

**Reconstruction and the Historic City:**  
**Rome and Abroad - *an interdisciplinary approach***

edited by

Chrystina Häuber, Franz X. Schütz and Gordon M. Winder





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## Preface and Acknowledgements

This book is the outcome of an international and multidisciplinary Symposium held in Munich in 2012. The idea to organize this Symposium on 'Reconstruction and the Historic City: Rome and Abroad - *an interdisciplinary approach*' took form on May 18, 2011, when the classical archaeologist Dr. Chrystina Häuber asked the geographer Dr. Franz Xaver Schütz (Fakultät für Geoinformation at the Hochschule München) and the Head of the Department of Geography at the Ludwig-Maximilians-Universität (LMU) München, Prof. Dr. Jürgen Schmude, whether they would like to organize with her an interdisciplinary Symposium on the reconstruction of historic cities at the LMU München. Prof. Dr. Schmude happily agreed because he is interested in inter- and trans-disciplinary research. Since December 2010, Dr. Häuber is based at the Department of Geography at the LMU München. For some time she and Dr. Schütz had wanted to invite the international cooperation partners of their research project "AIS ROMA" to present their work on ancient Rome in München. Prof. Dr. Schmude und Dr. Schütz agreed to collaborate in this Symposium and all three decided not to focus the presentations on ancient Rome alone, but to broaden the perspective both geographically and temporally. By the end of the day, a first draft describing the objectives of this Symposium was written, and the archaeologists Dott.ssa Susanna Le Pera (Comune di Roma, now Roma Capitale) and Prof. Eugenio La Rocca (Università di Roma "La Sapienza"), as well as Prof. Amanda Claridge (The University of London, Royal Holloway & Bedford New College) had agreed to come. The latter also helped to create the title of the Symposium. The other cooperation partners of the project "AIS ROMA", who could not be reached by telephone, were informed by Email, and soon responded positively. This was a very good start to our project.

From the beginning, two of our major aims were to discuss methods of reconstruction from the points of view of history, geography and archaeology, and also to allow the presentation of paper-based reconstructions as well as those generated on computer. Luckily Prof. Dr. Gordon M. Winder of the Department of Geography at the LMU agreed not only to present his work on urban historical geography of Auckland, New Zealand at this Symposium, but also to lend his expertise as an editor and in some cases translator of the CVs, abstracts and texts supplied by the invited speakers and published in the abstract booklet and in this volume. Fortunately, soon after the very beginnings of these plans, Prof. Dr. Stefan Ritter, the Chair for Classical Archaeology of the LMU, agreed to collaborate. In the following months the Symposium Committee, comprising Prof. Dr. Schmude, Prof. Dr. Ritter, Dr. Schütz and Dr. Häuber, shaped the objectives of this Symposium in detail, as well as the programme of the Symposium in 2012. Dr. Häuber and Dr. Schütz acted as conveners of the Symposium. Prof. Dr. Winder, Dr. Schütz and Dr. Häuber edited the texts of the abstract booklet and this book, Dr. Schütz was responsible for producing all the relevant pdf-files and for publishing the programme of the Symposium, the abstract booklet and the Symposium volume in the internet. The editors thank Prof. Dr. Schmude for accepting the manuscript as volume 6 of *Beiträge Wirtschaftsgeographie München* and for his generous support and help. We are likewise grateful for the financial support of the Münchener Universitätsgesellschaft.

Because of the date on which we had to schedule the event, we had the unexpected privilege of holding the Symposium at the grand and beautiful *Senatssaal* of the LMU Munich, located in the main and historic centre of the university. Apart from the high academic *niveau* this venue and the unusually fine weather for that time of the year made the Symposium an extraordinary experience for our guests. The presenters and chairs were all well-known scholars from the fields of Geography, Classics, Ancient History, Environmental History, Classical Archaeology, Geomatics, Architecture and History of Architecture, Heritage Studies, and Archival Studies. They hailed from Italy, the United Kingdom, the USA, New Zealand and Germany where they are employed at the archaeological agencies of the City of Rome, the Italian state, and the Vatican, in different universities in Rome and Perugia, The British School at Rome, the universities of Exeter and London, Brown University, the Universität Erfurt, the Hochschule München and the LMU Munich including the Rachel Carson Center. Over 100 people attended the Symposium. Apart from the individuals already mentioned, these included students, doctoral and postdoctoral students, and scholars from the following disciplines: Geography, Classical Archaeology, Ancient History, Classics, Theology, Art History, History of Architecture, and Engineering from Germany, Austria, the Netherlands, Italy, the United Kingdom, Australia, Sweden, Hungary and Japan.

Some other people deserve our thanks for their support and contributions. Prof. Dr. Ralf Ludwig, Prodekan at the LMU Munich, set the tone by opening our Symposium with a warm welcome and by expressing his delight at finding such close connections between Roma and Monaco di Baviera, and extended a special thanks to our Italian friends for bringing original Italian weather with them. Frau Maria Beck, Frau Andrea Beigel and Herr Winfried Pons of the Lehr- und Forschungseinheit für Wirtschaftsgeographie und Tourismusforschung, as well as our Studentische Hilfskräfte, Frau Julia Hartmann and Christoph Heumos, helped us far beyond the call of duty.

Unfortunately, there were several of our cooperation partners who, in the end, could not participate. These included the GIS-expert and geographer Prof. Michael F. Goodchild (at that time at University of California, Santa Barbara), whom we asked to be one of our three keynote-speakers. This is also true for the ancient historian and classicist Prof. Nicholas Purcell (The University of Oxford, Brasenose College), who had accepted our invitation to be one of our Discussants, and for the Egyptologists Dr. Rafed El-Sayed and Dr. Konstantin C. Lakomy (both Universität Göttingen). The classical archaeologist PD Dr. Jochen Griesbach (Martin von Wagner Museum, Würzburg) could also not attend. The latter three had accepted to give presentations at this Symposium. Whereas, Wilko von Hardenberg and Christopher Smith, each of whom gave a presentation, decided not to write contributions for the Symposium volume.

It is necessary to discuss reconstructions of ancient Rome not only because the buildings of this period have only survived in part but also because there are so many different perspectives on reconstruction. Scholars begin their reconstruction work by looking at diverse and heterogeneous texts and other materials from all periods. These starting points could be in a library containing ancient literary sources or records of inscriptions, at excavations or other sites where the objects can be seen or imagined *in*

*situ*, or in archives for material ranging from documentations of archaeological sites, letters, maps, city plans, travel guides, pictures, aerial photographs, satellite images, even insurance atlases, and the scholars themselves could be archaeologists, architects, classicists, experts in heritage and archive studies, geographers, historians, Egyptologists or other experts. The dimensions of the storehouse of materials are on such a scale that no single scholar is now able to claim familiarity and oversight of the entire heritage. Nevertheless, we all find ourselves, sooner or later, engaging with digital methods as we attempt to handle these materials and to visualize the results. For these reasons we invited scholars from these diverse fields to start, what we hope will be, a continuing communication on methods, ideas and practices related to reconstruction. As for the term reconstruction, we deliberately did not impose any definition on our invited speakers, but thought it would be better that we all present our work and discuss in a second moment our various relevant opinions. For this work the City of Rome is both an obvious and challenging starting point for sharing 'reconstructing the historic city' because of the unique span of her spatial and temporal dimensions, the number of scholars engaged in this work and the depth of scholarship on the eternal city.

Our book, with the results of our Symposium, we hope, will enliven and further diverse reconstructions.

Chrystina Häuber, Franz X. Schütz and Gordon M. Winder  
München, 17 December 2014

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## **Contributors and discussants**

### **Contributors**

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Jürgen Schmude  
Franz X. Schütz  
Gordon M. Winder  
T.P. Wiseman

### **Discussants**

Richard Gordon  
Rolf Michael Schneider  
Gordon M. Winder

For the abstracts of the contributions and the CV's of the contributors and discussants, see Beiträge zur Wirtschaftsgeographie München (BWM) 4, 2012. Online at: [http://www.rom.geographie.uni-muenchen.de/publications/BWM\\_2012\\_Band4.pdf](http://www.rom.geographie.uni-muenchen.de/publications/BWM_2012_Band4.pdf)

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## Symposium Abstract 2011-12

### **International Symposium: Reconstruction and the Historic City: Rome and Abroad – *an interdisciplinary approach***

This Symposium explores possibilities of reconstruction and visualization of historic cities in context, focusing on ancient Rome and other cities. The primary purpose of this Symposium is to apply and demonstrate methods. The presentations share the common goal of identifying and discussing examples, which should be of benefit to all participants and especially also for students. Most of the presentations are focused on ancient Rome, and those archaeological presentations in which this is not the case also are aimed at documenting the impact of the Roman Empire in space and time. Participants will trace both the beginnings and also the culmination of the expansion and subsequent decline of the Empire, for example by investigating the reuse of 'pagan' temples as Christian churches. Moreover, each of the presentations will explore the difficult question of what 'urban' means in his or her own specific context. This Symposium aims to illustrate why it is important in the field of urban reconstruction to conduct inter-disciplinary research. Classical archaeology, geography and GIScience, history, Egyptology and history of architecture each add meaning to the research topic.

In this event, scholars from the Research Unit for Economic Geography and Tourism Research at the Ludwig-Maximilians-University Munich and the Chair for Classical Archaeology of the Ludwig-Maximilians-University Munich collaborate for the first time. With this motivation, and with an eye to research cooperation in the future, this Symposium aims to expand both the historical and spatial scope of urban research into reconstruction.

Initiators of the symposium are the classical archaeologist Chrystina Häuber and the geographer Franz Xaver Schütz, who since 1994 have been engaged in a series of international, inter- and trans-disciplinary research projects on the topography of the ancient city of Rome.

The invited speakers are from diverse disciplines. They are on the one hand scholars from Italy, the United Kingdom, the United States and Germany, who have been working since 1994 with Chrystina Häuber and Franz Xaver Schütz in various projects on the topography of ancient Rome. On the other hand, the speakers belong to the Research Unit for Economic Geography and Tourism Research at the Ludwig-Maximilians-University Munich, and the Chair for Classical Archaeology of the Ludwig-Maximilians-University Munich.

The Symposium Committee

Prof. Dr. Jürgen Schmude, Prof. Dr. Stefan Ritter, Dr. Chrystina Häuber, Dr. Franz Xaver Schütz

Conveners of the Symposium:

Dr. Chrystina Häuber, Dr. Franz Xaver Schütz



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**Conference Programme 2012** (cf. BWM 4, 2012, pp. V-VII)

All of the presentations will be given in the Senatssaal of the Universität München (LMU), Hauptgebäude, Geschwister-Scholl-Platz 1, 80539 München

**Wednesday, 17. October 2012**

14.00 Registration.

15.00 Introduction.

Official Welcome from the Prodekan Ludwig of the Fakultät für Geowissenschaften at the LMU  
Official Welcome from the Symposium Committee.

**Introductory Lecture History**

How do we know? Prof. T. P. Wiseman (Ancient History and Classics, University of Exeter, UK). Prof. Wiseman will discuss reconstructions of ancient Rome from an historical perspective. (45 minutes)

**Introductory Lecture Archaeology**

The perception of space in ancient Rome. Prof. Eugenio La Rocca (Classical Archaeology, Università di Roma "La Sapienza", Italy). Prof La Rocca will discuss reconstructions of ancient Rome from an archaeological perspective. (45 minutes)

**Introductory Lecture Geography**

Disciplinary, interdisciplinary or transdisciplinary research: imperatives and constraints. Prof. Dr. Jürgen Schmude (Geography, Director of the Department of Geography, Universität München (LMU)). Prof. Schmude will discuss the prospects for interdisciplinary collaboration. (45 minutes).

18.00 End of Presentations.

19.00 Reception.

**Thursday, 18. October 2012**

**I. Session: Visualization Today**

8.15-9.00 Presentation (20 minutes) and Discussion (25 minutes)

Rome: the city of memories: Or, why and how reconstruct and visualize ancient and post-antique Rome using digital technologies? The "AIS ROMA", diachronic and phase maps of (ancient) Rome in the WWW. Dr. Chrystina Häuber (Classical Archaeology, Lehr- und Forschungseinheit für Wirtschaftsgeographie am Department für Geographie, Universität München (LMU)).

9.00-9.45 Presentation (20 minutes) and Discussion (25 minutes)

De Roma Instaurata (1446) - Nuova Forma Urbis Romae (2011): ricostruzione in quattro dimensioni di un paesaggio urbano complesso. Il Caso di Roma, metodologia ed esempi. Dott.ssa Susanna Le Pera (Classical Archaeology, Responsabile of the project "Nuova Forma Urbis Romae", Roma Capitale, Sovrintendenza ai Beni Culturali, Roma, Italy).

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9.45-10.30 Presentation (20 minutes) and Discussion (25 minutes)

Descriptio Urbis - Un webgis per ricostruire i paesaggi urbani di Roma. Dott. Paolo Buonora (Archive Studies, Archivio di Stato di Roma, Italy), Dott.ssa Susanna Le Pera (Classical Archaeology, Roma Capitale, Sovrintendenza ai Beni Culturali, Italy), Prof. arch. Paolo Micalizzi (Architectural History, Roma Tre Università degli Studi, Italy) and Dott. Luca Sasso D'Elia (Classical Archaeology, Roma Capitale, Sovrintendenza ai Beni Culturali, Italy).

10.30-11.00 Coffee Break

11.00-11.45 Presentation (20 minutes) and Discussion (25 minutes)

Why work with geographers in reconstructions and visualizations of ancient Rome? Dr. Franz Xaver Schütz (Geography, Hochschule München, Fakultät für Geoinformation).

## II. Session: Case Studies: Reconstructions of Single Buildings

11.45-12.30 Presentation (20 minutes) and Discussion (25 minutes)

Reconstructing the Temple of Apollo on the Palatine Hill in Rome. Prof. Amanda Claridge (Classical Archaeology, Royal Holloway, University of London, UK).

12.30-13.15 Presentation (20 minutes) and Discussion (25 minutes)

Methodische Überlegungen zur Rekonstruktion einer Decke in der 'Casa di Augusto' auf dem Palatin. Dr. Johannes Lipps (Classical Archaeology, Institut für Klassische Archäologie, Universität München (LMU)).

13.15-15.15 Lunch – participants are encouraged to take their meal at the Mensa of the Universität München (LMU).

## III. Session: Historical Visualizations

15.15-16.00 Presentation (20 minutes) and Discussion (25 minutes)

Alle Wege führen aus Rom hinaus! Die Wahrnehmung des Suburbium in Kartographie und Archäologie der Neuzeit. PD Dr. Jochen Griesbach (Classical Archaeology, Martin von Wagner Museum, Würzburg).

16.00-16.45 Presentation (20 minutes) and Discussion (25 minutes)

Changing interests: The city as topic in Roman Art. Prof. Dr. Stefan Ritter (Classical Archaeology, Institut für Klassische Archäologie, Universität München (LMU)).

16.45-17.15 Coffee Break

17.15-18.00 Presentation (20 minutes) and Discussion (25 minutes)

Reconstructions of Early Rome. Prof. Christopher J. Smith (Ancient History, Director of the British School at Rome, Italy).

18.00-18.45 Presentation (20 minutes) and Discussion (25 minutes)

The Life and Death of Ancient Roman Cemeteries. Prof. John Bodel (Ancient History, Brown University, USA).

20.30 Symposium Dinner.

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**Friday, 19. October 2012**

IV. Session: Reconstructions of City Districts

9.00-9.45 Presentation (20 minutes) and Discussion (25 minutes)

Le domus dell'aristocrazia romana repubblicana sul Palatino. Prof. Filippo Coarelli (Classical Archaeology, Università degli Studi di Perugia, Italy).

9.45-10.30 Presentation (20 minutes) and Discussion (25 minutes)

La necropoli lungo la via Triumphalis: storia dei rinvenimenti, della tutela e della ricostruzione di un tratto del paesaggio suburbano di Roma. Prof. Francesco Buranelli (Archaeology, Segretario della Pontificia Commissione per i Beni Culturali della Chiesa, Città del Vaticano).

10.30-11.00 Coffee Break

V. Session: Communication Processes

11.00-11.45 Presentation (20 minutes) and Discussion (25 minutes)

Tripheion – Atripe. Reconstructing the changes of sacred space in a late antique Upper Egyptian town. Dr. Rafed El-Sayed and Dr. des. Konstantin Lakomy (both are Egyptologists and both are based at the Seminar für Ägyptologie und Koptologie, Universität Göttingen).

11.45-12.30 Presentation (20 minutes) and Discussion (25 minutes)

The Environment & Society Portal: Connecting environmental events geographically, chronologically and conceptually. Dr. Wilko von Hardenberg (History, Rachel Carson Center for Environment and Society, Universität München (LMU)).

12.30-13.15 Presentation (20 minutes) and Discussion (25 minutes)

Reconstruction and Narrative: Re-imagining Auckland's Heritage in Walking Tour Guides. Prof. Dr. Gordon Winder (Economic Geography, Department of Geography, Universität München (LMU)).

Final Words from the Symposium Committee.

13.30 Parting Snack.

Discussants

The Classical Archaeologist Prof. Dr. Rolf Michael Schneider (Institut für Klassische Archäologie, Universität München (LMU)).

The Geographer Prof. Dr. Gordon Winder (Department für Geographie, Universität München (LMU)).

The Ancient Historian Prof. Richard Gordon (Universität Erfurt).

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# **Contributions**



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## How do we know? Historical evidence and cartographic data

T.P. Wiseman

‘Reconstruction and the Historic City’ is a project which aims to draw together the disciplines of geography and classical archaeology. I am not a geographer; I am not an archaeologist; but I am a classicist and a historian, and my opening contribution is intended to explain what the terms ‘historic’ and ‘classical’ actually mean. It is right, I think, that the first statement on our theme should be on behalf of Clio, the Muse of history, because every investigation of the past, however sophisticated the digital means of expressing it, has to recognise the rules of history, and the limits of our knowledge.

Reconstructing an unknown city is one thing: all one can do is map the remains and imagine what they may be remains of. Reconstructing a city whose history is known (at least partly) is quite another thing: in this case we want to give names to the remains, and map features for which no remains survive. And so, whether we like it or not, we have to ask the historian’s question: how do we know?

It is a philosophical paradox. On the one hand, we *cannot* have knowledge of the past, because the past is gone for ever and we can’t go back there to see what happened. On the other hand, we *do* have knowledge of the past, and our lives would be impossible without it. We know what happened yesterday; we know what happened last week; we know what happened on 11 September 2001; we even know what happened on 15 March 44 BC. But it is knowledge that cannot be absolutely confirmed.

Every statement we make about the past is necessarily a hypothesis, and in principle capable of disproof. When we say we *know* some event took place, or describe it as a historical *fact*, what we mean is that the evidence for it is so strong that we cannot imagine it ever being falsified. But there is always the logical possibility of falsification. It is not a ‘fact’ in the same sense as the demonstrable and repeatable fact that water will boil at 100 degrees Celsius.

For knowledge of the past, everything depends on the quality of the evidence, and for the city of Rome the evidence is comparatively rich. An enormous number of texts survive from the ancient world, the work of poets, playwrights, statesmen, scholars, historians, satirists, novelists, theologians. Many of these texts were written in the city of Rome or about the city of Rome, and what we think we know about the city is what these texts tell us, or what we can infer from them. The information they provide is enormously valuable, but it is not something we can simply take for granted.

For instance, how reliable are these ‘classical’ texts? They are the result of centuries of manuscript copying and recopying, and evident errors, omissions and interpolations are not at all uncommon. We can only ask what an author meant when we are sure we know what he wrote.

Then we have to ask *which* Rome he is talking about. From the first evidence of continuous habitation down to the desolation of the city at the time of the Lombard invasions, the history of ‘ancient Rome’ is a period of about 1800 years (the same as from the emperor Caracalla to our own time). The earliest of our literary texts, the comedies of Plautus, were written when Rome as a recognisable city-state had already

seen five centuries of urban development (the same as from Martin Luther to our own time).

