Medieval Porticoes of Rome:
Revealing Rome's Architectural and Urban Heritage Digitally

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Abstract. *As a case study in digital documentation this paper examines the medieval façade porticoes of Rome through the identification and mapping of these structures and analyzes them together with drawings and historic views allowing one to examine them in relation to historic and present day city maps. This paper makes use of a methodological approach to the multimedia representation of architectural and urban heritage, in order to offer architects, planners and scholars research tools that extend the capabilities of traditional forms of primary and secondary source material. Digital documentation examined in this study reveals a distinct layer of the city's building tradition, highlighting the phenomena of a shift in architectural and urban patterns and as a result the fabric of the city. The field of investigation of this paper is the city of Rome. More specifically it deals with the 54 buildings and complexes that house the remnants of medieval residential façade porticoes that exist inside the walls of the historic center of Rome. Through the identification of a distinct type and character of a medieval building such as the residential façade portico and their distribution, this study begins to contribute to what can later be added to and expanded upon in terms of gaining a better understanding of the density of settlement patterns of Medieval Rome.*

Keywords: Medieval, Rome, portico, digital documentation, urban networks, processional routes, urban armature,

Introduction

The 54 medieval residences identified in this study, when examined together reveal four distinct categories or sub-types of residential porticoes [Figure 1]. Type 1 will be referred to here as the trabeated portico and most likely the earliest form of residential façade portico constructed in Rome [Figure 2]. The particular reuse of ancient Roman building materials in the form of a simple architrave, single shaft columns, ancient column bases and Ionic capitals made by medieval craftsman from ancient blocks of stone are comparable in size, character, and detail to trabeated porticoes found in the narthexes of medieval churches such as the one visible along the façade of the church of San Lorenzo in Lucina. Type 2 is referred to here as the arcuated portico and is comprised of a series of brick arches that run along the façade of a residence, supported by single shaft columns, that either have an Ionic capital or carved abacus, and marble bases from antiquity or medieval production [Figure 3]. Similar to the first type, the arcuated portico has its counterpart in medieval church construction and are still visible today along the façade of Santo Stefano Rotondo. Type 3, the Tower house is found at the base of medieval towers creating an arcuated permeable base to an otherwise defensive and closed structure. Type 4, referred to as the Townhouse portico that is comprised of two arched openings supported by a single shaft column with an Ionic capital or carved abacus with or without a base mark one of the latest types of portico construction. According to Tomei, it is this residential type from which the Renaissance *casa a schiera* or
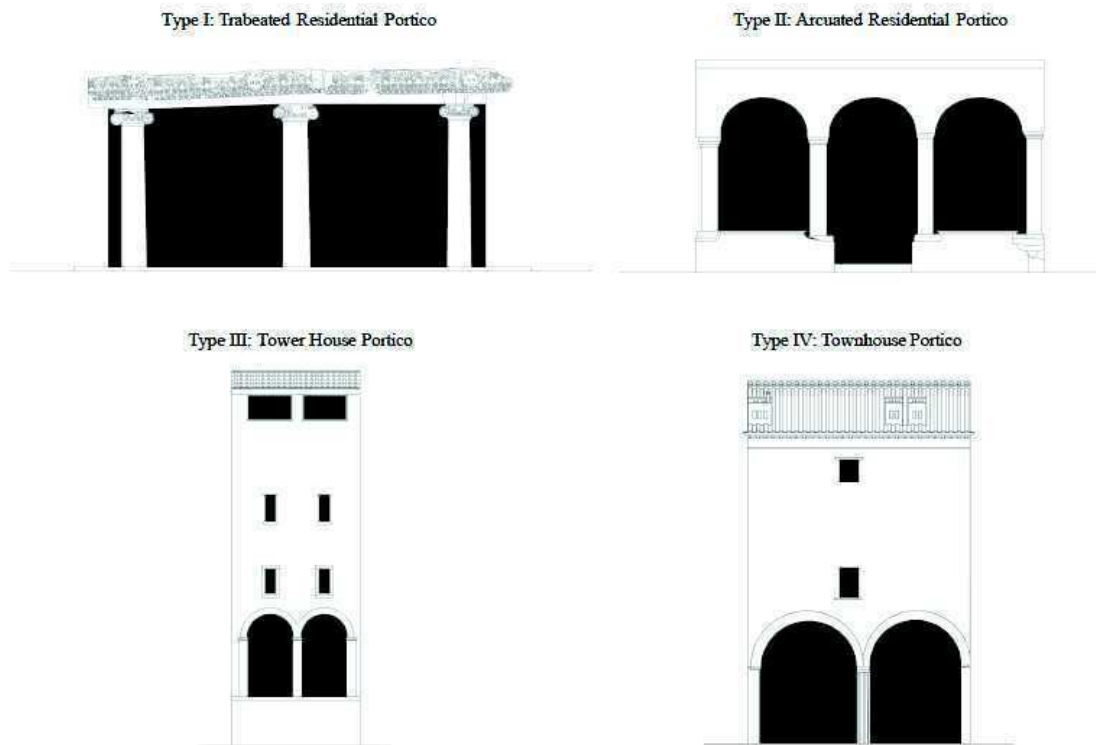
Type I: Trabeated Residential Portico

