIOLI**, PhD, is an assistant professor of architecture at **LOUISIANA STATE UNIVERSITY, UNITED STATES OF AMERICA**, and a licensed architect in Greece. She obtained her professional diploma in architecture from the

University of Thessaly, Greece, and was granted a post professional master's in architectural theory and history by the National Technical University of Athens, where she worked as a professional architect and designer. She completed her Doctor of Philosophy in the history and theory of architecture at McGill University. Her research seeks connections between architecture and literature in the public realm of the early 20th-century European city, focusing on aspects of embodied perception of place in the urban environment. Her work on architecture, literature, and pedagogy has been published in a number of edited volumes and presented at interdisciplinary conferences. She has taught both undergraduate and graduate courses at McGill University and Tec de Monterrey, Campus Puebla in Mexico.

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**MATHIJS SPEECKE** (1993) studied History at **GHENT UNIVERSITY, BELGIUM**, where he subsequently started his PhD fellowship financed by the Research Foundation Flanders (FWO) on "The Struggle for Urban Space in the Later Medieval City. The Case of Bruges (c. 13th-14th Centuries)." This project focuses on the politics of social topography and residential segregation in Late Medieval Bruges.

**Mathijs Speecke**  
mathijs.speecke  
@ugent.be

**NERA ŠEGVIĆ** is a PhD candidate at the **DEPARTMENT OF ARCHAEOLOGY, UNIVERSITY OF ZAGREB**. She holds a master's degree in Archaeology obtained at the University of Zagreb and an MSc degree in GIS & Archaeology obtained at the University of Edinburgh. Along with participation in numerous archaeological digs and surveys, she has worked as an expert assistant at the Institute of Archaeology (2013-2014, 2015-2016), dealing with documentation, digitizing, field data processing and database design. From 2017 she is an external collaborator on the project *RED – Roman economy in Dalmatia: production, distribution and demand in the light of pottery workshops* of the Croatian Science Foundation, with tasks involving spatial database design, implementation of GIS and WebGIS solutions and archaeological data analysis. Her scientific interests involve resource and distribution networks, GIS analysis of archaeological spaces and archaeological databases. She has organised and participated in various workshops and round tables dealing with GIS and database implementation in archaeology.

**Nera Šegvić**  
nera.segvic  
@gmail.com

**ELKE KATHARINA WITTICH** had studied the history of art, archaeology, German literature and history of music (University Hamburg), and was a member of the post graduate research group „Political Iconography“ of the Deutsche Forschungsgemeinschaft (DFG). Her graduate thesis „Karl Friedrich Schinkel zum Beispiel – Kenntnisse und Methoden im Architekturdiskurs des frühen 19. Jahrhunderts“ (Humboldt University Berlin) examines the knowledge

**Elke Katharina Wittich**  
elke.wittich  
@amdnet.de



about architecture and the methodology of architectural writings in the early 19th century by taking Schinkel and his educational training at the Berlin Building Academy as an example. She has published books and articles on the history of architecture and design as well as on the history of science in 17th to 20th centuries. From 2005 to 2011, Elke Katharina Wittich was the founding president of the private [DEPARTMENT OF DESIGN, HOCHSCHULE FRESENIUS, UNIVERSITY OF APPLIED SCIENCES](#). Nowadays she is professor of theory and history of design and architecture as well as director of programme development at the department of design, Hochschule Fresenius, University of applied sciences, Hamburg. Furthermore, she is a member of the academic committee of the project *Discovering Dalmatia. Dalmatia in 18th and 19th-century travelogues, pictures and photographs* at the Institute of Art History – Centre Cvito Fiskovic, Split, Croatia.

**Danko Zelić**  
danko@ipu.hr

[DANKO ZELIĆ](#) is a senior research adviser at the [INSTITUTE OF ART HISTORY, ZAGREB, CROATIA](#). He also teaches at the University of Zadar (Art History Department and the Doctoral studies programme). His main research interests are urban history and urban development of medieval Croatian towns, including the study of primary/archival sources. He was the PI of the project *Medieval Architecture and Urban Development in Croatia* (2012–2014); and PI of the project *Croatian Art-History Terminology – Establishment of the Thesaurus* (2007–2009), a team member at the project *Artistic Heritage from Antiquity to Early modern age* (2000–2006, PL Diana Vukičević Samaržija) and *Dubrovnik: Civitas et Acta Consiliorum. Visualising Development of the Late Medieval Urban Fabric*. In 1993 he was a visiting fellow at Paris IV (Sorbonne) / French Government grant. Since 2005 he is a member of the editorial board of the journal *Radovi Instituta za povijest umjetnosti / Journal of the Institute of Art History*. From 1994 to 2005 he was a member of organising committee of conferences at the International Centre for Late Antiquity and Middle Ages, Motovun (head: Miljenko Jurković). He collaborated in at the numerous exhibition and publishing projects.



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