Cities change. Fire and earthquake can destroy them, power and ambition can transform them. A summary list of the known fires and earthquakes (and how many were there that do not happen to be recorded?) gives an indication of how often, in the space of five centuries, the city underwent destruction and reconstruction:

Major fires, 250 BC-AD 250		Earthquakes	
241 BC	Orosius 4.11.8-9		
213 BC	Livy 24.47.15-16		
210 BC	Livy 26.27.1-5		
192 BC	Livy 35.40.8	192 BC	Livy 35.40.7
178 BC	Obsequens 8		
111 BC	Obsequens 39		
50 BC	Obs. 65, Orosius 6.14.4-5, 7.2.11	c.70 BC	Phlegon fr. 12.4
31 BC	Dio Cassius 50.10.3		
12 BC	Dio Cassius 54.29.8		
7 BC	Dio Cassius 55.8.5-6		
AD 6	Dio Cassius 55.26.4	AD 15	Dio Cassius 57.14.7
AD 36	Tacitus <i>Annals</i> 6.45.1, Dio C. 58.26.5	AD 51	Tacitus <i>Annals</i> 12.43.1
AD 64	Tacitus <i>Annals</i> 15.38-41		
AD 80	Suetonius <i>Titus</i> 8.3-4, Dio C. 66.24.1-3		
[AD 138-161]	Historia Augusta <i>Antoninus Pius</i> 9.1		
AD 192	Herodian 1.14.2-5, Dio C. 72.24.1-2		
[AD 222-8]	Dio Cassius 80.2.3		
AD 237	Herodian 7.12.5-7	AD 262	Hist. Aug. <i>Gallienus</i> 5.2-4

An Alexandrian Greek in the early years of Augustus commented sourly:<sup>1</sup> ‘The only reason I’m sorry about fires in Rome is that I know what has been destroyed will be replaced by something better.’ So – not only is our evidence uncertain, but our subject, the city, is in constant flux. How can we hope to be able to map it?

To give an idea of what ‘historical evidence’ means, I have chosen five examples to discuss. They all refer to the area between the Campidoglio and the Arch of Titus [fig. 1],<sup>2</sup> where the remains of the ancient city have for the most part *not* been built over; they all date from the best-attested period of Roman history, where our literary sources are numerous and well-informed; and they are all taken from the work of a historian who was carefully explaining to his contemporary readers where in the city particular historical events took place. If *these* cases are problematic, what can we do with other areas, at other times, where the texts are few or non-existent?

<sup>1</sup> Timagenes, quoted in Seneca *Epistulae* 91.13

<sup>2</sup> The sites marked on fig. 1 are referred to in the text by reference letters in square brackets: [A], [B] etc.



Fig. 1. Air photograph of the Capitol and Roman Forum area, with fixed points marked as follows:

- A: site of the temple of Jupiter Optimus Maximus (*Capitolium*)
- B: *arx* summit of Capitol (S. Maria in Aracoeli)
- C: Palazzo Senatorio, built on the 'Tabularium' substructure
- D: Piazza della Consolazione
- E: temple of Saturn
- F: Senate-house
- G: piazza of the Roman Forum
- H: temple of Vesta
- I: *regia*
- J: Neronian 'house of the Vestals'
- K: Arch of Titus
- L: Palatine hill
- M: Basilica of Maxentius
- N: Via dei Fori Imperiali
- O: temple of Antoninus and Faustina
- P: SS. Cosma e Damiano
- Q: Farnese Gardens *belvedere*
- R: S. Giorgio in Velabro

Source air photograph: basemap "World Imagery " from ESRI ArcGIS Online 11/2013.

Our historian is Titus Livius – ‘Livy’ in English. All five of the passages I have chosen are from his history of *early* Rome, written between 30 and 20 BC but narrating events that supposedly took place between what we would call the eighth and the fourth centuries BC. For him and his readers this was ancient history, from 300 to 700 years before their own time. But since it was the history of the city they lived in, Livy could point to the precise places where the supposed events took place.

### First example: Romulus’ *asylum* and the *clivus Capitolinus*

This comes early in Livy’s account of the reign of the founder, Romulus. Needing to attract manpower for his new community, Romulus offers a place of refuge (*asylum*) in a sacred grove on the Capitol:

#### 1.1 Livy 1.8.5:

*locum qui nunc saeptus descendentibus inter duos lucos est asylum aperit.*

He opened as a sanctuary the place which is now fenced off as you go down between the two groves.

As it happens, that same description ‘between the two groves’ (*inter duos lucos*) is given by our sources for the temple of Veiovis,<sup>3</sup> and both the *asylum* and the Veiovis temple are also described as ‘between the *arx* and the Capitolium’ [A, B].<sup>4</sup> Not only that, but in 1939 the Veiovis temple was discovered, complete with its cult-statue, under the Palazzo Senatorio [C], so we know quite precisely what site Livy was referring to.

But what does he mean when he says ‘the place that is fenced off as you go down’? It was fenced off anyway, whether you were going down or up. There must be something missing from the text: *descendentibus* only make sense as a positional indication if Livy was saying ‘on the right as you go down’ or ‘on the left as you go down’. The standard Oxford text therefore inserts the phrase *ad laeuam* (‘on the left [hand]’) after *inter duos lucos*.

But why should Livy identify the site from the point of view of someone coming *down* from the Capitol, rather than going *up* from the Forum? It would make better sense to imagine a visitor going *towards* the site, not one who was on the Capitol already. So I prefer a different emendation:<sup>5</sup>

*locum qui nunc saeptus d<exter> escendentibus inter duos lucos est asylum aperit.*

He opened as a sanctuary the place which is now fenced off on the right as you go up between the two groves.

*Escendere* (without the *d*) means ‘to go up’; so Wellesley assumes that the *d* of *descendentibus* belonged to *dexter* (agreeing with *locus* understood), and that at some point in the transmission the scribe’s eye jumped to the wrong *e*, thus inadvertently leaving out five letters.

But whichever emendation we use, we must remember that it is only an editor, and not necessarily Livy himself, who tells us that the *asylum* grove was on the left as

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<sup>3</sup> Vitruvius 4.8.4, Ovid *Fasti* 3.430, *Fasti Praenestini* for 7 March.

<sup>4</sup> Strabo 5.3.2 C230 (*asylum*); Aulus Gellius 5.12.2 (Veiovis).

<sup>5</sup> K. Wellesley, *Latomus* 33 (1974) 912-5.

you go down, or on the right as you go up. And in fact, that reading is quite problematic topographically, because the Roman substructure on which the Palazzo Senatorio was built – the so-called Tabularium – was already there in Livy's time. Its plan allowed room for the Veiovis temple in a re-entrant angle, but not for anything else. So if Livy really did say 'it was on the right as you go up', we would have to suppose that when Quintus Catulus built the great substructure in 78 BC, he effectively destroyed the historic site of Romulus' *asylum*. As a matter of fact, I think that is a real possibility;<sup>6</sup> but we cannot assume it from Livy's text.

The present-day south-west slope of the Capitol probably bears no resemblance at all to what was there in Livy's time. We know there was at least one major landslide, bringing down buildings from the Capitol summit on to the S. Omobono site next to Piazza della Consolazione [D], and there may have been many more. So even if we were confident of the meaning of Livy's text, it would still not enable us to identify the precise route of the street or stair by which his imagined visitor might come up from the Forum to find the *asylum* grove.

Let us turn now to Tacitus' description of the assault on the Capitol by Vitellius' troops on 18 December AD 69:

**1.2** Tacitus *Histories* 3.71.1-3:

*cito agmine forum et imminetia foro templa praeteruecti erigunt aciem per aduersum collem usque ad primas Capitolinae arcis fores. erant antiquitus porticus in latere cliui dextrae subeuntibus, in quarum tectum egressi saxis tegulisque Vitellianos obruebant. ... faces in prominentem porticum iecere et sequebantur ignem ambustasque Capitolii fores penetrassent, ni Sabinus reuulsas undique statuas, decora maiorum, in ipso aditu uice muri obiecissent. tum diuersos Capitolii aditus inuadunt iuxta lucum asyli et qua Tarpeia rupes centum gradibus aditur. improvisa utraque uis; propior atque acrior per asylum ingruerat. nec sisti poterant scandentes per coniuncta aedificia, quae ut in multa pace in altum edita solum Capitolii aequabant.*

At a rapid pace they went past the Forum and the temples that face the Forum, and charged up the hill opposite as far as the first gates of the Capitoline fortress. There used to be porticos along the slope on the right hand side as you go up; men came out on to the roofs of these and attacked the Vitellians with stones and tiles. ... They threw firebrands into the projecting portico and followed the flames, and they would have got through the burning gates of the Capitol if Sabinus had not pulled down the statues all around, the pride of our ancestors, and heaped them up in the entrance itself as a substitute wall. Then they attacked other access routes to the Capitol, next to the asylum grove and where the Tarpeian rock is reached by the hundred steps. Both attacks were unexpected; the one by the asylum was closer and fiercer. And nothing could be done to stop men climbing up through the adjoining buildings, which because of peacetime conditions had been built up high and reached the level of the Capitol.

They must have come from the Praetorian barracks, down through the Subura and along the Argiletum, entering the Forum at its northern end next to the Senate-house [F]. Tacitus says they went *past* the Forum and the temples facing it (*praeteruecti*), which clearly means past the main piazza [G] and the temple of Saturn [E] on their left, and the temple of Concord on their right.

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<sup>6</sup> See T.P. Wiseman, *Remembering the Roman People* (Oxford 2009) 77-8.

They charged up the *clivus Capitolinus*, the lower route of which is attested by a substantial stretch of paving that survives above and behind the Saturn temple [E]. It led up to the main Capitoline complex around the great temple of Jupiter Optimus Maximus [A], which must have had some sort of monumental entrance, described by Tacitus as the ‘gates of the Capitoline fortress’. Some people think there is evidence for it in Livy:

**1.3** Livy 37.3.7, on the war against Antiochus, 190 BC:

*P. Cornelius Scipio Africanus, priusquam profisceretur, fornicem in Capitolio aduersus uiam qua in Capitolium escenditur cum signis septem auratis et equis duobus, et marmorea duo labra ante fornicem posuit.*

Before his departure, Publius Cornelius Scipio Africanus erected an arch on the Capitol facing the street by which one comes up to the Capitol, with seven gilded statues and two horses, and two marble basins in front of the arch.

When Livy says ‘facing the street’ (*aduersus uiam*), his description may imply that it was not an arch *over* the road at all; it is clear from the text that its main purpose was to carry the honorific statues, and not necessarily to provide an entrance to anything.

Returning to Tacitus (1.2), we find that ‘in the past’ (*antiquitus*) there were porticos alongside the *clivus*, ‘on the right as you go up’. How far in the past does he mean? Clearly they no longer existed in his day (no doubt destroyed by the fire the Vitellians started), but it is not clear how old they were in 69. Our next item is a report in Livy of a portico built in the second century BC all the way up the *clivus* from the Saturn temple to the Capitolium itself:

**1.4** Livy 41.27.7, on the censors of 174 BC:

*clivum Capitolinum silice sternendum curauerunt et porticum ab aede Saturni in Capitolium <...> ad senaculum ac super id curiam.*

They undertook to have the Capitoline slope paved in stone, and a portico [constructed] from the temple of Saturn to the Capitol (...) to the *senaculum* and beyond that to the Senate-house.

But this passage too is corrupt, leading straight on to the description of a quite different building project by the *senaculum* and Senate-house [F] in the Forum. How much text has been lost? What was the train of thought between the portico on the *clivus Capitolinus* and the unknown building in the Forum? We have no idea.

Back to Tacitus again (1.2): the defenders kept the Vitellians from entering the main entrance to the complex by pulling down statues – of which there were very many on the Capitol<sup>7</sup> – and using them as a barricade. So the attack turned to other access points (*aditus*), including the way up by the *asylum* grove to which Livy referred in item 1.1. The other route they tried was the ‘hundred steps’ (*centum gradus*), which led to the Tarpeian Rock and were therefore on the *arx* summit of the hill, somewhere near the church of S. Maria in Aracoeli [B].

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<sup>7</sup> See for instance Cicero *Ad Atticum* 6.1.17 (50 BC) – including a whole squadron (*turma*) of equestrian statues of the ancestors of Q. Metellus Scipio.



How many ways were there up to the Capitol? Another set of steps, above 'the Calpurnian arch' (*fornix Calpurnius*), is mentioned in the account of the murder of Tiberius Gracchus, on the Capitol in 133 BC, by a historian writing about 550 years after the event:

**1.5** Orosius 5.9.2:

*Gracchus per gradus qui sunt super Calpurnium fornicem detracto amiculo fugiens ictus fragmento subsellii conruit.*

Gracchus fled by the steps which are above the Calpurnian arch; his cloak torn off, he was struck by a broken piece of bench and collapsed.

It is highly unlikely that this arch still existed in Orosius' time, but since his main source was Livy, we can reasonably assume that Livy mentioned it in his lost book 58. Was it an arch over a street? Was it a base for honorific statues, like Scipio's arch? Nobody knows. Nor does anyone know where it was. Another historian, Velleius Paterculus (2.3.2), says that Gracchus was killed as he tried to escape from the Capitol down the *clivus Capitolinus*. But how would that fit with these 'stairs above the *fornix Calpurnius*'?

To return yet again to Tacitus (1.2): in the end, the Vitellians gained access to the Capitol by climbing up through the houses that were built up against the side of the hill. Suddenly, a whole new dimension is added to our imaginary topography. So far we have been thinking merely of streets and steps, porticos and arches and honorific statues. Now we have to think of residential buildings high enough to reach the top of the hill. We know that already in the time of Cicero there were houses close to the *asylum* 'between the two groves',<sup>8</sup> and his friend Milo in 52 BC had a town house on the *clivus Capitolinus* itself.<sup>9</sup>

The point I want to make is a very simple one. When we try to imagine the ways a Roman might go up from the Forum to the Capitol, we depend on evidence that is fragmentary, haphazard, and sometimes textually corrupt; and the cityscape to which our sources refer was complex and constantly changing. How can you map all that?

**Second example: The *noua uia* and the temple of Jupiter Stator**

This comes from Livy's account of the death of Tarquinius Priscus, the fifth king of Rome, in what we would call the first half of the sixth century BC:

**2.1** Livy 1.41.4:

*ex superiore parte aedium per fenestras in nouam uiam uersas – habitabat enim rex ad Iouis Statoris – populum Tanaquil adloquitur.*

Tanaquil addressed the People from the upper part of the house, through the windows that faced the *noua uia* – for the king lived by the temple of Jupiter Stator.

There is no textual uncertainty here, but the topographical description is deeply problematic.

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<sup>8</sup> Cicero *De diuinatione* 2.40; e.g. Propertius 4.8.31.

<sup>9</sup> Cicero *Pro Milone* 64. Ovid's house in AD 8, not far from the temple of Jupiter Optimus Maximus (*Tristia* 1.3.30), may have been on the *clivus*.

The king is dead in his house, but the queen, Tanaquil, wants to conceal the fact from the People until the succession can be organised. A crowd gathers outside, and she addresses them from an upper-storey window. As usual, Livy wanted his readers to be able to place the scene exactly in the Rome of their own time; they of course knew where the *noua uia* and the temple of Jupiter Stator were, but unfortunately we don't. They are, in fact, two of the most controversial items in the whole of Roman topography.

The house of Tarquinius Priscus is also mentioned by an author of the late-third or fourth century AD, listing the dwelling-places of each of the kings:

## 2.2 Solinus 1.24:

*Tarquinius Priscus ad Mugoniam portam supra summam nouam uiam.*

Tarquinius Priscus lived by the Mugonia Gate above [or beyond] the top of the *noua uia*.

Solinus was probably using Varro; so his account of where the Roman kings lived may well represent what Livy took for granted in the first century BC – though whether it represented anything approaching historical accuracy is of course quite another question. Anyway, Solinus adds a new item, the *porta Mugonia*, 'above the top of the *noua uia*', whatever that means.

Then there is a text in Plutarch (early second century AD) which purports to give us the site of the Jupiter Stator temple:

## 2.3 Plutarch *Cicero* 16.3, on 63 BC:

προελθὼν δ' ὁ Κικέρων ἐκάλει τὴν σύγκλητον εἰς τὸ τοῦ Στησίου Δίος, ὃν Στάτορα Ῥωμαῖοι καλοῦσιν, ἰδρυμένον ἐν ἀρχῇ τῆς ἱερᾶς ὁδοῦ, πρὸς τὸ Παλάτιον ἀνιόντων.

Cicero went out and summoned the Senate to the temple of Jupiter the Stayer, called Stator by the Romans, which is situated at the beginning of the *sacra uia* as you go up to the Palatine.

His near-contemporary Appian, also reporting the events of the late Republic, seems to confirm this location:

## 2.4 Appian *Civil Wars* 2.11.38-40, on 59 BC:

πεισθεὶς οὖν ὁ Βύβλος ἐνέβαλεν ἐς τὴν ἀγορὰν δημηγοροῦντος ἔτι τοῦ Καίσαρος. ἔριδος δὲ καὶ ἀταξίας γενομένης ... τὸν μὲν ἄκοντα ὑπεξήγαγον οἱ φίλοι ἐς τὸ πλησίον ἱερὸν τοῦ Στησίου Διός.

Bibulus agreed, and burst into the Forum while Caesar was still speaking. There was a riot, ... and his friends got him out, against his will, into the nearby temple of Jupiter the Stayer.

So the temple was near the Forum, at the beginning of the *sacra uia* as you go up to the Palatine [L]. Now it seems we can find our way: in the modern Foro Romano, the Augustan paving exposed by Giacomo Boni in 1899, on which we walk up to the Palatine via the Arch of Titus [K], is universally assumed to be that of the *sacra uia*.

But in fact, things are not so simple. We know that the *sacra uia* began at the shrine of Strenia on the Carinae, which was somewhere east of the Basilica of

Maxentius [M], and ran down through the Forum to the *arx* of the Capitol.<sup>10</sup> However, Plutarch and Appian probably didn't know that: before they ever came to Rome, all that republican cityscape had been destroyed in the great fire of AD 64, and the *sacra uia* had been redeveloped by Nero as a grand rectilinear avenue leading straight up to the ridge and the vestibule of the *domus aurea* palace.

It seems likely that the *noua uia*, wherever it was, did not survive the Neronian redevelopment. There seem to be no references to it in the present tense after AD 64, and the imperial street that the guidebooks call '*noua uia*', running along the side of the Palatine from above the Arch of Titus to above the temple of Vesta [H], has absolutely no right to that name at all. But we shall come back to the *noua uia* problem later; for the moment, let's concentrate on the other two sites associated with the house of Tarquinius Priscus – the temple of Jupiter Stator (2.1) and the *porta Mugonia* (2.2).

Where the Jupiter Stator temple was, both before and after the Neronian redevelopment, is one of the great puzzles of Roman topography. We know it was destroyed in the fire of AD 64; we also know it was rebuilt.<sup>11</sup> The aetiology of its foundation places it at the gate to Romulus' Palatine city, because in the great battle with Titus Tatius' Sabines, Romulus' men were driven back right to the gate before he prayed to Jupiter to make them stand and fight – which was the meaning of the epithet 'Stator'.<sup>12</sup>

That juxtaposition of gate and temple was taken for granted by Ovid, in a poem written from exile about AD 10, where he imagines his book being led through an unfamiliar Rome by a friendly guide:

**2.5** Ovid *Tristia* 3.1.29-32:

*'hic locus est Vestae, qui Pallada seruat et ignem, | haec fuit antiquae regia parua Numae.' | inde petens dextram 'porta est' ait 'ista Palati, | hic Stator, hoc primum condita Roma loco est.'*

'This place belongs to Vesta, who guards Pallas and the fire; this was the small palace of ancient Numa.' Heading to the right from there, he said 'That is the gate of the Palatine, here is (Jupiter) Stator, in this place Rome was first founded.'