Type II: Arcuated Residential Portico

Type III: Tower House Portico

Type IV: Townhouse Portico

Figure 1. Four types of residential façade porticoes of Rome

Townhouse emerges. In addition to these four types there was one additional portico attached to a medieval tower that more aptly resembled a market loggia rather than a residential façade portico [Figure 4]. Of the 54 structures discussed, 17 could not be classified under any of the above mentioned sub-types due to the fragmentary elements of the porticoes visible, the existing remains still residing beneath layers of plaster.

In order to gain a better understanding of the architectural character of medieval Rome, a brief survey of residential architecture of the Middle Ages will be explored. It is difficult to pin point the exact moment of evolution of residential architecture in Rome that in antiquity was comprised of the single-family *domus* or the multi-family *insula*. While there were countless variations of these two types, they served as cornerstones for understanding of ancient residential architecture. Scholars look to ancient examples to better understand the origins of medieval residential architecture

that served as a single family dwelling including a ground floor *bottega* with living areas of one or two storeys above. One of the few places where it is possible to examine this evolution in residential architecture during late antiquity near Rome, is in the city of Ostia as mentioned by Torgil Magnuson and Axel Boëthius. Magnuson goes on to outline significant moments in Rome's medieval residential architecture, finding that "before the eleventh century families of the Roman aristocracy lived modestly in low buildings, usually referred to as *domus maior* and were usually free standing. The structures had multiple levels and the reuse of ancient building material was almost always present. Of the houses of this type and time that survive is the above mentioned Casa dei Crescenzi and the ninth century houses in the Forum of Nerva. Based on Meneghini's reconstruction of the houses in the Forum of Nerva, the construction type and design appear to more closely resemble Early Christian architecture,

Piazza Fontana di Trevi, 92-95

Piazza Campo Marzio, 5-6

Casa Bonadies

Via Capo di Ferro, 31

Via dei Giubbonari, 64

Via di S. Bonosa, 22

Palazzo Ginnasi

Figure 2. Type 1 Trabeated façade porticoes of medieval residences in Rome

specifically the design and construction of the narthex in relation to the church. The location an design of these types of residential buildings continued to evolve throughout the center of Rome as we will see later.

During the twelfth century in Rome an increasing number of the city's inhabitants were situated in and around the area of the Campus Martius. On the other side of the river there was the growing neighborhood of Trastevere and the Borgo Leonino near St. Peter's Basilica. By this time an increasing number of Rome' residential architecture included fortified towers, built by the aristocratic families of the city. Documentary evidence suggests that the city of Rome around this period had somewhere around 318 towers. Today, very few of these towers survive; they have either been reduced, masked and enveloped by the growing heights of neighboring buildings or incorporated into later structures. The more common housing type for the average shop owner or craftsman during this time consisted of a mixed-use work

live situation that included a workshop or *bottega* on the ground floor and a living area above. Houses with two storeys were reffered to as *domus solorata*, and became common at the beginning of the thirteenth century. From the middle of the eleventh century this housing type became common for merchant classes and not just the aristocracy. Yet the three-storey houses or *domus solorata cum tribus solariis*, do not seem to have been built in Rome until the thirteenth century. At the back of the house there was almost always a garden. The workshop, *bottega* feature was common and when a number of houses of this kind were joined, in some cases a portico was formed as we will examine later in this study. Twentieth century renovations have revealed a number of walled in medieval residential porticoes throughout the center of Rome providing greater understanding of the porosity that existed along the streets during the Middle Ages, where workshops were abundant. We can imagine, if the number of tower houses

Piazza S. Cecilia, 19

Via della Lungaretta, 160-161

Vicolo della Luce, 57

Via Tribuna di Campitelli, 23-23 B

Via della Madonna di Monti, 67, 68, 69

Figure 3. Type 2 arcuated façade porticoes of medieval residences in Rome

in Medieval Rome reached 318 representing the aristocracy of the city and others of later wealth, the number of houses for the average person, including residences with a portico along the façade would be double. While this type of house must have been more profuse in Rome than what we see today, there appears to be orderliness to their construction that differs from the same building type found in central and norther Italy. While there is quite a variety in these buildings that we see today, the use of materials and even architectural details are much more harmonious to the Roman street scape providing unity with individual variety.

In order to visualize the street scape of medieval Rome, historic *vedute* or views of the city coupled with deeds of sale and leases begin to provide a more complete picture. In this study, archival documentation and historic views are immensely helpful in re-populating the topography of the medieval city. Beginning with Fra Paolino's 1323 map of Rome, that shows a number of non-attached houses and row-houses, lining the sterets, which were more common of that time we can begin to better understand the medieval cityscape. The map describes the topography of the city of Rome through a series of pictorial elevations rather than the measured iconographic maps that we use today. While it is not an accurate measured plan of the city, it is telling in its depiction of important ancient, religious, civic, and residential architecture. Porticoes seem to be present throughout Rome on the surfaces of buildings as well as a free standing street portico that appears to run through the center of the city.

The Codex Escurialensis from the end of the fifteenth century also provides detailed views of Rome and its urban fabric that is not easily understood from the later bird's eye view plans of the city produced by Leonardo Bufalini in 1551 and Antonio Tempesta in 1593. In particular views of the Forum of Nerva through the arch of the ancient building framing a residential portico that passed along
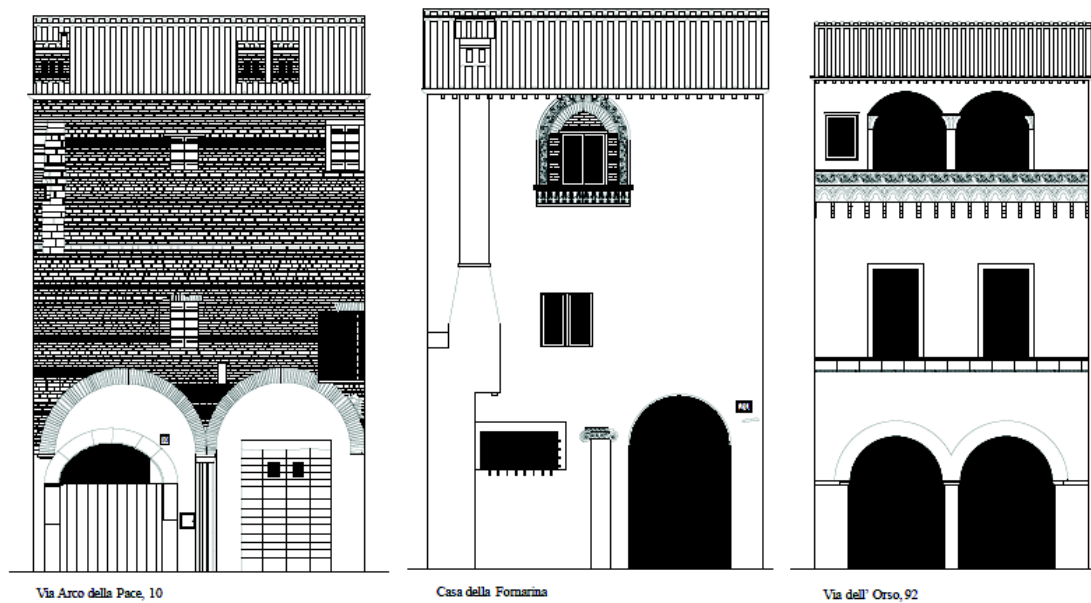
Via Arco della Pace, 10   Casa della Fornarina   Via dell' Orso, 92