Numa's 'small palace' is the *regia* [I], close to the temple of Vesta; then there is a right turn to the gate and the temple. The 'place where Rome was first founded' was probably the *area Palatina*, where Romulus as augur received divine approval for his city.<sup>13</sup> The question is, where did you turn right to reach it? If the temple was indeed close to the Forum (2.4), one might expect the right turn to have been somewhere in the area later occupied by the post-Neronian 'House of the Vestals' [J].

Much of the area we dealing with here has been the subject of an intensive programme of exploration since 1985, in which some remarkable discoveries have been made. One of the early successes was the excavation of what seemed to be an archaic city gate, in a wall datable to the second half of the eighth century BC; it was immediately assumed that the *porta Mugonia* had been found, and that Romulus'

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<sup>10</sup> Varro *De lingua Latina* 5.45, cf. Festus 372L.

<sup>11</sup> Tacitus *Annals* 15.41.1; *Notitia urbis Romae*, regio IV.

<sup>12</sup> Livy 1.12.3-7; Dionysius of Halicarnassus *Roman Antiquities* 2.43.3, 2.50.3; Plutarch *Romulus* 18.6-7; cf. Ovid *Fasti* 6.793-4, Tacitus *Annals* 15.41.1.

<sup>13</sup> Josephus *Antiquities of the Jews* 19.223; cf. Dionysius of Halicarnassus *Roman Antiquities* 2.5.1-2, 14.2.2.

Palatine city was a historical fact.<sup>14</sup> However, at over 100 metres up the street from the Vesta temple, it is not a very good fit for the Ovid passage (2.5); and in any case, not everyone believes that what was found there was a city gate at all.<sup>15</sup> And as for the supposedly adjacent temple of Jupiter Stator, there is absolutely no sign of it.

The point I want to make here is that even on the most untouched site, with the most thorough and expert excavation, the problems posed by the textual evidence cannot always be solved. So how confident can we be with the scraps of archaeological data that can be rescued from other sites, which have been continuously built over during the long development of modern Rome?

### Third example: The *Velia* and the temple of *Vica Pota*

We now come to Livy's narrative of the first year of the Republic. One of the consuls was Publius Valerius, who had a house on the *Velia* overlooking the Forum. The *Velia* has long disappeared: part of the summit was flattened about AD 310 to build the Basilica of Maxentius [M], and the rest of the hill was removed in 1932 to create Mussolini's Via dell'Impero, the present-day Via dei Fori Imperiali [N]. It overlooked the area of the *macellum*, later Vespasian's *templum Pacis*.

Valerius' house was described by his enemies as 'looming over the Forum' like the citadel of a monarch.<sup>16</sup> Conscious of the bad impression it made, Valerius had it demolished, and summoned the citizens to explain his action:

#### 3.1 Livy 2.7.11-12:

*'non obstabunt Publi Valeri aedes libertati uestrae, Quirites; tuta erit uobis Velia; deferam non in planum modo aedes sed colli etiam subiciam, ut uos supra suspectum me ciuem habitetis; in Velia aedificent quibus melius quam P. Valerio creditur libertas.'* *delata confestim materia omnis infra Veliam et ubi nunc Vicae Potae <aedes> est domus in infimo cliuo aedificata.*

'The house of Publius Valerius shall not obstruct your liberty, Quirites. The *Velia* shall be safe for you. I will not just take my house down on to level ground; I will put it below the hill, so that you can dwell above this suspect citizen. Let those build on the *Velia* to whom liberty is better entrusted than to Publius Valerius!' All the building material was at once brought down below the *Velia*, and the house was built at the bottom of the slope, where the temple of *Vica Pota* is now.

Livy has given him a reproachful speech, in which he tells the citizens that the bricks and timbers will be taken down to *below* the *Velia*, and used to build a new house there. Once again, for the benefit of readers, the precise site is described: it was at the bottom of the slope (*in infimo cliuo*), where the temple of *Vica Pota* was in Livy's time.

Who was *Vica Pota*? A passage in Cicero, on the deification of abstract qualities, explains that she represented the qualities of victory and power:

#### 3.2 Cicero *De legibus* 2.28:

*quodsi fingenda nomina, Vicae Potae potius uincendi atque potiundi ...*

But if names must be invented, better (those like) *Vica Pota*, from victory and power ...

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<sup>14</sup> Andrea Carandini, *La nascita di Roma* (Turin 1997) 577-83, tavole XVII-XXXII.

<sup>15</sup> Adam Ziółkowski, *Sacra Via Twenty Years After* (Warsaw 2004) 74-84, 141-4.

<sup>16</sup> Plutarch *Publicola* 10.2, Livy 2.7.6.

And indeed, she was evidently also known by the more familiar name of *Victoria*, victory. So when the scholarly Asconius, quoting the equally scholarly Julius Hyginus, tells a slightly different story about Publius Valerius' house (in which the Roman People provide it for him at public expense), he too puts it below the Velia, but where the temple of *Victoria* was in his time:

**3.3** Asconius 13C, on precedents for publicly-funded houses:

*Iulius Hyginus dicit in libro priore de uiris claris P. Valerio Volesi filio Publicolae aedium publice locum sub Velis, ubi nunc aedis Victoriae est, populum ex lege quam ipse tulerat concessisse.*

In the first volume of *On Famous Men*, Julius Hyginus says that the People granted to Publius Valerius Publicola, son of Volesus, a site for a house at public expense below the Velia, where the temple of Victoria is now.

I think we must assume that the site he describes was the same as the site Livy described in item 3.1.

It was necessary to refer to the temple as a topographical marker, because 'below the Velia' could mean below it on the north, east or south side. The context of the Livy story, with the first house looming over the Forum, may imply that the second house was below the Velia on the Forum side, at the foot of the western slope. So where *was* the temple of Vica Pota/Victoria? The answer comes in an unusual and neglected text.

The speeches of Cicero survive because he was a master-orator, and his works were used as exemplary models by students of oratory. Those students sometimes composed speeches of their own which purported to be by Cicero, at particular key moments in his eventful career. One example, supposedly delivered just before his departure into exile in 58 BC, is included among the real Ciceronian speeches from that period collected in a ninth-century manuscript in Paris. It is a very good imitation, and the author, writing probably in the Augustan age or not long after, was clearly very well informed; for topographical evidence, therefore, it is no less valuable than a genuine speech would be.

Pseudo-Cicero appeals to Jupiter Stator, because in November 63 BC the real Cicero had summoned the Senate to that temple to denounce Catiline as a traitor:<sup>17</sup>

**3.4** 'Cicero' *Priusquam in exsilium iret* 24:

*teque, Iuppiter Stator, quem uere huius imperii statorem maiores nostri nominauerunt, cuius in templo hostilem impetum Catilinae reppuli a muris, cuius templum a Romulo uictis Sabinis in Palatii radice cum Victoria est consecratum, oro atque obsecro ...*

I beseech you too, Jupiter Stator, whom our ancestors truly named as the support of our empire, in whose temple I drove from the walls Catiline's hostile attack, whose temple, with Victoria, was consecrated by Romulus at the foot of the Palatine after the defeat of the Sabines...

The author links the Jupiter Stator temple with that of Victoria, both supposedly founded by Romulus 'at the foot of the Palatine' (*in Palatii radice*). We must remember that Romulus had vowed the temple to Jupiter at the point immediately outside the gate of his Palatine city, where his retreating army rallied to make their stand, and that

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<sup>17</sup> Cicero *In Catilinam* 1.11, 2.12.

Ovid's evidence (2.5) implies that the site of both gate and temple was close to the temple of Vesta and the *regia* [H, I].

Pseudo-Cicero's phrase 'at the foot of the Palatine' is also used by Servius in his commentary on Virgil's *Aeneid*, precisely with reference to the *regia*:

**3.5** Servius in *Aeneidem* 8.363:

*quis enim ignorat regiam ... in radicibus Palatii finibusque Romani fori esse?*

Everyone knows that the *regia* is at the foot of the Palatine at the edge of the Roman Forum.

If a site *in radicibus Palatii* could also be at the edge of the Roman Forum, that fits the context of Livy's story (3.1) very well. Publius Valerius was in the Forum, addressing the citizens. He would have pointed up, to the top of the Velia, to show that his house was no longer there; and he would have pointed down, to the bottom of the Velia, on the side they could see, to show where his house would be more modestly rebuilt. Everything fits together perfectly.

Except that this whole area was thoroughly explored by two of the greatest of Roman archaeologists – Rodolfo Lanciani in 1878-82, and Giacomo Boni in 1899.<sup>18</sup> They found no Palatine gate, no temple of Jupiter Stator, no temple of Vica Pota/Victoria. But what Boni did find was an archaic house;<sup>19</sup> it was between the temple of Antoninus and Faustina [O] and the so-called temple of Romulus at SS. Cosma e Damiano [P], no more than 30 metres from the *regia* and below the western slope of where the Velia used to be – that is, precisely at the place implied by Livy's story about Publius Valerius.

The point I want to make with this third example is a question: when mapping an area, do you allow archaeological evidence to prove a negative? Did the excavations of Lanciani and Boni demonstrate that the temples of Vica Pota and Jupiter Stator *cannot* have been where the textual evidence shows they must have been? It's a question that does not have an obvious answer.

**Fourth example: The statue of a girl on a horse**

Our fourth Livian case-study comes from his narrative of the second year of the Republic. Lars Porsena of Clusium is besieging Rome from his camp on the Janiculum side of the Tiber. The Romans have had to send their children as hostages, but some of the girls escape, under the leadership of Cloelia, by swimming back across the river. Both sides behave magnanimously: the Romans send the hostages back, Porsena returns them unharmed and praises Cloelia's bravery.

What matters for our purposes is Livy's report of the equestrian statue subsequently put up in her honour:

**4.1** Livy 2.13.11:

*pace redintegrata Romani nouam in femina uirtutem nouo genere honoris, statua equestri, donauere; in summa sacra uia fuit posita uirgo insidens equo.*

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<sup>18</sup> Rodolfo Lanciani, *The Ruins and Excavations of Ancient Rome* (London 1897) 208-9; *Notes from Rome* (Rome 1988) 295-303. Cf. T.P. Wiseman, 'Con Boni nel Foro', *RINASA* 3.8-9 (1985-6) 119-149, esp. 132-6.

<sup>19</sup> Filippo Coarelli, *Il foro Romano: periodo arcaico* (Rome 1983) 79-82.

When peace was restored the Romans rewarded bravery unprecedented in a woman with the unprecedented honour of an equestrian statue: a girl riding a horse was set up at the top of the *sacra uia*.

Here again, it is clear that Livy is directing his readers to something they knew. It is true that he does not say explicitly that the statue was still there when he was writing, but there would have been no point in mentioning it at all if his readers had not known it as a familiar sight.

A few years after Livy, Dionysius of Halicarnassus narrated the same story, adding only that the initiative for the statue came from the fathers of the girls Cloelia had rescued:

**4.2** Dionysius of Halicarnassus 5.35.2:

Κλοιλία δὲ τῇ παρθένῳ στάσιν εἰκόνας χαλκῆς ἔδοσαν, ἣν ἀνέθεσαν ἐπὶ τῆς ἱερᾶς ὁδοῦ τῆς εἰς τὴν ἀγορὰν φερούσης οἱ τῶν παρθένων πατέρες. ταύτην ἡμεῖς μὲν οὐκέτι κειμένην εὕρομεν, ἐλέγετο δ' ἐμπρήσεως περὶ τὰς πλησίον οἰκίας γενομένης ἠφανίσθαι.

To young Cloelia they granted the erection of a statue, which the fathers of the girls set up on the *sacra uia*, the street leading to the Forum. I found that it was no longer there; it was said to have been destroyed when a fire broke out among the nearby houses.

Like a good historian, Dionysius went to look for the surviving evidence, the statue itself – but he couldn't find it. People told him it had been destroyed in a fire, and if we are right to think that it had still been there when Livy was writing his second book, the fire must have happened some time around 20 BC.

Moving forward about ninety years, we come to the elder Pliny's discussion of the statue. Having referred to the Cloelia story, he then mentions an alternative version from an unknown author called Annius Fetalis:

**4.3** Pliny *Natural History* 34.29:

*e diuerso Annius Fetalis equestrem quae fuerit contra Iouis Statoris aedem in uestibulo Superbi domus Valeriae fuisse, Publicolae consulis filiae, eamque solam refugisse Tiberimque transnatauisse.*

On the other hand, Annius Fetalis says that the equestrian statue that was opposite the temple of Jupiter Stator, in the forecourt of the house of Superbus, was that of Valeria, daughter of the consul Publicola, and that she alone escaped and swam across the Tiber.

Annius claimed it was a statue of Valeria, daughter of Publius Valerius 'Publicola', the same man whose house, demolished and rebuilt, was the subject of our previous example. Plutarch's allusion to this tradition, dating from soon after Pliny, confirms that Annius was talking about the same statue:

**4.4** Plutarch *Publicola* 19.5:

ἀνάκειται δὲ τὴν ἱερὰν ὁδὸν πορευομένοις εἰς Παλάτιον ἀνδριᾶς αὐτῆς ἔφιππος, ὃν τινες οὐ τῆς Κλοιλίας ἀλλὰ τῆς Οὐαλλερίας εἶναι λέγουσιν.

An equestrian statue of her stands by the *sacra uia* as you go to the Palatine, though some say it is of Valeria, not Cloelia.

The fact that Pliny (or Annius) uses the past tense seems to fit in with Dionysius' evidence for the statue's disappearance; but there is a complication here, because Seneca, writing about AD 40, refers to it in the present tense as a feature of the *sacra uia* in his own time:

**4.5** Seneca *De consolatione ad Marciam* 16.2:

*Cloeliam contempto et hoste et flumine ob insignem audaciam tantum non in uiros transcripsimus; equestri insidens statuae in sacra uia, celeberrimo loco, Cloelia exprobrat iuuenibus nostris puluinum escendentibus.*

Cloelia defied both the enemy and the river, and because of her extraordinary bravery we have almost enrolled her among men; seated on her equestrian statue in a much-frequented place on the *sacra uia*, Cloelia shames our young men as they get up on their cushions.

Perhaps the statue was replaced after the fire Dionysius refers to (4.2), and then destroyed again in the great fire of AD 64. But Plutarch (4.4), writing in the early second century AD, refers to it again in the present tense. That implies that whatever supposedly archaic statue Livy was referring to in the 20s BC (4.1) was destroyed and replaced, and destroyed again and replaced again, all within a period of about 130 years.

We have no idea whether Annius Fetalis (4.3) wrote before or after the Neronian fire; Pliny, of course, was writing about ten or fifteen years after it. So we cannot tell whether the extra topographical information provided by Pliny (or Annius) refers to the situation before the post-64 redevelopment of the whole *sacra uia* area. In Livy's time the statue was at the top of the street, *in summa sacra uia*; when Pliny (or Annius) was writing it was opposite the temple of Jupiter Stator, which seems to have been much further down, close to the Vesta temple and the *regia* (2.5, 3.4). One possibility is that after the Jupiter Stator temple was destroyed in the fire of 64, it was rebuilt on a different site.

The most interesting detail in Pliny's account (4.3) is the information that the statue was situated in the *uestibulum* of the house of king Tarquinius Superbus. Other sources put the house of Tarquinius Superbus 'above the *clivus Pullius* at the Fagutal grove'<sup>20</sup> – that is, on the Esquiline near the church of S. Martino ai Monti. But if we compare this passage with item 2.1, where the Jupiter Stator temple was adjacent to the house of Tarquinius Priscus, it is clear that Pliny (or Annius) followed a different tradition, which knew just one 'house of the Tarquins' occupied successively by Tarquinius Priscus and Tarquinius Superbus.

At 2.1 the Tarquin house opens on to the *noua uia*; at 4.3 its forecourt houses a statue that all the other sources place on the *sacra uia*. Does that mean it was situated at the point where the two streets met? That is certainly possible: the Jupiter Stator temple was next to the old Palatine gate (2.2, 2.5), and it would be reasonable to assume that the two *uia*e departed from the gate in different directions. But we must remember that Pliny (4.3) and Plutarch (4.4) were writing after the Neronian redevelopment of the whole area from the Forum to the Arch of Titus; how well did Pliny remember, and how well could Plutarch understand, the historic pre-Neronian topography their sources took for granted?

<sup>20</sup> Solinus 1.26 (perhaps from Varro).



It is interesting to note that Plutarch in two separate places (2.3 and 4.4) refers to the *sacra uia* as the route to the Palatine.<sup>21</sup> No pre-Neronian author does that: the old *sacra uia* went up to the Carinae, and to get to the Palatine you had to make a right turn (2.5) – though where exactly is a problem that still baffles our enquiry. After the fire, the grand Neronian avenue led straight up to the even more grand entrance to the imperial palace, which was what the term *Palatium* now meant.

If Plutarch's present tense in item 4.4 is to be taken literally, we must assume that after the Neronian fire everyone knew from the history books that the Cloelia/Valeria statue had been set up on the *sacra uia*, and therefore that was where the latest replacement of it had to stand. But the *sacra uia* was no longer the same street, and the old nexus of the Palatine gate, the 'house of the Tarquins' and the temple of Jupiter Stator (2.1, 2.5) had disappeared for ever. It would no longer be possible for a historian to do as Livy had done, and place the events of the distant past in the Rome his readers knew.

As it happens, the literary sources for the first and early second centuries BC are comparatively plentiful. The same cannot be said of the third and fourth centuries; so we must also ask ourselves how many *other* destructions and redevelopments there may have been, for which we do not happen to have good evidence.

For instance, what does it mean that the fourth-century Regionary Catalogue puts the temple of Jupiter Stator not in *regio X*, the Palatine, but in *regio IV*, named from Vespasian's *templum Pacis*? Perhaps it had always been in that region, despite the consistent evidence linking it with the Palatine gate. But equally, it may have been rebuilt after destruction, and not on the same site. It is yet another example of the uncertainties inherent in what we call 'the literary data'.

### **Fifth example: The *noua uia* and the temple of Vesta**

Our final exemplary text comes from Livy's fifth book, which narrates the destruction of Veii and the subsequent sack of Rome by the Gauls. Between these two events, when the victorious Romans had no idea of what was about to happen to them, a mysterious nocturnal voice delivered a message to a humble citizen, a plebeian called Marcus Caedicius, with instructions that he report it to the magistrates. He did so, but they took no notice; afterwards, to make amends for their neglect of the divine message, the Senate set up a shrine to Aius Locutius, 'the sayer-speaker'.

As usual, the historian places the event precisely for the benefit of his readers:

#### **5.1 Livy 5.32.6, on 391 BC:**

*eodem anno M. Caedicius de plebe nuntiauit tribunis se in noua uia, ubi nunc sacellum est supra aedem Vestae, uocem noctis silentio audisse clariorem humana, quae magistratibus dici iuberet Gallos aduentare.*

That same year Marcus Caedicius, a man of the *plebs*, reported to the tribunes that on the *noua uia*, where now the shrine is above the temple of Vesta, he had heard in the silence of the night a voice more clear than that of a mortal, which ordered that the magistrates be told that the Gauls were coming.

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<sup>21</sup> So too Martial 1.70.5; Dio Cassius 66.15.1, 69.4.4; Galen *De methodo medendi* 13 (10.942 Kühn).

The supernatural voice was heard ‘where now the shrine is, above the temple of Vesta’. The temple of Vesta is securely located [H]; ‘above it’ ought to mean on the slope of the Palatine hill immediately to the south or south-east. That slope is concealed by the huge substructions, built to support the Hadrianic extension of the *domus Tiberiana* palace, which now form the *belvedere* of the Farnese Gardens [Q], offering a wonderful view of the Forum and the Capitol. The topography of Livy’s time is entirely lost.

The story of the nocturnal message is told by various ancient authors. It is agreed that Caedicius was walking by night on the *noua uia* when he heard the voice;<sup>22</sup> that Camillus as dictator carefully sought out the exact place before setting up the shrine;<sup>23</sup> and therefore that the shrine itself, an altar within an enclosure,<sup>24</sup> was set up on the *noua uia*.<sup>25</sup> Moreover, Cicero and Varro also refer to the altar as extant in their own time. Applying all this to Livy’s account, we may confidently infer that the *noua uia* must have been ‘above the temple of Vesta’.

But according to Cicero, the voice came from the grove of Vesta, which sloped down to the *noua uia*:

## 5.2 Cicero *De diuinatione* 1.101, on supernatural voices:

*nam non multo ante urbem captam exaudita uox est a luco Vestae, qui a Palatii radice in nouam uiam deuexus est, ut muri et portae reficerentur...*

Not long before the capture of the city, a voice was heard from Vesta’s grove, which slopes down from the foot of the Palatine to the *noua uia*, saying that the walls and gates must be rebuilt...

There is no getting away from the force of the prefix: *de-uxus*, ‘sloping down’, must imply that the *noua uia*, already ‘above the temple of Vesta’ (5.1), was below the grove of Vesta, and the grove in turn was below ‘the foot of the Palatine’. And yet ‘the foot of the Palatine’ is where the temple itself was; see item 3.5, describing the position of the *regia* nearby. How do we make sense of that?

There is no sign that Cicero’s text is corrupt, and in any case no obvious emendation suggests itself. And if that is indeed what Cicero wrote, we can hardly suppose that he was mistaken. Since he was referring to a site very close to his own town house, which was on the slope of the Palatine with a view over the city, he is an unusually authoritative witness.<sup>26</sup> I have no idea what the solution may be; the point I want to make is precisely that the problem seems insoluble.

Let’s turn to a different author’s reference to Vesta and the *noua uia*, written about fifty years after Cicero and about thirty years after Livy:

## 5.3 Ovid *Fasti* 6.395-8, on the festival of Vesta in June:

*forte reuertabar festis Vestalibus illa | qua noua Romano nunc uia iuncta foro est. | huc pede matronam uidi descendere nudo; | obstipui tacitus sustinuique pedem.*

On Vesta’s festal day I happened to be going back by the way which now joins the *noua uia* to the Roman Forum. I saw a lady coming down to this place in bare feet. I was dumbstruck, and halted my step.

<sup>22</sup> Plutarch *Camillus* 14.2, *De fortuna Romanorum* 5 (*Moralia* 319A).

<sup>23</sup> Plutarch *Camillus* 30.2.

<sup>24</sup> Cicero *De diuinatione* 1.101, 2.69; Varro *ap.* Aulus Gellius 16.17.2.

<sup>25</sup> Cicero *De diuinatione* 2.69; Varro *ap.* Aulus Gellius 16.17.2; Livy 5.50.5, 5.52.11.

<sup>26</sup> Velleius Paterculus 2.14.3 (slope); Cicero *De domo* 100, *De haruspicum responso* 33 (view).

The poet was 'going back', presumably from the Forum,<sup>27</sup> and he met a lady 'coming down'. *Descendere* without further explanation is often used of coming down from one's house to the Forum,<sup>28</sup> and that is presumably what is meant here. Usually one 'came down' by the *sacra uia*,<sup>29</sup> but it so happened (*forte*) that on this occasion the poet was going back by a different route. Since he specifies that it was the day of the *Vestalia*, we may assume the lady he saw was going to Vesta's temple [H], or to Vesta's grove.<sup>30</sup>

The route Ovid was using, when he saw her coming down, is described as 'the way by which the *noua uia* is now joined to the Roman Forum'. That fits with the *noua uia* being 'above Vesta's temple' (5.1), but not with Vesta's grove 'sloping down' to the *noua uia* (5.2). What matters most, however, is the little word *nunc*. Ovid is describing a new situation. We know that a great fire in 7 BC destroyed 'many buildings round the Forum',<sup>31</sup> and we may also remember the fire that destroyed the statue of the girl on the horse before Dionysius could get to see it (4.2). It would not be surprising if Augustus' city planners took advantage of such disasters to create a more impressive urban landscape in this most historic of areas.

All we know from Ovid is that there was a new stair or ramp somewhere between the Vesta temple and the Palatine. How much had the topography changed since Cicero and Livy were writing? How much would it change again when Caligula 'extended part of the Palatine as far as the Forum', and used the temple of Castor as his *uestibulum*?<sup>32</sup> We have no idea.

Archaeology can only deal with what survives, and one feature that survives is indeed a ramp or stepped street between the shrine of Juturna and the temple of Vesta, leading up to the Palatine slope. It is often linked with the Ovid passage, but wrongly; since it was built long before his time, probably in the second century BC, it would be absurd for him to refer to it as an innovation. Archaeology cannot help us to locate the *noua uia* in relation to the Vesta temple; all we have are inferences from texts, which are either mutually contradictory (5.1 and 5.2) or refer to a short-lived late-Augustan topography that is now irretrievably lost (5.3).

The *noua uia* is also referred to in relation to a place called *Velabrum*. Here we have to beware of a long-standing fallacy, the idea that *Velabrum* was the name of the entire valley between the Capitol and the Palatine.<sup>33</sup> It was not: there is absolutely *no* evidence for that use of the name in the ancient world. On the contrary, *Velabrum* was the name of a market-place on the *uicus Tuscus*, the street that led from the Roman Forum (between the Basilica Julia and the temple of Castor) to the *Forum boarium* and

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<sup>27</sup> Cf. Plautus *Pseudolus* 163.

<sup>28</sup> E.g. Cicero *Philippics* 2.15, 8.6; Catullus 112.1; Q. Cicero *Commentariolum petitionis* 36; Horace *Epistles* 1.20.5. Cf. Cicero *Pro Roscio Amerino* 133 (from house); Cicero *Ad Atticum* 1.18.1, *De oratore* 2.267 (*in forum*).

<sup>29</sup> E.g. Cicero *Ad Atticum* 4.3.3; Seneca *Apocolocyntosis* 12.1.

<sup>30</sup> Ovid *Fasti* 6.411 (*lucus*).

<sup>31</sup> Dio Cassius 55.8.5-6.

<sup>32</sup> Suetonius *Gaius* 22.2.

<sup>33</sup> E.g. A.J. Ammerman, *LTUR* 5 (1999) 101.

the Circus Maximus.<sup>34</sup> That fits very precisely with the site of the mediaeval church of S. Giorgio in Velabro [R].

When Varro in *De lingua Latina* derived the name ‘Aventine’ from the verb *aduehere*, to carry or convey to (a place), he supported his conjecture by his belief that the low-lying ground between the Aventine and the Palatine and Capitol had once been permanently under water.<sup>35</sup> We now know that this was not the case;<sup>36</sup> but Varro believed that it was, and he used his ‘knowledge’ to create the idea of ferries carrying people and goods to and from the Aventine. This is the context in which he referred to the *Velabrum* and the *noua uia*:

**5.4** Varro *De lingua Latina* 5.43:

... dicitur Velabrum, et unde escendebant ad <in>fiam nouam uiam locus sacellum <ue>labrum.

... is called *Velabrum*, and the place from which they used to alight at the bottom of the *noua uia* is the shrine ‘of the *Velabra*’.

Unfortunately, the text of *De lingua Latina* is very corrupt, and one of the corruptions comes precisely at the beginning of this sentence.

What exactly was it that ‘was called *Velabrum*? We don’t know, because the subject of the sentence is lost in the corruption. But it’s likely that Varro was talking about the supposed ferries, because elsewhere he derives *Velabrum* from *uehere*, to carry or convey.<sup>37</sup> Besides, the sentence refers to ‘where they used to alight’ – presumably from the ferry. That makes sense: if S. Giorgio in Velabro [R] marks roughly the place he is referring to, one can imagine how he could have thought there was a landing-stage there for boats or rafts coming across the flooded valley of the Circus Maximus from the Aventine. And if so, that gives us the site of ‘the bottom of the *noua uia*’, since only a simple emendation is needed to restore the reading *infiam nouam uiam*.

This juxtaposition of *Velabrum* and *noua uia* is confirmed by Varro’s discussion of the Larentalia festival, and the sacrifice at the supposed tomb of Acca Larentia:

**5.5** Varro *De lingua Latina* 6.24, on the Larentalia festival in December:

*hoc sacrificium fit in Velabro, qua in nouam uiam exitur, ut aiunt quidam ad sepulcrum Accae ... locus extra urbem antiquam fuit non longe a porta Romanula.*

This sacrifice is carried out in the *Velabrum*, where you go out into the *noua uia*, at the tomb of Acca, as some say ... The place is outside the ancient city, not far from the Porta Romanula.

‘Where you go out’, presumably from the market-place, ‘into the *noua uia*’: evidently the street ran from wherever the altar of Aius Locutius was – above Vesta’s temple (5.1) or below Vesta’s grove (5.2) – on a line gradually converging with the slightly

<sup>34</sup> Livy 27.37.15, Plutarch *Romulus* 5.5, Suetonius *Nero* 25.2, Porphyrio on Horace *Satires* 2.3.228. Market: Plautus *Curculio* 483, *Captiui* 489; Horace *Satires* 2.3.229; Martial 11.52.10, 13.32.1-2; *CIL* 6.9671, 9993.

<sup>35</sup> Solinus 1.14; cf. Varro in Dionysius of Halicarnassus *Roman Antiquities* 1.14.1.

<sup>36</sup> Albert Ammerman, in Lothar Haselberger and John Humphrey (eds), *Imaging Ancient Rome* (*JRA Supplement* 61, 2006) 303-7.

<sup>37</sup> Varro *De lingua Latina* 5.44, 5.156.

lower *uicus Tuscus*, until the two streets met at the *Velabrum* market-place near S. Giorgio. That gives a satisfactory sense for the phrase ‘the bottom of the *noua uia*’ (5.4), and it seems that here at least we have a site that can be mapped.

But the complexities of the literary sources still have one surprise in store. It comes in a passage of Aulus Gellius in the second century AD:

**5.6** Aulus Gellius *Noctes Atticae* 16.17.2, on the derivation of *Vaticanus*:

*M. Varro in libris diuinarum aliam esse tradit istius nominis rationem: nam sicut Aius, inquit, deus appellatus atque ei statuta est quae est infima noua uia, quod eo in loco diuinitus uox edita erat, ita Vaticanus deus nominatus...*

Marcus Varro in his *Divine Antiquities* says that there is another reason for that name: for, he says, just as Aius was called a god, and the altar which stands at the bottom of the *noua uia* was set up to him, because in that place a voice was divinely emitted, so Vaticanus was named as a god ...

But if the Aius Locutius shrine was at the *bottom* of the *noua uia* (see 5.4 for the phrase), then everything is back in the melting-pot. Did Varro locate the shrine differently from his contemporaries (5.1, 5.2)? How could that be, if it was still extant in their time? Or was *infima noua uia*, and therefore also the *Velabrum*, really somewhere near the Vesta temple? How could that be, if Varro thought it was a landing-stage for ferries from the Aventine? One could always accuse Gellius of misquoting Varro, or misunderstanding him,<sup>38</sup> but that is a desperate remedy. If we don’t trust what the texts tell us, how can we understand anything?

I conclude with the second sentence in item 5.5: the *Velabrum*, where you went out into the *noua uia*, was ‘outside the old city’ – meaning the imagined Palatine city of Romulus – and ‘not far from the Porta Romanula’.

Nowadays it is believed that the Porta Romanula, supposedly an archaic gate in an archaic circuit-wall, is securely located on the Palatine slope above and behind the temple of Vesta [H].<sup>39</sup> The supposed evidence was published by Henry Hurst in 2006: it is ‘a rectangular cut into the *cappellaccio* bedrock ... represent[ing] a solid structure that may have stood until Hadrianic times’. What survives is a rectangular hole in the ground, from which the masonry that once filled it has been robbed away. The excavator infers ‘a rectangular structure made of cut blocks of stone, measuring at least 4.5 m east-west and 3.6 m north-south’ cut about 4 m deep into the natural bedrock. What was it? As Hurst observes, with admirable honesty, ‘it could be any sort of deeply-founded structure; while presumed to be early, because of its non-correspondence in alignment to other structures, it is undated’.<sup>40</sup>

If this undated feature could be anything, why should it be the Porta Romanula in particular? Henry Hurst makes the suggestion, with proper caution, only because he believes the Porta Romanula already has ‘a relatively unproblematic ancient textual location’ – namely this Varro passage (5.5), which places it at the *Velabrum*.

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<sup>38</sup> E.g. T.P. Wiseman, *PBSR* 72 (2004) 172, 182.

<sup>39</sup> E.g. Andrea Carandini, *Le case del potere nell’antica Roma* (Roma-Bari 2010) 129-31, fig.s 55-6.

<sup>40</sup> Henry Hurst, *PBSR* 74 (2006) 241-3, 252-4, 274-9; quotations from 275, 241 and 276.

A few years ago, pointing out the fallibility of Hurst's argument, and the consequent absence of any archaeological evidence for the Porta Romanula, I ended my piece with these words:<sup>41</sup>

I confidently expect to see [Hurst's] article cited in the near future as confirmation of the position of the *porta Romanula*, and as proof that the gate was still standing in the second century AD as a monumental memory of Romulus' city.

Now that we have the magnificent new *Atlante di Roma antica*, we may turn to the chapter on 'the Romulean walls of the Palatine'. The authors explain how the eighth-century BC walls were destroyed in the sixth century BC when aristocratic houses were built on the site. But somehow they were still remembered:<sup>42</sup>

Tuttavia non se ne perse la memoria. La *porta Romanula*, di cui gli scavi hanno forse messo in luce una versione di età repubblicana, sopravvisse fino a età adrianea.

There is a single footnote reference, and sure enough, it is to Hurst's article. True, the authors say 'perhaps' (*forse*), but in their sentence that meaningless adverb applies only to the subordinate clause. The main statement, that the 'Romulean' gate survived till the time of Hadrian, is given as a fact – and in the *tavole* of the atlas the 'Porta Romanula' appears repeatedly, as a securely identified topographical feature, from the eighth century BC right down to the time of Domitian.<sup>43</sup> There is no reference, either here or in the bibliography, to my counter-argument of 2007.

So, an undated hole in the ground, which the excavator himself says could be 'any sort of deeply-founded structure', becomes the securely attested guarantee of the historical reality of the legendary Rome of Romulus. Let us be clear about it: this procedure is not only a rejection of historical method; it is a deliberate confidence trick, to persuade the uninformed reader to believe in a myth. It is precisely what the responsible historical cartographer should *not* do.

Every datum is a hypothesis, and no hypothesis can be secure if the evidence it depends on is corrupt or ambiguous or contradictory. I hope to have shown that the location of some significant topographical features in a uniquely well-explored area of Rome depends on evidence which is, precisely, corrupt or ambiguous or contradictory. So my message to the cartographers – and to the archaeologists as well – is simply this: be careful when you make your hypotheses, and remember how fragile they necessarily are.

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<sup>41</sup> T.P. Wiseman, *PBSR* 75 (2007) 236.

<sup>42</sup> Daniela Bruno and Dunia Filippi, in Andrea Carandini (ed.), *Atlante di Roma antica* (Milan 2012) 80; cf. Bruno, *ibid.* 216.

<sup>43</sup> *Atlante di Roma antica* vol. 2, tavv. 1, 2, 5, 15, 48, 62, 76, 77, 78; cf. tavv. 47, 61, 70 (with a '?').

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## Ancient Rome seen by the ancient Romans

Eugenio La Rocca

Strabo, a Greek from Asia Minor, tries to explain the characteristics of Rome (Strabo Geography V, 8 [C235]): "...With regard to this city, I have already said that it was founded there as a matter of necessity, not as a matter of choice... Even those who afterwards added certain districts to the settlement could not as masters take the better course, but as slaves must need accommodate themselves to what had already been founded... If the Greeks had the repute of aiming most happily in the founding of cities in that they aimed at beauty, strength of position, harbors and productive soil, the Romans had the best foresight in those matters which the Greeks made but little account of, such as the construction of roads and aqueducts, and of sewers that could wash out the filth of the city into the Tiber... In a word, the early Romans made but little account of the beauty of Rome, because they were occupied with other, greater, and more necessary matters..."

Of course, authentically Greek works of art had been present in Rome ever since the Archaic age. But temples continued to be built in the ancient way: they were not made of marble, but rather of stuccoed tufa, wood and terracotta, and the araeostyle or diastyle rhythm of their colonnades was much wider compared to coeval Greek buildings.

The more serious matter is that the new monuments were usually grafted onto the urban fabric with total indifference either to a new urban conception of the city, or to their insertion in a space rearranged according to more modern rules regarding the organization of residential districts and road axes. Interested in individual monuments erected with private funds or with the *manubiae* acquired in their military campaigns, the Roman aristocrats did not possess an analogous interest in infrastructural works, which were usually realized instead with funds from the censors. Naturally, Rome did not lack bridges, aqueducts, streets, and porticoes along the streets to protect citizens from rain, but it does not seem that these works were planned as part of an authentic urban renewal. We know of only a very few cases of a specific desire to shape the structure of Rome itself, renovating – even in circumscribed areas – its urban framework. Rome had remained one of many among the cities of Latium and Italy, without possessing even the slightest structure of an imperial capital.

Even marble, which from the time of classical Athens onwards was a principal symbol of imperialistic power, was lacking in the city. It was not until the triumph of Quintus Caecilius Metellus over Macedonia in 146 B.C. that Rome finally had its first building made entirely of marble, in the Greek style: the temple of Jupiter Stator, a peripteral ionic temple with eustyle rhythm, built according to a project by Hermodoros of Salamis, but known only through the fragments of the Severan Forma Urbis Marmorea, depicting the temple as rebuilt in the Augustan age (fig. 1). The plan shown here (fig. 2) is a proposal for a reconstruction based on the reading of Vitruvius. Fulvia Bianchi may have found a fragment of one of the ionic capitals of this temple (fig. 3), so

similar to the capitals of Hermogenes that it informs us that Hermodoros followed his work, importing to Rome models in a purely Greek style.

Nevertheless, the temple of Jupiter Stator remains an isolated example within the Roman architectural panorama, perhaps not on account of its construction in marble, as much as on account of its morphology, which did not respond to the needs of the Roman ritual system. The temple of Mars or the round temple of the Forum Boarium do not respect the proportions of corresponding Hellenic temples, and they insert purely Roman elements, such as tuscanic type bases, into the architectural components (fig. 4). The other temples built or restored from this period onwards tend, in contrast, to present the traditional *sine postico* structure again – with some updates plausibly owing to the teachings of a great architect, Gaius Mucius (or Mutius), the architect of the temple of Honos et Virtus dedicated by Gaius Marius. This temple virtually concluded the Roman period of experimentation with Greek peripteral temples, in favor of the *sine postico* design upon a podium, such as the temple of Janus in the Forum Holitorium (fig. 5), or the temple of Portunus in the Forum Boarium.

More than architectural problems, however, I wish in this paper to show a few examples of the ways in which Romans perceived urban space, and how such a conception differs in a considerable way from our own urban perception, calibrated upon systems conceived in the Renaissance. Indeed, it is clear that in the perception of space, the modern eye tends to read ancient urbanism with a marked misunderstanding, according to the laws of linear perspective with a single vanishing point. Such laws, established in the Renaissance, are perfectly documented in the celebrated perspectival views on the panels in Urbino (fig. 6), Baltimore, and Berlin, works of central Italian artists who created splendid urban landscapes in the manner of Leon Battista Alberti. Late-republican and imperial Rome, in contrast, and perhaps with the exception of one area of the Augustan Campus Martius, was an agglomeration of enormous monumental complexes. These complexes, surrounded by porticoes or high enclosure walls, lacked any sort of articulated urban relationship to each other. They were instead legible separately, and in most cases, not as a unit. The monuments were inserted into the urban fabric in ways that were at times brutal and without any attempt to adapt them with the existing urban fabric – see for example the *porticus Liviae* on the Esquiline (fig. 7) –, as occurred millennia later with the insertion of the Vittoriano in the historic nucleus of the city.