Figure 4. Type 4 townhouse façade porticoes of medieval residences in Rome

the present day Via della Madonna dei Monti is no longer visible but captured in over three hundred years of artist's renderings of the same view. The present day street still retains a residential portico examined in this study, indicating the greater number of porticoes that existed historically throughout the city. From the Dutch painter Marten van Heemskerck (1498-1574) who produced copious drawings of the city of Rome from 1532-36 it is possible to make out residential and religious porticoes throughout the center of the city that are no longer visible to us today [Figure 5]. These views also include snapshots of the portico near the Forum of Nerva. Heemskerck's abundant drawings include cityscapes of Rome's porticoes present in the area surrounding the Basilica of St. Giovanni in Laterano and the Capitoline Hill.

Methodology

Through examination of the medieval façade porticoes of Rome what has emerged as a result is a greater understanding of the major urban sequences and or processional routes along which these porticoes were situated [Figure 6]. The mapping and geo-locating of these structures reveals the commercial heart of medieval Rome. At the architectural scale what emerged is a clear and comprehensive culture of construction that it not only limited to residential architecture but carries over to the building of churches and other religious and civic structures. Also discovered in this study is the identification of four distinct sub-types of residential porticoes that emerge when examining the extant remains of these medieval structures coupled with historic archival materials.   The reuse of ancient *spolia* reworked by medieval masons was quite systematized and cohesive and when examined as a group, clear patterns emerge allowing one to better understand not only the medieval culture of building but the quantity of certain ancient Roman materials such as architraves, capitals and pieces of stoner were available locally and re-worked by medieval masons. The use of the Ionic order appears to be executed by a number of skilled masons in a variety of ways that attempt to communicate the ancient precedent from which they were taking inspiration. The Ionic order in medieval Rome was not only prevalent in residential architecture but the capital of choice by masons for religious architecture of the period as well. While this study is limited in the fact that it is not able to examine every building thoroughly in the *abitato*, peeling back the layers of
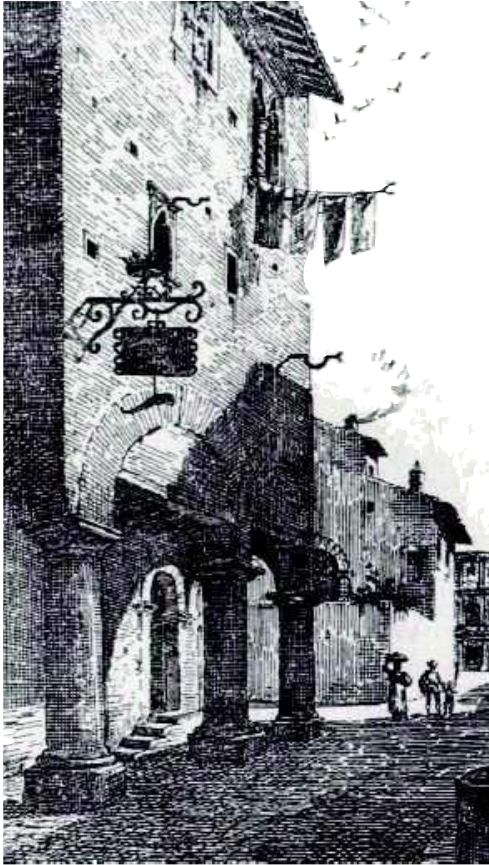
Figure 36. Residential façade portico. Source: Giovan Battista Giovenale