The same image of the city, seen from inside by a spectator walking along its roads and porticoes, must have offered the idea of an arbitrary accumulation, in which each monument was necessarily perceived from below, in an incredible patchwork of partial glimpses. Think, for example, of the effect of the cramped area between the Circus Flaminius and the temple of Apollo, with the two buildings at such a minimum distance that it was possible neither to have a frontal view of the façade of the temple, nor to see its pedimental decoration (fig. 8). And within this curious disorder, through very high walls, or through porticoes that left no space other than to a continuous series of colonnades, one entered into authentic piazzas that were regularly articulated, but according to the same schemes: ample four-sided porticoes that usually accommodated one or more temples or works of art. As often occurs when one gets to the root of a problem of Greek or Roman culture, the profound difference between



modern and ancient ways of seeing emerges here, too: emerges our ingrained habit of reading architecture based on a linear perspective system – as on the panel paintings with views of city piazzas that we saw before, or in Pienza's Piazza del Duomo, the masterpiece of Bernardo Rossellino.

With the exception of one area of the Campus Martius, urban interventions from Augustus onwards never had the aim of a total refounding of the city. The connective tissue of the city remained more or less intact, if one excludes the works striving to regularize areas of vital strategic importance, such as the Roman Forum, the image of which responded poorly to the needs of the imperial capital. The monumental reorganization of the Forum's piazza took a very long time. It was only when the power of Augustus was definitively consolidated that its open space, of a vaguely trapezoidal form with irregular sides, separated into two areas with dissimilar orientations, and bounded by important road axes, was redesigned with increased coherence, on the basis of a new focal axis. Apart from this case, urbanistic interventions followed in a haphazard fashion: through the limited construction of new monuments, or the restorations or repairs of existing buildings. When it was felt that the Roman Forum needed to be expanded, the prices of land in the historic center prevented this project from obtaining results of greater scope barring drastic use of compulsory expropriation. Even Augustus, at the apex of his power, when he was the master of all of Rome and its empire, took care not to expropriate at a controlled price the land upon which he built his *forum*, so much that, according to contemporary sources, the dimensions of the final structure were not adequate to the real needs of the space. And when a new large monument was built, the surrounding urban fabric remained as it was, disorderly and irregular. Even in the case of the *porticus Liviae* (fig. 7), the *princeps* ordered the demolition of the much-maligned *domus* of Publius Vedius Pollio and, in its place, the construction of the *porticus*. In this way, as we see well in the Severan *Forma Urbis*, the *porticus* was inserted within an irregular maze of *insulae* and small streets.

If we look at the details of two of the most important monumental complexes of ancient Rome, the Forum of Augustus and the Forum of Trajan, we can immediately recognize the lack of correspondence between the plan and the real perception of monumental space (fig. 9). Today we can admire an extraordinary panorama from the Via Biberatica in Trajan's Markets towards the Forum of Trajan, the Capitoline and the Palatine, but we must imagine, to the contrary, the same street in antiquity as sunken between high walls (fig. 10). There may have been windows opening towards the Forum of Trajan; but from these windows only roofs of various heights, with no sense of a landscape, would have been visible. The harmonious spatial qualities of the exedrae of the two fora, so clear in the plan, could be understood in reality only by walking past the wall of the porticoes that impeded the view of the semicircular spaces from the grand central courts (fig. 11).

The Basilica Ulpia in Trajan's Forum, a sumptuous, massive building designed for judicial activities, revealed itself in the spectator's eye as a large quadrangular space with five naves, and two exedrae on its short walls. But someone standing in the broad central nave would have perceived the presence neither of the exedrae, as they were separated from the principal body of the structure by a double row of high colonnades,

nor of the lateral naves (fig. 12). We are not sure if the Basilica Ulpia served as the model for the first Christian basilica built by Constantine on the Lateran, dedicated to the Savior and subsequently to St. John the Baptist and to St. John the Evangelist. It is certain, however, that this Christian basilica differs from its pagan precedent in that a person who entered the church by its main entrance on the short side would have been able to take in at one glance the entire space, including the rear apse, the true focal point of the construction (fig. 13). Whereas in the Christian basilica the rear apse is an essential element of the space, the focus of the entire construction, in the Basilica Ulpia, from what we can tell, there seems not to be a focal point but rather many perspective points: the visitor must memorize the space by walking through the interior of the basilica, without stopping in one location, and then mentally adding up these individual sections. Thus, between the ages of Trajan and Constantine, the perception of space had changed, perhaps in order to respond to different cultural needs: for example, the necessity in a church to participate collectively in the sacrifice of the mass, whereas in the pagan basilica the requirement was, on the contrary, to subdivide the space in order to allow multiple tribunal hearings to take place at the same time, but in nearby spaces.

There is more. The porticoes of the fora transformed their interior courts, which in most cases were spread out like large squares, into repetitive and slightly monotonous images as far as the urbanistic aspect was concerned. However if one wanted to look at it, these courts were quadrangular peristyles, differentiated from each other largely based on rich and polychromed architectural decoration, which served to liven up the static nature of the design. Even in Roman literature, for example in the poetic descriptions of luxurious *domus*, architectural quality or originality never emerges, but rather the splendor of the marbles: “Here is Lybian stone and Phrygian, here hard Laconian rock shows green, here are versatile alabaster and the vein that matches the deep sea, here marble oft envied by Oebalian purple and the blender of the Tyrian cauldron. Airy gables rest on countless columns, beams glitter allied with Dalmatian ore. Cool descends from ancient trees, shutting out the sunshine, translucent fountains live in marble” (Stat. *Silv.* I, 2, 148-155).

Strangely, at least from a modern perspective, while on the one hand Romans favored outdoor spaces for religious ceremonies, on the other such spaces were in fact porticoed courtyards — wide but at the same time closed off from the surrounding urban environment (fig. 14). Who, in ancient Rome, could have imagined what took place behind the mighty walls that separated the Forum of Augustus and the piazza in front of the Temple of Mars Ultor from the pulsating life of the Suburra districts (fig. 15)? Initially Christian basilicas were also separated from their surrounding districts by the insertion of a porticoed courtyard at their entrance, which served as a barrier between exterior and interior. An example of such a structure is the Church of Santa Cecilia in Trastevere.

And that is not all. In Roman architectural complexes there is always a wall of columns or of pilasters that keeps one’s glance from gathering a picture of the whole. From the piazza of the Forum of Augustus, one could not see the *exedrae*; in the sanctuary of Palestrina, a complex as well as fascinating system of ramps and stairs leads from one square to another, but each of these is separated from the others, and cannot be

perceived in its totality even from the preceding square (fig. 16). In short, these were restricted views, closed in on themselves. The articulation that is visible in a plan of an architectural complex was not perceptible as such to the visitor, who was driven to walk from one space to another, discovering the spatial complexity not through a truly perspectival structural system, but rather through memory and mental agglutination. As we have seen in the passage I quoted of Statius' *Silvae*, the Romans, just as the Greeks, were not interested in panoramas and spatial expansions, but they tended to enclose the landscape, constricted and possibly without horizons, as if within a picture frame. But this is not all!

Nature is never seen with a romantic eye, but rather as a space circumscribed and shaped by the hand of man, who models nature with admirable artifice. The world uncontrolled by the human mind was alien to the Romans. The natural landscape – woods, tall mountains, cliffs, and the infinite sea – entered into their imagination only in limited ways. Hence the manner – so strange to us – of painting the landscape always avoiding the presence of a horizon, always reducing the depth of the field through multiple parallel planes, like a stage set, and ultimately through the construction of a symbolic and typified landscape that responded to precise rules and set patterns (fig. 17). It is that genre that in the rhetorical language of the age was called *topothesia*, which is the portrayal of an imaginary landscape, in opposition to *topographia*, which was direct representation from nature, but adopted usually for the uses of cartography, and thus for the reproduction in some scientific way of a region, a territory, or a city. We now have an outstanding example of *topographia* in the so-called “painted city” of the Oppian hill (fig. 18).

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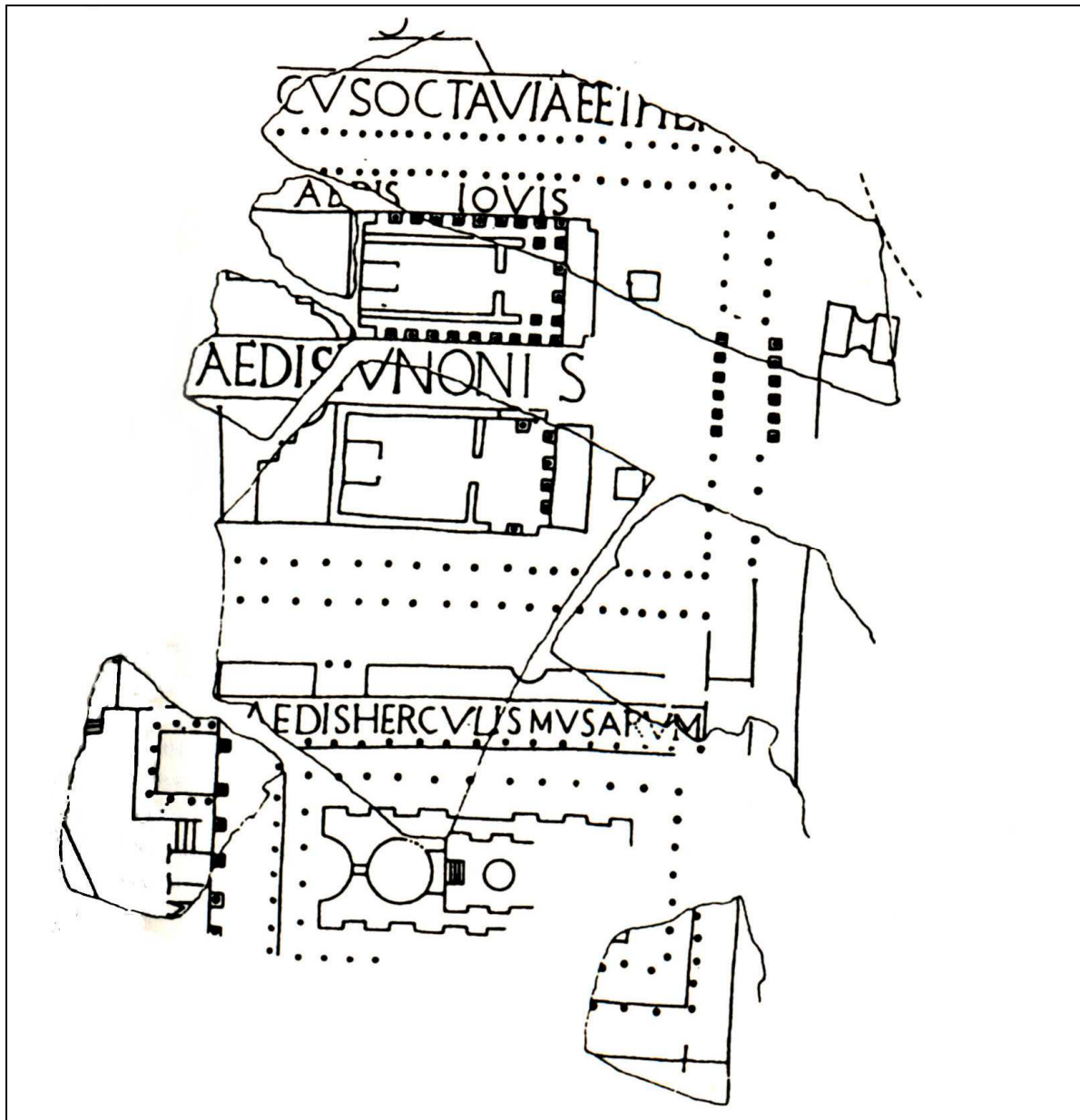


Fig. 1: Reconstruction drawing of the fragments of the *Forma Urbis Severiana* in the *circus Flaminius*: top, the *porticus Octaviae* with the temples of Jupiter Stator and Juno Regina (Augustan phase and subsequent restoration); below, the *porticus Philippi* with the temple of Hercules Musarum (after G. F. Carettoni, A. Colini, L. Cozza, G. Gatti, *La pianta marmorea di Roma antica: Forma Urbis Romae*, Roma 1960).

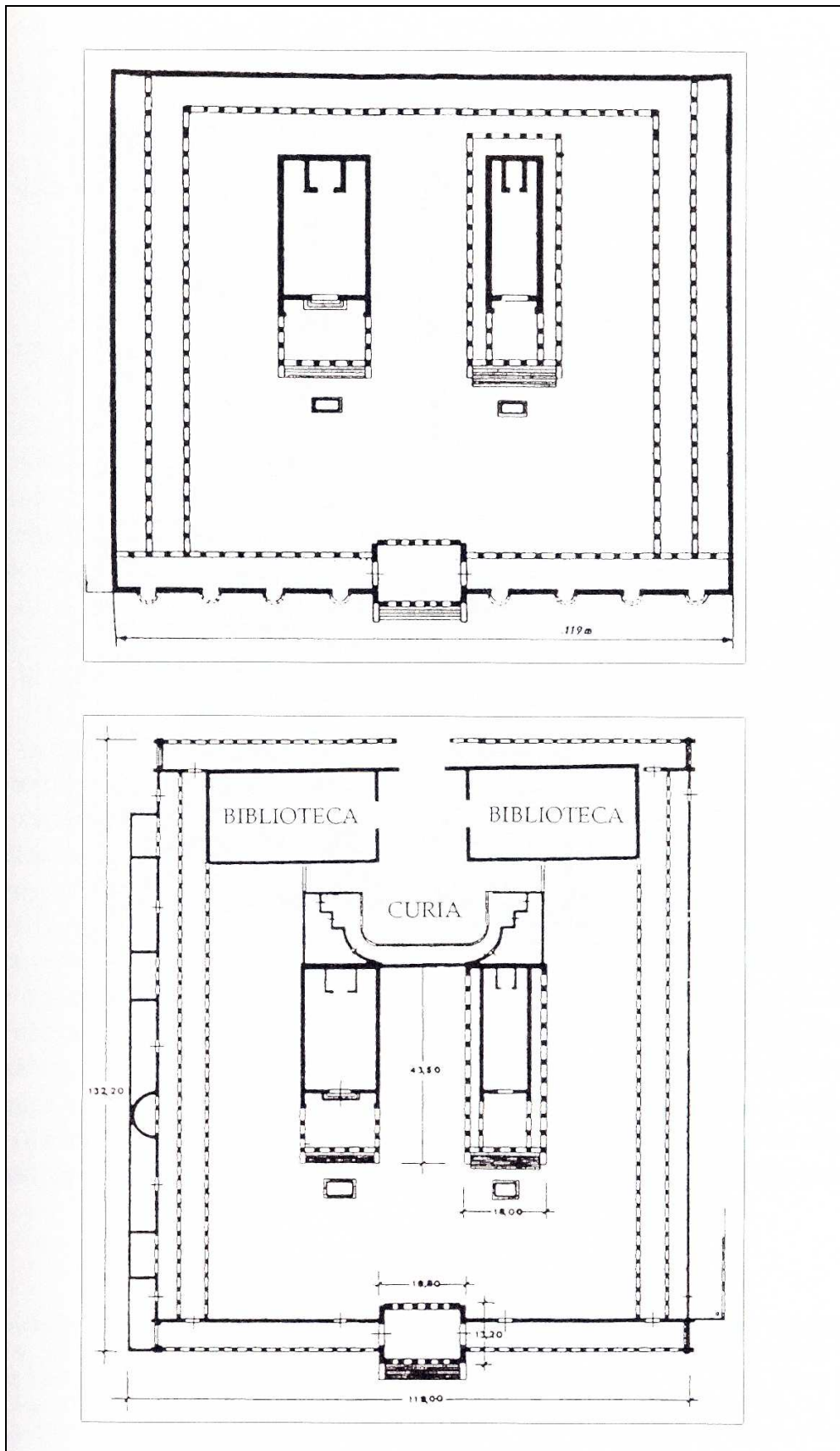


Fig. 2: Proposal for a reconstruction of the plan of the temples of Jupiter Stator and Juno Regina. Above, the Republican temples in the *porticus Metelli*; below, the temples after the Augustan intervention in the *porticus Octaviae* (after Vitruve, *De l'architecture*, livre III, edited by P. Gros, Paris, Belles Lettres, 1990).

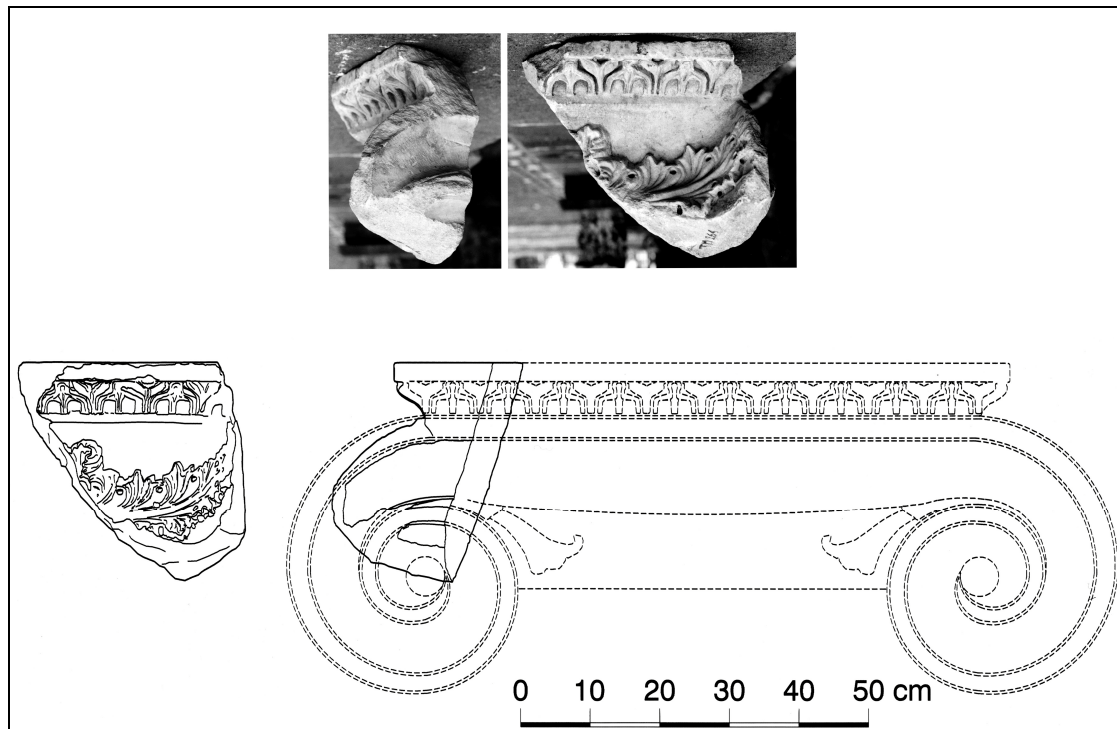


Fig. 3: Fragment of a Ionic capital attributed to the decoration of the temple of Jupiter Stator in the *porticus Metelli*, and reconstructive drawing (after F. Bianchi, "Il tempio di Giove Statore e la scena del teatro di Marcello. Maestranze e modelli decorativi tra epoca tardo-repubblicana e media età imperiale", *RendLinc*, s. 9, 21, 2010).

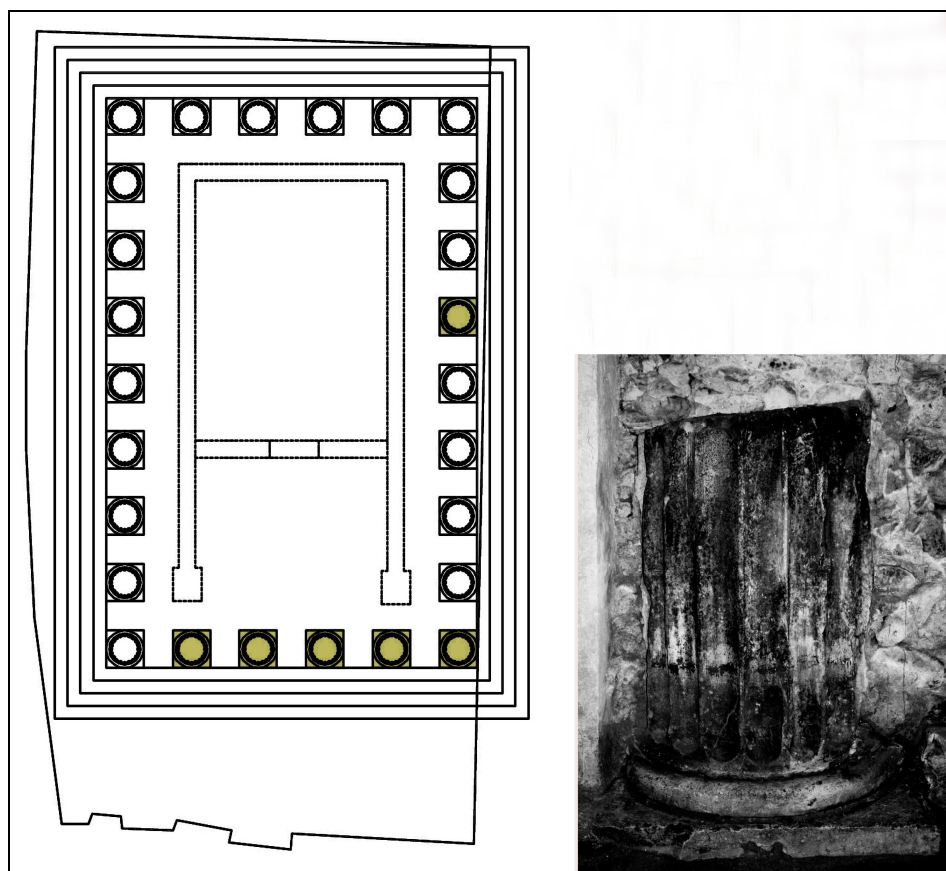


Fig. 4: Plan of the temple of Mars *in circo* (after D. Kosmopoulos, "Il tempio presso S. Salvatore in Campo: lo stato della questione", *BullCom* 113, 2012).



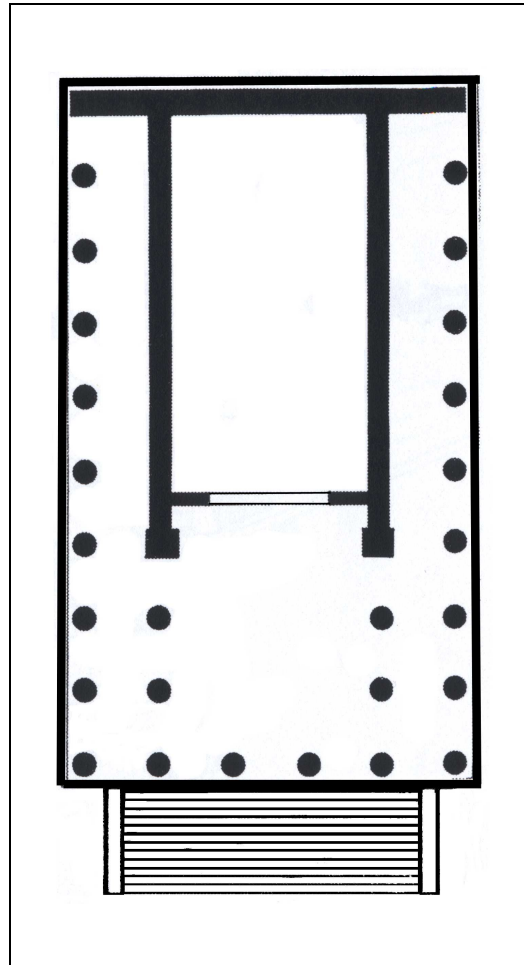


Fig. 5: Plan of the northern temple (perhaps of Janus) in the *forum Holitorium* (after J. W. Stamper, *The Architecture of Roman Temples*, Cambridge 2005).

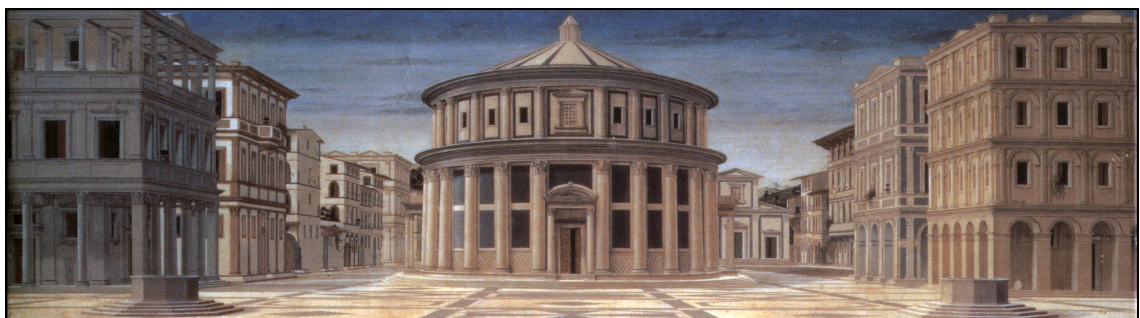


Fig. 6: Urbino, Galleria Nazionale delle Marche. Ideal townscape, probably designed by Leon Battista Alberti (after G. Morolli, "La vittoria postuma: una città niente affatto 'ideale' ", in *L'uomo del Rinascimento. Leon Battista Alberti e le arti a Firenze tra ragione e bellezza*, a cura di C. Acidini Luchinat e G. Morolli, Catalogo della mostra, Firenze 2006).



Fig. 7: Reconstruction drawing of the fragments of the *Forma Urbis Severiana* representing the area of the *porticus Liviae* (after E. Rodríguez Almeida, "Aggiornamento topografico dei Colli Oppio, Cispio e Viminale secondo la *Forma Urbis Marmorea*", *RendPontAcc* 48, 1975-76).

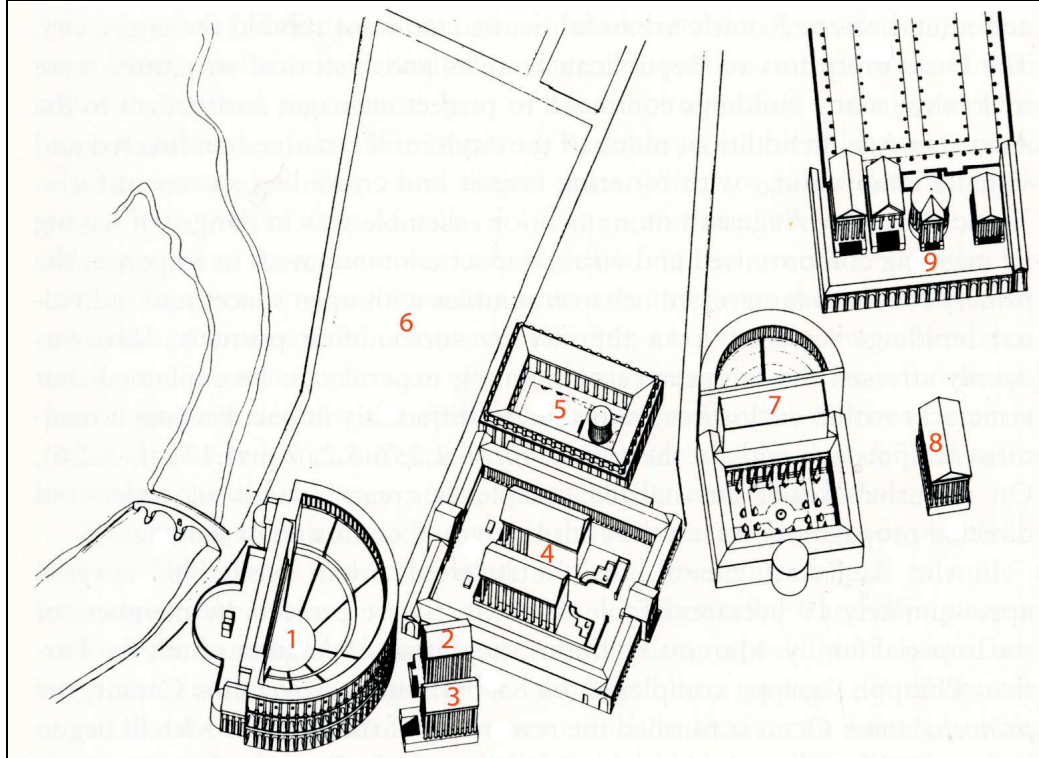


Fig. 8: Reconstructive axonometrical view of the area between the Marcellus' theater and the *circus Flaminius* (after D. Favro, *The Urban Image of Augustan Rome*, Cambridge 1996).



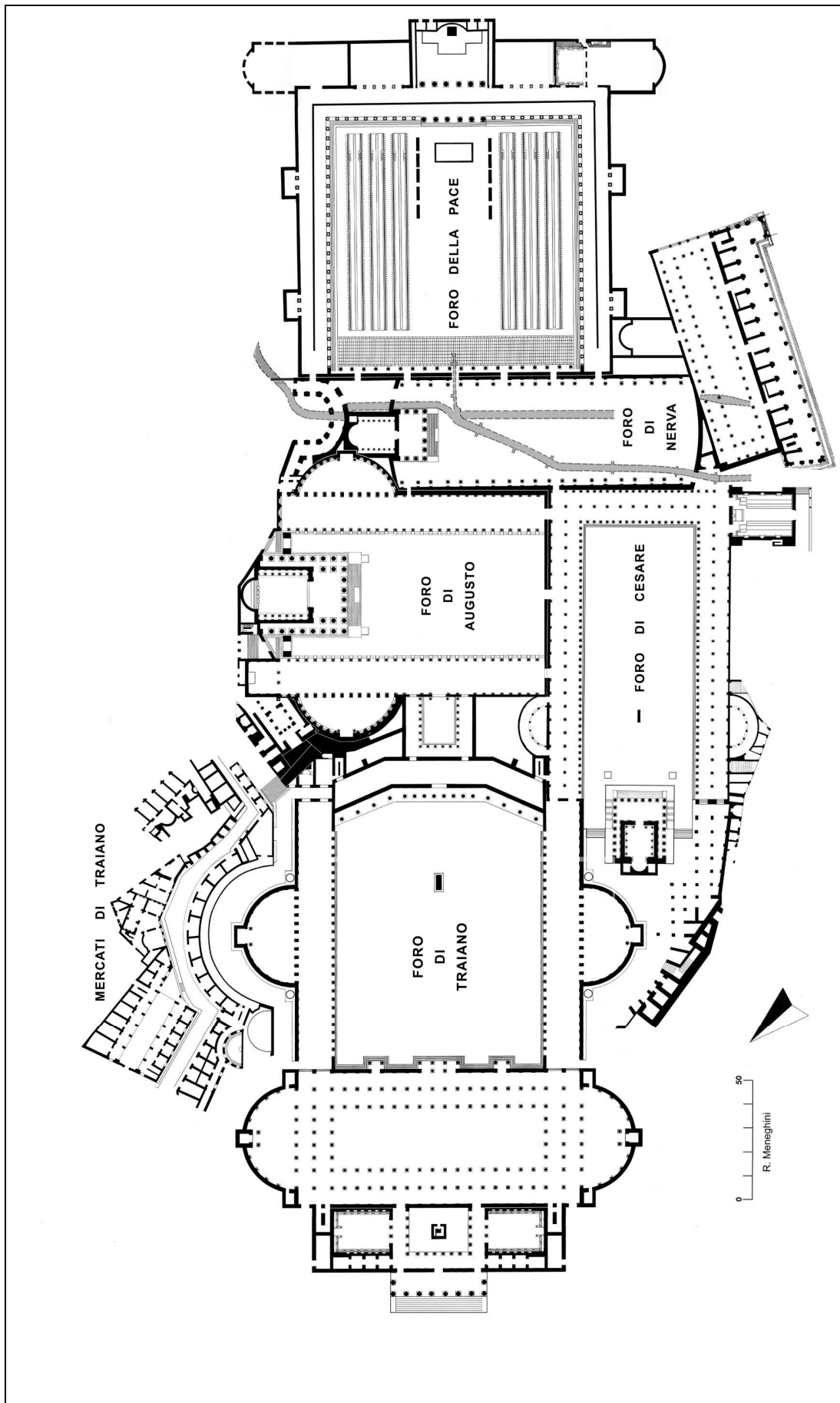


Fig. 9: Reconstructive plan of the Imperial fora, result of recent excavations (photo Sovraintendenza ai Beni Culturali di Roma Capitale).

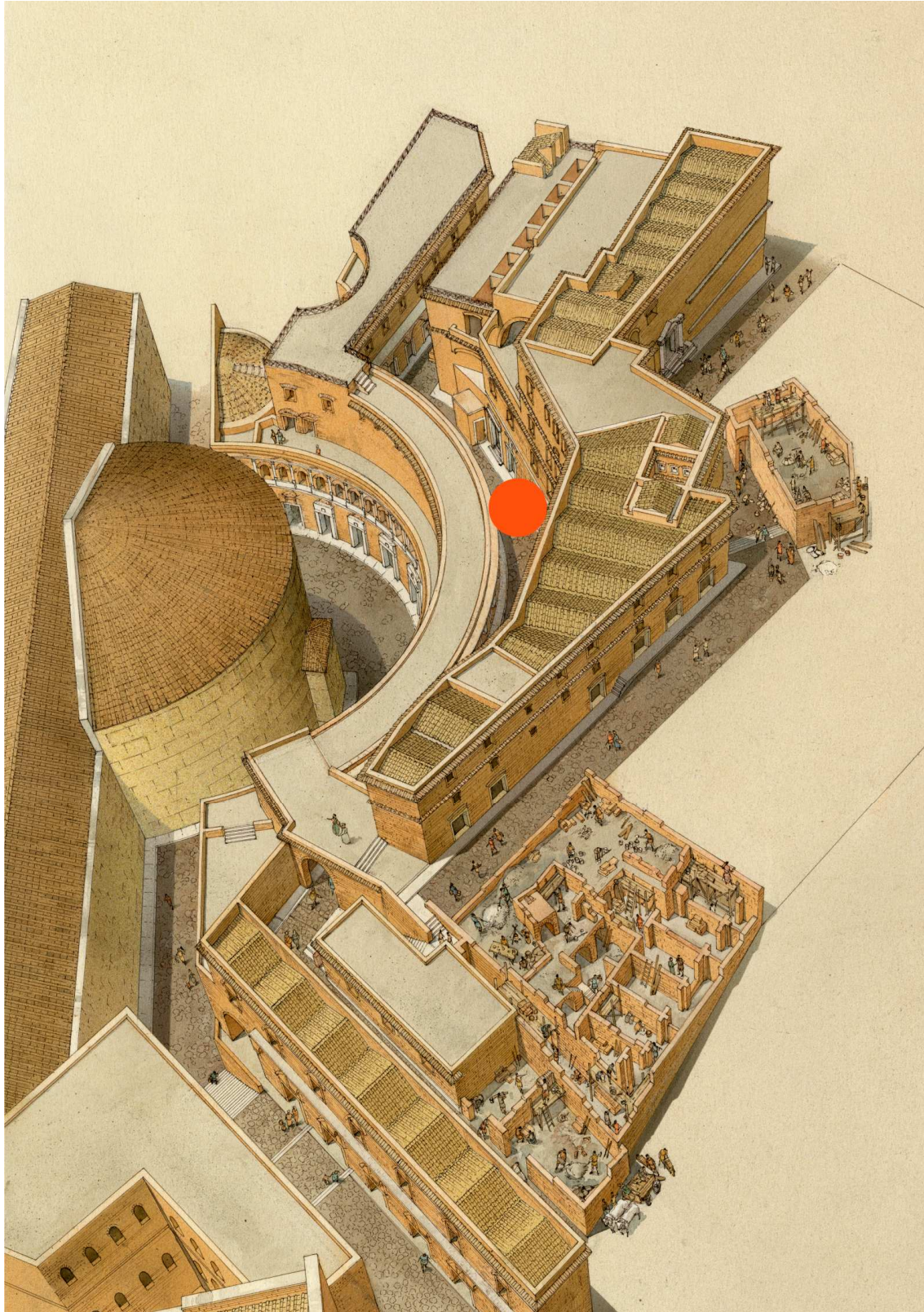


Fig. 10: Reconstructive axonometrical view of Trajan's Markets. The circle patterned in red defines the position of the so-called *via Biberatica* (drawing InkLink; photo Sovraintendenza ai Beni Culturali di Roma Capitale).





Fig. 11: Reconstructive view of the Augustus' forum with the porticoes and the temple of Mars Ultor (drawing InkLink; photo Sovraintendenza ai Beni Culturali di Roma Capitale).

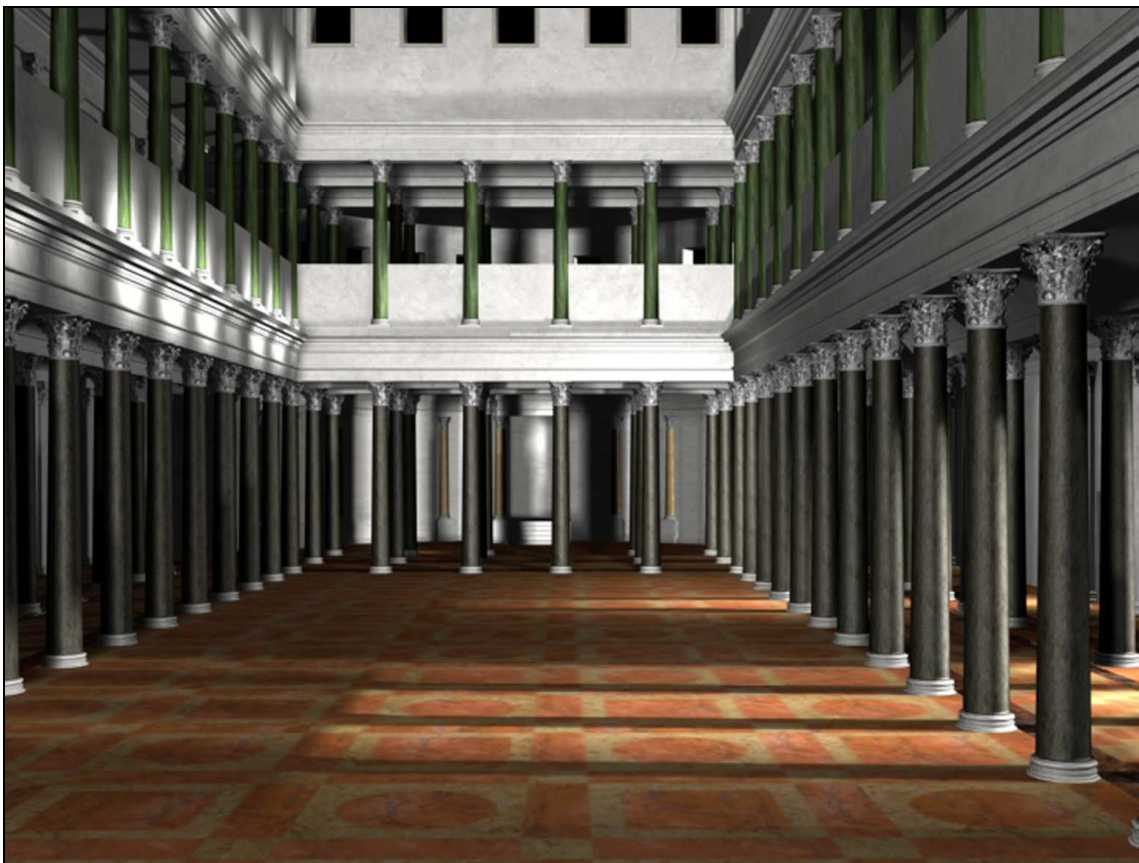


Fig. 12: Reconstructive drawing of the *basilica Ulpia* (photo Sovraintendenza ai Beni Culturali di Roma Capitale).