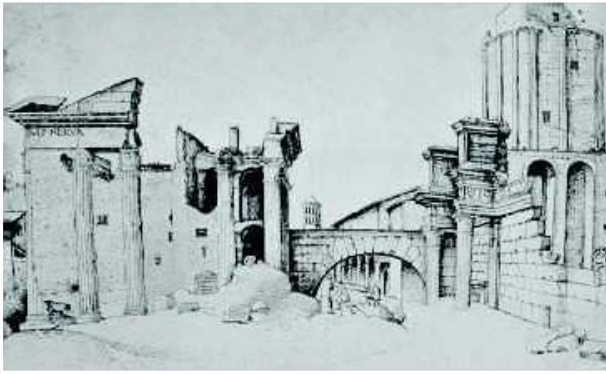Figure 45. Forum of Nerva. Maarten van Heemskerck, 1532-36. Source: Kupferstichkabinett, Staatliche Museen zu Berlin.

Figure 43. View of the Forum of Nerva towards the present day Via della Madonna dei Monti. Codex Escurialensis, Domenico Ghirlandaio, 1490. Source: University of California San Diego.

Figure 5. Historic views of medieval porticoes in Rome

each and every structure to reveal the pre-existing masonry, ruins, or use of *spolia*, what is partially visible in the form of enveloped columns, tower houses, and church structures serves as the base of future research that can be continuously added to.

Type 1 Trabeated Residential Portico

Rione II. Trevi
1. Piazza Fontana di Trevi, 92
2. Piazza Fontana di Trevi, 95

Rione III. Campo Marzio
3. Piazza Campo Marzio 5-6

Rione V. Ponte
4. Casa Bonadies/Via di Banco Santo Spirito, 61

Rione VI. Parione
5. Via dei Giubbonari, 64

Rione VII. Regola
6. Via Capo di Ferro, 31

Rione VIII. Sant' Eustachio
7. Palazzo Ginnasi, Via dell'Arco de Ginnasi, Largo di Santa Filippini, 5

Rione XIII. Trastevere
8. Casa Mattei in Piazza Piscinula

Type 2 Arcuated Residential Portico

Rione I. Monti
1. Via della Madonna dei Monti, 67, 68, 69

Rione V. Ponte
2. Antico Albergo dell'Orso

Rione VI. Parione
3. Vicolo Savelli, 32

Rione VIII. Sant'Eustachio
4. Palazzo della Valle, Corso Vittorio Emanuele II, 101

Rione X. Campitelli
5. Vicolo Margana, 12
6. Vicolo Margana, 14

Rione XI. Sant' Angelo
7. Via del Teatro di Marcello, 2
8. Via dei Delfini, 8/9
9. Via Tribuna dei Campitelli, 23
10. Via Tribuna dei Campitelli, 23 B
11. Casa dei Vallati, Via del Portico d'Ottavia, 29
12. Albergo della Catena (Via del Foro Piscario)

Rione XIII. Trastevere
13. Casa Mattei in Piazza Piscinula
14. Via della Lungaretta, 160-161
15. Vicolo della Luce, 57
16. Piazza S. Cecilia, 19
17. Via della Renella, 42
18. Via della Scala, 5

Type 3 Tower House Portico

Rione VII. Regola
1-7. Case di S. Paolo
8. Piazza Margana, 40

Type 4 Townhouse Portico

Rione V. Ponte
1. Via dell Orso, 11
2. Via Arco della Pace, 10

Rione XIII. Trastevere
3. Casa della Fornarina, Via di Santa Dorotea, 20

Urban growth in the inhabited parts of Rome, or the *abitato* was gradual. With the construction of new buildings, primarily inside or above ancient Roman ruins or the reuse of *spolia* from these ancient structures, the urban armature of ancient Rome slowly began to change. Some significant streets from antiquity have remained in use until present day and new ones were created through the manner in which medieval residential block structures had a tendency to grow on top of larger ruins from antiquity as can be seen near Campo de Fiori and the houses that were built above the Theater of Pompey. In this example, the curvature of the street as formed by the sequence of buildings that line it, reflect the form of the theater below. Others however, were built up in the open areas of the Imperial Forums, making use of the surrounding building materials and foundations. Roberto Meneghini's studies of the archeological remains of early medieval housing in the area fo the Imperial Forums reveal some of the most compelling information about the development and character of early medieval residential architecture. Meneghini's findings of other later medieval residences along the Via Alessandrina provide for a greater understanding of the profusion of this housing type in the present *rione* of Monti, that today only one example can be found. Meneghini's work depicts a profound continuity in architectural design and the use of the façade portico from the early Middle Ages to the beginning of the Renaissance.