Fig 13: Rome, San Martino ai Monti. Fresco of Filippo Gagliardi: view of the interior of the basilica of St. John Lateran, before interventions of Francesco Borromini (photo E. La Rocca).

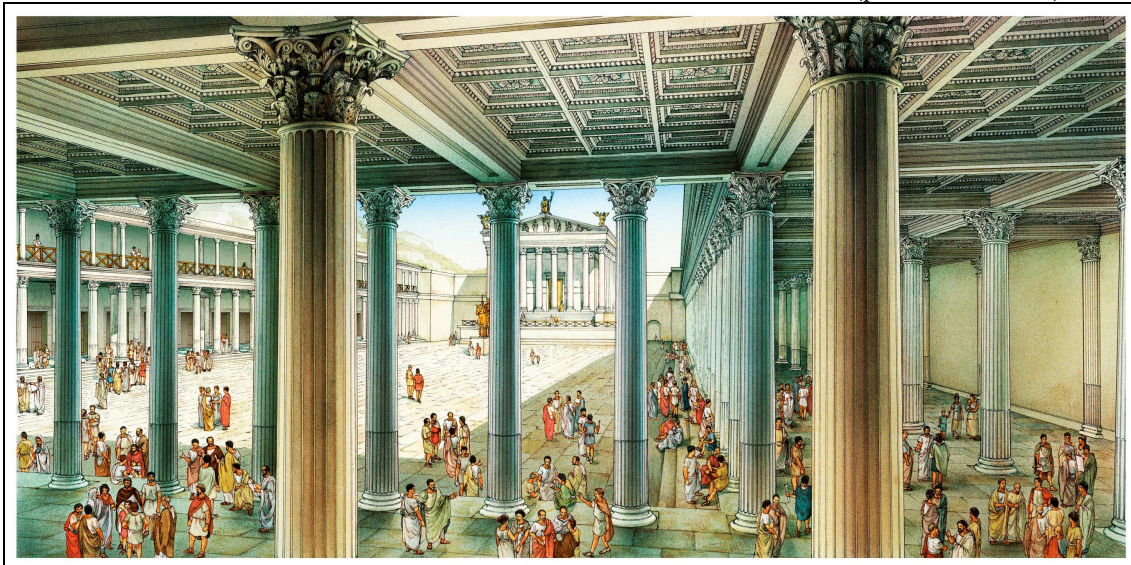


Fig. 14: View of Caesar's forum, according to the reconstruction of Alessandro Delfino (drawing InkLink; photo Sovraintendenza ai Beni Culturali di Roma Capitale).





Fig. 15: Rome, Museo dei Fori Imperiali. Model of the Augustus' forum by Italo Gismondi: the boundary wall seen from Suburra (photo Sovraintendenza ai Beni Culturali di Roma Capitale).

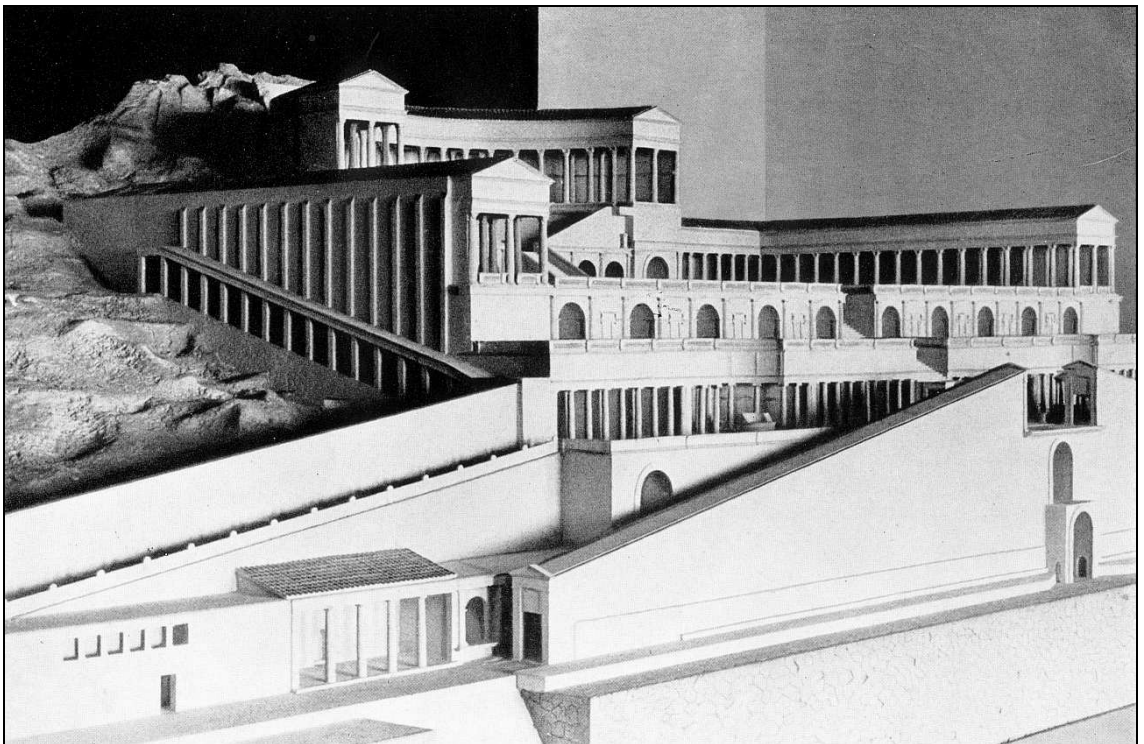


Fig. 16: Palestrina, Museo Archeologico Nazionale. Reconstruction model of the sanctuary of Fortuna Primigenia (after H. Kähler, *Das Fortunaheiligtum von Palestrina-Praeneste* [Acta Univ. Saraviensis 7, 1958]).





Fig. 17: Pompeii, Stabian baths. Watercolor reconstruction of the paintings of the *laconicum* (after F. Niccolini, *Le case ed i monumenti di Pompei disegnati e descritti*, Napoli 1854–1896).





Fig. 18: Rome, Oppian hill. Wall fresco: view of a unknown city, the so-called "Città dipinta" (photo Sovraintendenza ai Beni Culturali di Roma Capitale).

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## Disciplinary, Interdisciplinary or Transdisciplinary Research? Imperatives and Constraints

Jürgen Schmude

This paper discusses the shift from disciplinary via interdisciplinary to transdisciplinary research. The comments will be illustrated by concrete examples from some research projects that have been carried out by the author within the last years.

In the 18<sup>th</sup> century researchers were more all-rounders than scientific experts for one discipline or specialists in a special field of science. The holistic idea of science requires generalists, not specialists (GROSS et al. 2008, p. 23). Perhaps Alexander von Humboldt can be seen as *the* prototype of a scientific all-rounder. From our perspective he did his research in different disciplines like anatomy, botany, ancient studies, geology, biology, mathematics, philology, zoology and geography. Moreover he did his research on different continents: Europe, North, Middle and South America. His approach to research was not only a holistic one but he followed an integrated strategy of research. But this strategy or concept of research stood in deep contrast to developments in the “real world” outside of academia where an increasing focus on “isolated problems” could be observed. As a consequence research was more and more dominated by problem-oriented research (BECHMANN 1999).

This development led to some far reaching consequences in the world of science and research. Research became understood as disciplinary research and the individual scientific discipline became more and more important. This understanding of science is - from our point of view today - a traditional understanding und research that is based upon this understanding often is described as “traditional research.” As a consequence the scientific world was more and more fragmented and a broad range of isolated disciplines lived parallel lives due to the limitation of the human detection capability (PLANCK 1944, p. 243).

Metaphorically the situation can be compared with a cupboard (Figure 1). If one opens drawers of this cupboard then each will contain an isolated discipline like



"geography," "archaeology" or "biology," and there is no interaction between them, even in terms of methodology.

The next step in this process was the specialization within the disciplines, which were - especially in the 20th century - more and more fragmented. Many research questions and aspects of inquiry which were not located in the center but on the fringes of disciplines, were faded out as specialization continued within the disciplines. As one result of this process a simplification of the "real world" and a general specialization of science and scientific research can be observed, especially in the 20th century (HÜRTER/WOLLER 2005, p.7).

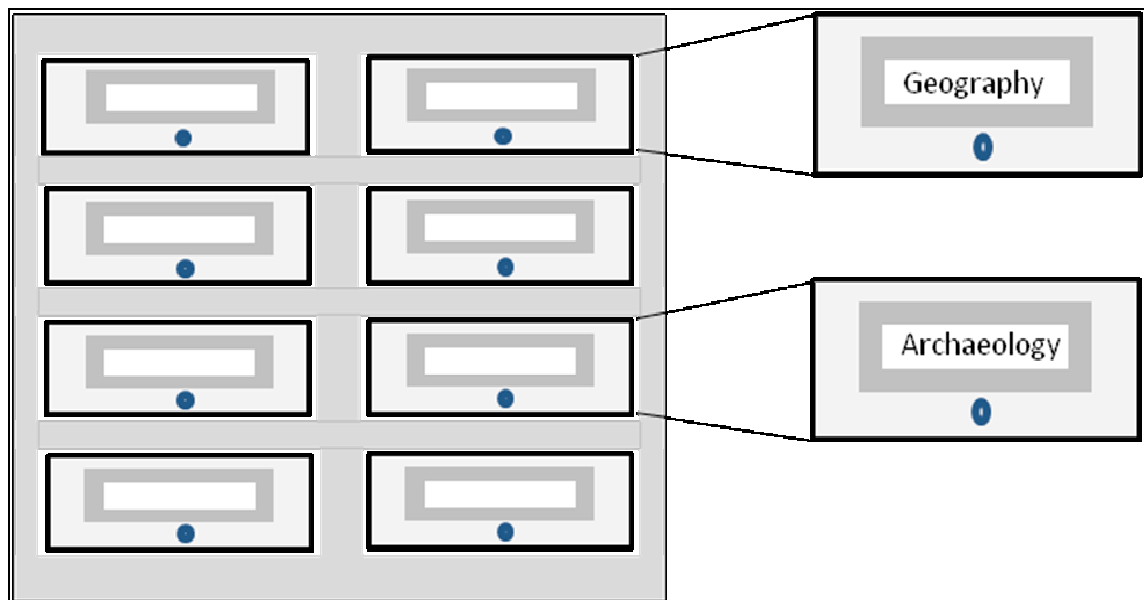


Fig. 1: The cupboard of disciplinary research and its drawers.  
(Source: own research and own graph).

The consequences of this process can be illustrated by the example of the discipline of geography. The research in geography no longer followed an integrated approach [and](#) instead the discipline was divided into physical and human geography. Further, within this dichotomy, the differentiation within the two branches of geography resulted in a growing number of so-called "hyphen geographies": physical geographers were divided into for example climate geographers, soil geographers and so on, whereas human geographers were categorized into sub disciplines like urban

geography, agricultural geography or social geography. In fact the list of specializations was much longer.

The problem that arose from this development was that researchers from different disciplines and sub disciplines were not able to talk to each other anymore because they did not understand each other. That contradicted the development in the “real world” where new problems and questions emerged that could not be answered by an isolated discipline. In other words, the evolution of problems in society does not follow problems and methods of historically determined fields of science and research (PARTHEY 2010, p.1).

As a consequence the situation of science and research in the middle of the 20th century can be characterized by a kind of stagnation within the disciplines, each of which proved unable to give answers to questions and problems that were located on the fringes of their fields.

Figuratively speaking each discipline remained in the eye of its own thunderstorm, where it was calm and quiet, whereas they were most needed at the edge of their “storm.” Fortunately the centrifugal power of disciplines became stronger and the disciplines moved from the eye to the border of their thunderstorms.

This resulted in an approximation of disciplines and the birth of new interdisciplinary fields like bio-chemistry, geo-biology or economic geography. Instead of the concentration on disciplinary research, interdisciplinary research following an integrated approach saw a re-launch.

The example of the “Interdisciplinary Entrepreneurship Research Program” of the German Research Foundation (DFG), which was implemented from 1998 until 2004 to stimulate interdisciplinary research related to births, deaths and survival of new born enterprises, illustrates what interdisciplinary research among several disciplines can achieve. At least two disciplines were working on the same research question, for example the problem of the corporate succession process. To optimize this process the

psychologist tries to solve the problem of handing over the firm from the old to the new owner. The researcher in law researches which legal form the firm should have and the economist will examine the branch-specific economic problems (e.g. potential for innovation), whereas the geographer has a regional perspective on the problem (e.g. change in location requirements). As the following figure shows, the network of disciplines that were participating in the research program is characterized by strong and weak ties between the disciplines (Figure 2). For example geography, economics and business administration did a lot of research together. They shared a considerable number of questions that they could answer through interdisciplinary research. In contrast, law or regional planning had few contact points with other disciplines. Depending on the field of research the need for and the ability to conduct scientific cooperation and interdisciplinary research differs from discipline to discipline.

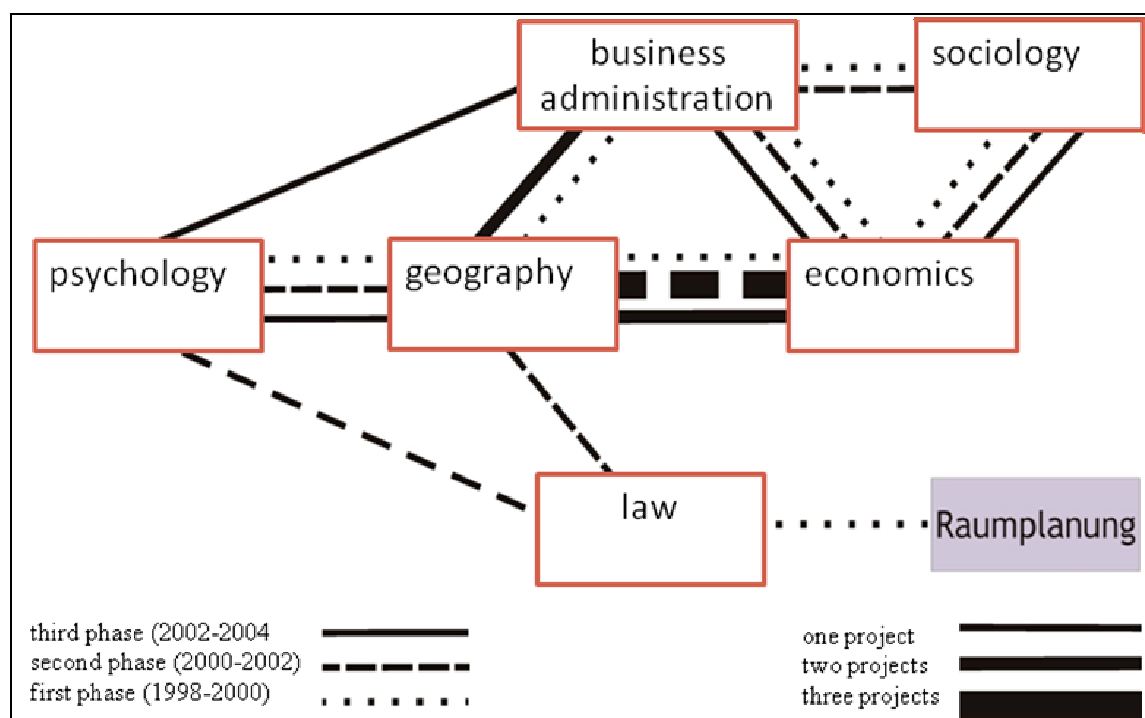


Fig. 2: The network of disciplines within the DFG-program "Interdisciplinary Entrepreneurship Research (1998-2004)".

(Source: own research and own graph).

The above described re-launch of integrated research has taken place especially since the late 1980s and has been developed according to a transdisciplinary approach in the

last few years when stakeholders and decision makers became more and more important for the research process.

The level of collaboration between scientists and stakeholders differs during the research process (Figure 2). The key words in transdisciplinary research are “co-design” and “co-production” of knowledge, and this means that decision makers are participating in the research process from the identification of the problem at the beginning to the distribution of research results at the end of the research process.

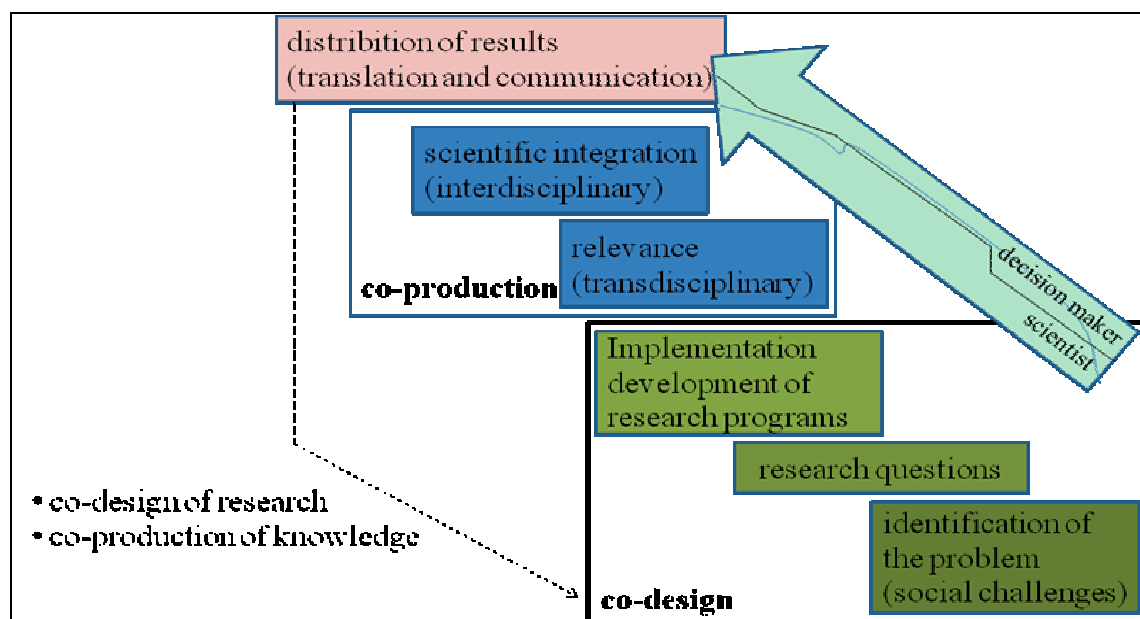


Fig. 3: The process of transdisciplinary research  
(Source: own design after NGKCF 2012, p. 11).

Another example from recent research will further illustrate what transdisciplinary research means. In the global change research project GLOWA Danube ([www.glowa-danube.de](http://www.glowa-danube.de)) which, among other problems, dealt with the impact of climate change on ski tourism in the Alps, by examining the development of the number of ski days per season using models and scenarios (SOBOLL/SCHMUDE 2011).

By integrating the perspective of stakeholders like the owners of mountain railways, professional ski instructors or owners of mountain restaurants, a so-called "optimal ski day" was designed. The stakeholders, who earn much more money on an optimal ski

day than on an average ski day, defined several parameters of an optimal ski day, like the duration of sunshine, wind intensity or temperature, and each and all of these conditions must be met before a day can be designated an "optimal ski day." Based on this definition the development of the number of optimal ski days in the future was modeled. As a result a so called "Christmas-Easter-shift" was recognized (Figure 3) which is very important, for example for the marketing of ski regions in the future (SOBOLL/SCHMUDE 2014).