Through the mapping of these residences, it appears that their distribution is far from random and through an examination of historic cartography coupled with documentary evidence, it becomes clear that this housing type appears much more frequently along important street networks that persisted from antiquity to present day. These streets in particular marked not only ancient thoroughfares, but later sacred processional routes of the papacy, pilgrimage routes, and streets important for trade in the center of Rome. Examining these buildings together allows one to repopulate the center of Rome in the Middle Ages with its trade activity, pilgrimage and procession. This thesis focuses primarily on one specific building type, yet coupled with research findings pertaining to significant church architecture, tower houses, residential compounds, and civic buildings, the center of Medieval Rome can begin to be repopulated, changing our present day understanding and visualization of the historic urban landscape of Rome.

Measurement and analysis

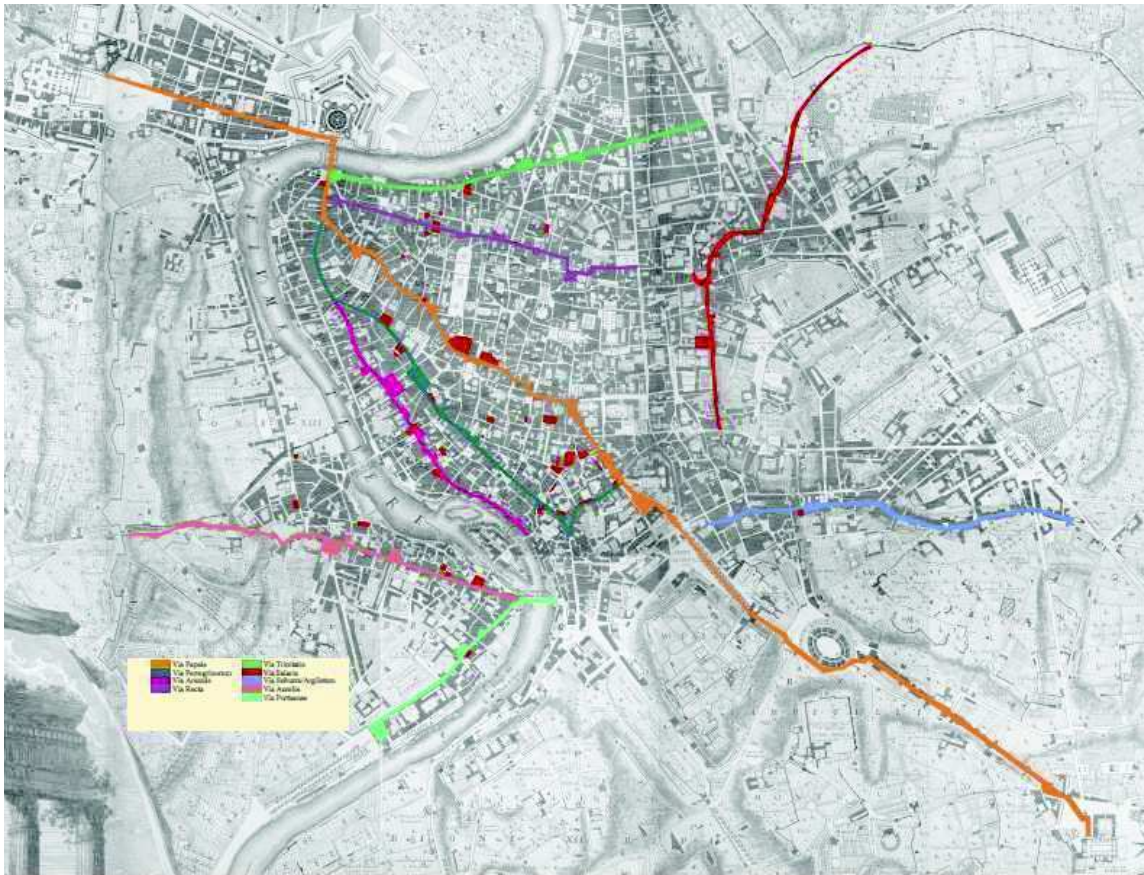The static nature of traditional methods of visual representation has limited the ways

Figure 6. Map of Rome indicating medieval residences with porticoes in red, highlighting major streets and processional routes of the middle ages

shcolars are able to communicate large bodies of visual data spanning both space and time. In contrast, digital innovations have provided new and dynamic platforms for computer visualization and simulation of real, reconstructed and imagined environments. The increasingly dynamic nature of representational tools has opened up new veins of research and possibilities for both professionals and scholars studying the built environment, allowing for greater synergy between traditional and digital means of analyzing the development of architecture and urban form. Advancements in integrative and digital approaches to the study of the historic urban environment is becoming of increasing necessity for scholars. This paper prepared a case study and methodology ready for virtual deployment in order to provide new views and insights into one specific layer of the urban and architectural fabric of Rome through an examination of medieval residential façade porticoes. Making elements of the city that are invisible to us today visible once again.

At the moment comprehensive texts and instruments that allow architects, designers, historians, planners or even students the ability to understand the complex layers of a city's urban environment are limited. The case study examined in this thesis is ready to be uploaded to a digital tool that allows for such exploration of the built world. Through the development of one such research tool with the Historic Urban Environments Lab at the University of Notre Dame (HUE/ND), the findings of this paper will be added to a website and digital application for public use and study of one specific layer of Medieval Rome. This digital research tool allows for visualizing and analyzing the built environment and its evolution virtually, through the integration of traditional methods of creating images including drawings, maps, plans and other archival source materials with the latest optical technologies that utilize modern day instruments to assist in answering

the questions left by the existing remnants of the past.

In order to prepare traditional research material for digital application, the collection of primary archival materials is necessary including: images, maps, plans coupled with secondary source materials. In the current study, the visible remnants of medieval residential porticoes throughout the city of Rome were identified, geo-located, documented on site in the form of measured drawings and photography. This onsite data was then coupled with archival data in the form of historic plans of residences dating from the fifteenth-seventeenth centuries. In addition, historic views, photographs and restoration drawings were then examined and combined with maps of the city to provide a comprehensive geo-database. This data then can be added to an interactive website that can house all of the content of this study for virtual exploration that combines textual sources, advanced computing, GIS and geo-location, data mining, and scholarly input. This data could then be added to a website that includes features such as a digitized full text searchable publication, a searchable image gallery that contains all of the images from the study, layered historical maps, a large plan of Rome with each neighborhood and case studies highlighted and described, with room for additional scholarly content. Images and text can be recreated virtually, presented through a book reader software program, and searchable through optical character recognition. The website will allow the user to build and create specific content that can then be transferred to a mobile application. Allowing for a customizable experience that can be brought into the field focusing on a particular neighborhood or route. For example, this project examines historic urban street patterns in relation to the location of medieval porticoes, relying on contemporary cartographic data. In this study, historic maps and cadasters are redrawn to create illustrated map layers that can be searchable digitally.

Conclusion

Traditional research methods carried out in

the field for this paper in the identification and documentation of the medieval residential porticoes of Rome, in the form of measured drawings, photography, geo-location and examination of archival resources has provided an ample case study ready to be explored digitally. The information gathered in this thesis is the beginning of a greater attempt to find ways of breathing new life into print scholarship, allowing it to be housed not only in the confines of the pages of one book but also to simultaneously reside alongside other sources of information and explored in new and vibrant ways. This paper allowed for the development of a methodological approach to data acquisition and examination of architecture and the built environment that could easily be studied in both traditional print media and on the web. In this particular study, it will be possible to begin to explore medieval Rome in new and exciting ways.

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