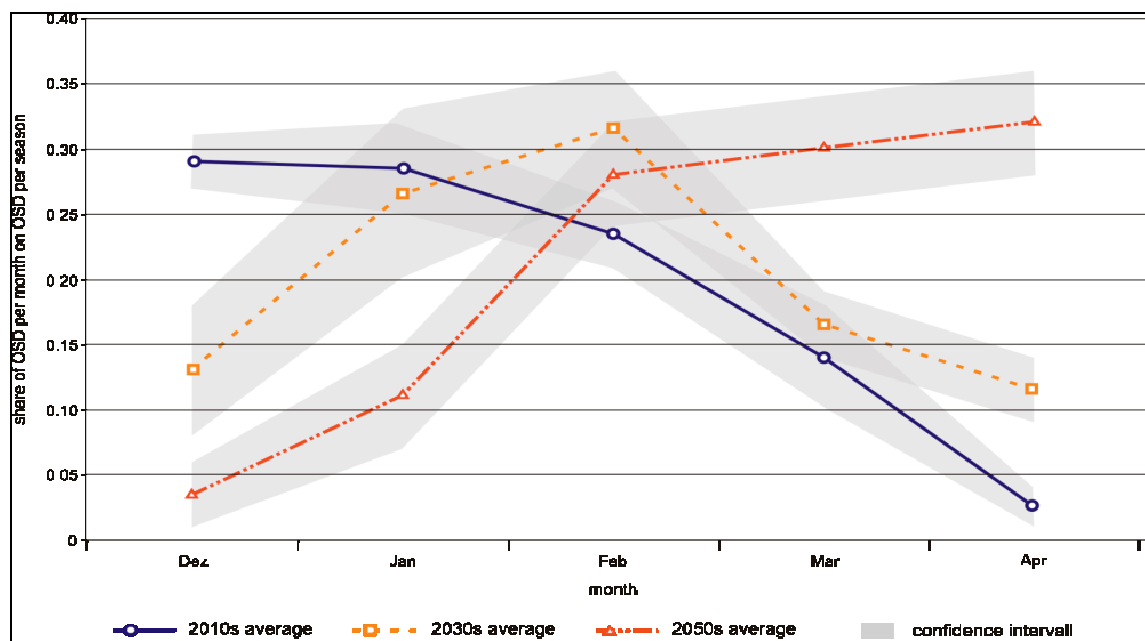


Fig. 4: The Christmas-Easter-shift of the "optimal ski day" as a result of trans-disciplinary research.

(Source: SOBOLL/SCHMUDE 2014, p.332).

Three different approaches to research have been shown: disciplinary, interdisciplinary and transdisciplinary research. That leads to the question: which approach is the best? To compare the different approaches a SWOT-analysis has been carried out (Table 1) in which the most important arguments that are mentioned in literature and scientific discussions (e.g. GETHMANN 2012, KLEPPER 2012, and GRUNDWALD 2012) are considered.

For each of the three approaches one can find strengths, weaknesses, opportunities and threats (but it is not claimed that the list in table 1 is complete).

SWOT-Analysis	Strengths	Weaknesses	Opportunities	Threats
disciplinary research	concentration, time saving	fade out of aspects at the fringes of disciplines	basis for inter- and trans-disciplinary research	blindness to research questions
interdisciplinary research	extension of the range of methods	difficulties in understanding the "language" of other disciplines	evolution of new research questions	isolation of disciplines
transdisciplinary research	new application-oriented research questions	time consuming	complementary to disciplinary research	damage to the autonomy of sciences

Table 1: SWOT-analysis of disciplinary, interdisciplinary and interdisciplinarity research.

(Source: own compilation after GETHMANN, 2012; KLEPPER, 2012; GRUNWALD, 2012).

This SWOT-analysis shows that each of the three approaches is valuable which means that there is no "royal way" of research. The decision which approach is the best depends on the research goal, the research questions and the scientific framework, and thus, for instance, the time budget, man power and finances, and this means that it does not make sense to decide which of these approaches should be chosen before the research question has been clearly defined.

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## Rome: the city of memories. Or, why and how reconstruct and visualize ancient and post-antique Rome using digital technologies? The "AIS ROMA", diachronic and phase maps of (ancient) Rome in the WWW - *Short Version*\*

Chrystina Häuber

My presentation is divided into two Parts. Part I deals with a distinct scholarly perspective, Part II with a perspective that scholars and tourists share. Part I is dedicated to a special kind of 'memory': the more than 1,000 years of international scholarship on Rome that creates pitfalls for anyone who tries to reconstruct the ancient city today. I will discuss examples that I have come across in my own map-project, which I am conducting since 2003 together with Franz Xaver Schütz and further cooperation partners. Its main objective is to draw maps of Rome within the Aurelian Walls; for this purpose we developed the information system "AIS ROMA"<sup>1</sup>. My maps are based on the official photogrammetric data of the Comune di Roma, now called Roma Capitale that the Sovrintendenza ai Beni Culturali of Roma Capitale has generously provided us with<sup>2</sup>.

I dedicate my contribution to a painter, the late Prof. Wilhelm Menning<sup>3</sup> (Fig. 1), head of the *Kunstseminar* ('art seminar') Duisburg and to his colleagues, the classical archaeologist Dr. Karina Türr and the ancient historian and Etruscologist Dr. Stephan Türr, the late sculptor Kurt Sandweg<sup>4</sup> and the artist Martin Goppelsröder. Prof. Menning and his colleagues took us students of the art seminar in September of 1972 to Rome; and to the late classical archaeologist and expert in the topography of ancient Rome, Prof. Lucos Cozza (Università degli Studi di Perugia)<sup>5</sup> (Fig. 2), whom I first met in 1981 in the library of the British School at Rome.

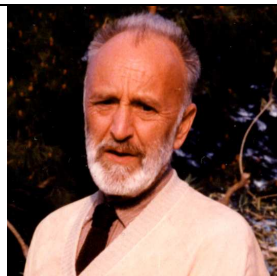


Fig. 1. Wilhelm Menning  
(photo: K. Türr 1980s).

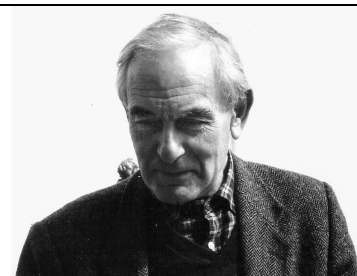


Fig. 2. Lucos Cozza  
(photo: Giovanni Sebastiano Cozza 1990).

In return for sponsoring our trip to Rome in September of 1972 our chancellor had suggested that we should produce ourselves artworks while in Rome to be shown in an exhibition afterwards<sup>6</sup>. Prof. Menning alerted us to famous artworks in Rome, to books about the City of Rome and its history, and to artists, who had worked in Rome.

Since I have had the good fortune to work with Prof. Dr. Jürgen Schmude and Prof. Dr. Gordon Winder at the Research- and Teaching Unit of Economic Geography and Tourism-Research of

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<sup>1</sup> Cf. the contribution by F.X. Schütz in this volume, pp. 108-127; and Häuber 2014, pp. XV-XIX. The information system "AIS ROMA" is based on the object-oriented software "FORTVNA", into which functionalities of 3/4D-GIS are incorporated. This Franz Xaver Schütz and I developed for the purpose ourselves in the research project FORTVNA (1994-2001).

<sup>2</sup> La Rocca 2001; cf. Häuber 2014, pp. XVI-XVII.

<sup>3</sup> Mediaş August 22<sup>nd</sup>, 1912 - December 25<sup>th</sup>, 1998 Erlangen.

<sup>4</sup> Düsseldorf October 11<sup>th</sup>, 1927 - November 18<sup>th</sup>, 2008 Düsseldorf; cf. *Kurt Sandweg*, p. 35. I thank Martin Goppelsröder who was so kind as to present me with a copy of this book.

<sup>5</sup> Roma April 21<sup>st</sup>, 1921 - June 27<sup>th</sup>, 2011 Roma; cf. Coates-Stephens, [Lavinia] Cozza 2014, *passim*.

<sup>6</sup> This exhibition was shown at the Niederrheinisches Museum Duisburg in 1972/73. While in Rome, I had *inter alia* made drawings of the 'Esquiline Venus', a Roman marble statue in the Musei Capitolini, and, because I could not capture its ethos, decided to study Classical Archaeology as a second major.



the Ludwig-Maximilians-Universität (LMU) München since March of 2011<sup>7</sup>, I have reflected again upon the experiences back in 1972 and realized that my being a tourist when I first came to Rome is an important part of the kind of research I am conducting. Our teachers of the art seminar had tried very hard to make us students *not* to behave like tourists when in Rome, which is regarded in Tourism-Research a typical concern of many tourists<sup>8</sup>. Martin Goppelsröder had therefore given us Mark Twain's satirical report on his own trip together with some compatriots to Europe and the Holy Land, called *The Innocents Abroad*, first published in 1869<sup>9</sup>; nevertheless we proved to be at least as 'innocent' as those. Further, the multidisciplinary of this art seminar has influenced my scholarly approach to the City of Rome. My experience with these professors of art was that they treated us as younger colleagues from the first day they accepted us as their students<sup>10</sup>. Therefore, the ideas that they discussed with us on this trip to Rome in 1972 still keep me busy today. At the time, none of us was able to solve the questions we had on site, and I will tell you in the following some examples. It were Prof. Lucos Cozza, the classicist and ancient historian Prof. T.P. Wiseman (University of Exeter) and other scholars, whom I met since December of 1980 in the library of the British School at Rome and in the Comune di Roma/ Roma Capitale, who taught me a suitable approach to solve such problems: the study of the topography of (ancient) Rome.

One of Lucos Cozza's most important research interests was the Severan marble plan. It was him, who studied and documented in 1948<sup>11</sup> in a measured plan the 'morphology' of the ancient wall<sup>12</sup> at the *Templum Pacis* in Rome, to which once this largest Rome map ever made that we know of was attached (18,10 m wide and 13 m high, with north at the bottom, in total ca. 235 square meters of plan, the scale was 1: 240, the plan is datable to 205-208 AD<sup>13</sup>). Only about 10 % of the marble plan have survived, and 5 % of those fragments are securely located thanks to Cozza's brilliant idea to reconstruct the scheme of the original marble veneer panelling, into which the plan was incised<sup>14</sup>. Cozza thus enabled countless scholars after him to work with this ancient Rome plan, a tool of absolutely immeasurable potential, especially because only the fragments of this Severan marble plan document parts of the urban fabric of the ancient city. Lucos Cozza is therefore for Part I of my talk, in which I will present you my scholarly problems related to my maps, the ideal reference person. Interestingly, Lucos Cozza is also for Part II of my talk, in which I will discuss reconstructions that scholars and tourists alike are interested in, the ideal reference person. When in Rome in 1972, all of us bought ourselves *Rom wie es war und wie es ist*<sup>15</sup>, which was published in several languages. Amanda Claridge only told me much later that Lucos Cozza was also the author of this booklet for tourists which shows photographs of the current situation of ancient buildings, as well as reconstructions of their appearance in antiquity, seen from the same angle.

<sup>7</sup> I am employed there since December 2010, but we only moved to München in March of 2011.

<sup>8</sup> Cf. Popp 2010, pp. 15ff.

<sup>9</sup> Cf. Ayck 1974, pp. 36-44, fig. on p. 42, p. 141.

<sup>10</sup> After having successfully passed an exam.

<sup>11</sup> Cf. Ferrea 2006, pp. 45-46 with ns. 11, 12, fig. 9: "Il rilievo realizzato in seguito da Lucos Cozza nel 1948, pubblicato nell'edizione del complesso del 1960 [with n. 11: "PM (i.e. *Pianta Marmorea*), pp. 175-195, tav. LXI"] (fig. 9), costituisce indubbiamente un insostituibile strumento per la ricostruzione della pianta marmorea, con la precisa indicazione e descrizione di tutti gli elementi presenti sulla parete laterizia, primi fra tutti i fori per le grappe che sostenevano le lastre, che consentono di ricavarne la tessitura", with n. 12: "Una ripresa fotogrammetrica della parete è stata eseguita in tempi recenti per conto della Sovrintendenza Comunale con la supervisione di Susanna Le Pera e Luca Sasso d' Elia". The results have been shown and discussed by S. Le Pera in her talk at the Symposium, see in this volume, pp. 68-87; cf. Tucci 2004, p. 185 with n. 1. For details of the Severan marble plan, cf. in this book E. La Rocca, pp. 23-39, figs. 1; 7.

<sup>12</sup> Santangeli Valenzani 2006, p. 57, fig. 4.

<sup>13</sup> Coarelli 1980, p. 121; *id.* 2003, p. 152; Tucci 2004, p. 185.

<sup>14</sup> Claridge 1998, p. 153, fig. 64; *ead.* 2010, p. 171, fig. 65, p. 173; Tucci 2004, p. 185.

<sup>15</sup> Cozza, without date.

### The so-called House of Augustus on the Palatine

I have chosen as my first example a bird's eye view reconstruction from the *Atlante di Roma antica* ('Atlas of ancient Rome') by Andrea Carandini and Paolo Carafa<sup>16</sup>, which I compare with a detail of my own diachronic map of exactly the same area (**Fig. 3**<sup>17</sup>). My map is "2D", the "3D"-image in Carandini, Carafa is also based on a ground-plan, but the underlying philosophy is quite different - apart from the different orientation. Because my maps are based on the photogrammetric data of Roma Capitale, north on them is in the upper-middle border. Whereas Franz Xaver Schütz and I reduce the reconstructions of ground-plans to a minimum, the reconstruction in the *Atlante di Roma antica* is based on two principles: analogy (with different buildings) and symmetry (assuming that the architectural remains documented on site are parts of larger, symmetrical units)<sup>18</sup>. In addition to that, the reconstruction of this huge building as the House of Augustus rests on two assumptions, (1) that small architectural remains found underneath the Church of S. Anastasia belong to the *domus* (House) of Republican date, excavated immediately to the west and east of the temple of Apollo, and (2) that all these remains belong to the same palatial *domus* which may securely be identified as the House of Augustus (or rather of Octavian, as Augustus was named until 27 BC). These assumptions have been refuted by other scholars. The shortest distance between S. Anastasia and the so-called House of Augustus is ca. 75 m (**Fig. 3**, labels: S. Anastasia; DOMUS / TEMPLUM: APOLLO; DOMUS "AUGUSTUS").

I am not going to discuss this reconstructed part of ancient Rome here in detail, but follow on my map **Fig. 3** the results of T.P. Wiseman's research on the House of Augustus and the Temple of Apollo<sup>19</sup>, as well as Amanda Claridge's<sup>20</sup> research on the Temple of Apollo, which is why I have labelled the house in question: DOMUS "AUGUSTUS" on my map, indicating with the inverted commas that this is in my opinion the so-called House of Augustus. To sum up my first point: reconstruction begins already with ground-plans, which is why those have to be as accurate as possible. And: every reconstruction must be accompanied by a text. I have discussed my (in the meantime updated) map of the Palatine **Fig. 3** in a manuscript and intend to publish it<sup>21</sup>.

### The five different locations suggested for the temple of Iuppiter Stator

On my map (**Fig. 4**<sup>22</sup>) are marked five different locations of the temple of Iuppiter Stator. This, my second example, is also connected to my first. Because, provided we knew where the temple of Iuppiter Stator stood, this would have consequences for the location of the House of Augustus<sup>23</sup>. I have mapped those five suggestions in order to help newcomers to the field to realize that currently so many different opinions exist concerning the location of this temple. As we have heard in T.P. Wiseman's talk, there are endless consequences, when we start to follow up either one of these suggestions. The reason for that is a phenomenon, which I suggest to call a 'cluster of toponyms', meaning that a group of other toponyms is 'attached to' the temple of Iuppiter Stator. This means that one of these can only securely be located, provided all the others can convincingly be identified.

<sup>16</sup> D. Bruno, in: Carandini, Carafa 1 2012, pp. 233-235, tavv. 70-72, ill. 10-12; the here discussed reconstruction is ill. 10.

<sup>17</sup> Cf. Häuber 2014, pp. 874-875, at Map 5.

<sup>18</sup> So Carafa 2012, p. 51.

<sup>19</sup> Wiseman 1987-2014; cf. his contribution in this volume, pp. 3-22, as well as the contribution by J. Lipps; cf. pp. 153-160; E. La Rocca in: La Rocca *et al.* 2008, pp. 226-241; Coarelli 2012, p. 577 s.v. Casa di Augusto, p. 587 s.v. Tempio di Apollo.

<sup>20</sup> Claridge 1998, pp. 128-134; *ead.* 2010, pp. 135-144; cf. her contribution in this volume, pp. 128-152.

<sup>21</sup> Häuber *forthcoming*.

<sup>22</sup> For this map, cf. Häuber 2014, p. 875 at Map 6.

<sup>23</sup> Cf. Wiseman 2009, p. 531 with n. 27. See now Coarelli 2012, p. 582 s.v. *Iuppiter Stator*; Zevi 2014; Häuber *forthcoming*.

### **Rome's various city-walls**

Another typical possible pitfall in studying the topography of ancient Rome is provided by the fact that Rome has had during her long history a number of different city-walls with numerous gates, the names of which we know from ancient literary sources (**Fig. 5**<sup>24</sup>). There were altogether three ancient city-walls. (1) the wall of the pre-urban settlement on the Palatine (that wall has in part been excavated, the settlement itself is datable to the 10<sup>th</sup> century BC). Ancient tradition attributed this settlement to the mythical founder of Rome, Romulus, who had allegedly founded Rome in the middle of the 8<sup>th</sup> century BC (this supposed city *Roma quadrata* is drawn on **Fig. 5** as a green area between four recorded ancient toponyms, bordered by a dotted line because we do not know the precise locations of those toponyms, nor the actual size of *Roma quadrata*). (2) the so-called Servian city-wall, built in the 6<sup>th</sup> century BC and restored in the 4<sup>th</sup> century BC (which borders the yellow area on my map), and (3) the Aurelian Walls, the first phase of which were built 271-275 AD (which border the violet area on my map). There are many examples, in which the names of city-gates in Rome have been attributed to the wrong city-walls. One of the reasons being the fact that the so-called Servian city-wall - that only survives in small sections - was unknown for many centuries, which is why the names of its gates were attributed to gates in the still standing Aurelian Walls. This set of problems creates even nowadays a lot of confusion.

### **Architectural fragments dating to the Republican period, found at the foot of the Capitoline Hill, which have been attributed to five different ancient buildings**

All the above mentioned examples seem simple, when compared with the topographical problems related to the Capitoline. My map **Fig. 6**<sup>25</sup> shows that the Capitoline Hill used to have two distinct parts in antiquity that were called *Capitolium* and *Arx* respectively. The architectural fragments in question are on display at the foot of the Capitoline below the 'Tabularium' that overlooks the Forum Romanum, and precisely on the north-west side of the excavated section of the ancient road called CLIVUS CAPITOLINUS, right behind the AEDES: DEI CONSENTES for someone going in south-west direction up to the *Capitolium* (**Fig. 6**). On the opposite side (to the north-east) of this road stands the temple of Saturn, labelled: AEDES: SATURNUS. Since I have already published this example<sup>26</sup>, I wish to mention only a few points: none of the contemporary authors who discussed those architectural fragments recently knew that they have been attributed to so many different buildings (Pirro Ligorio: temple of Saturn, R. Delbrück: porticoes on top of the Tabularium, C. Reusser: temple of Fides on the *Capitolium*, H. v. Hesberg: temple of Honos and Virtus on the *Arx* and P.L. Tucci: temple of Iuno Moneta on top of the 'Tabularium'. P. Pensabene suggested to me [personal communication] that Pirro Ligorio refers to the here discussed architectural fragments and that they certainly do not belong to the temple of Saturn because of their building material, travertine. He himself does not attribute those fragments to a specific architecture known from ancient literary sources). One thing is clear: as in the case of the five different locations suggested for the temple of Iuppiter Stator, not all five attributions concerning those architectural fragments can possibly be true.

What is the reason for the just mentioned confusion? The answer is very simple: for many centuries the true location of the main market place of the City of Rome, the Roman Forum, had

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<sup>24</sup> For this map and the following, cf. Häuber 2014, pp. 873-874 at [Inserted box on Map 3]; Häuber 2013, p. 152.

<sup>25</sup> For this map, cf. Häuber 2014, pp. 874-875 at Map 5.

<sup>26</sup> Häuber 2005, pp. 23-34, figs. 2-5; cf. for the text 'Pirro Ligorio 1528', mentioned here, *op.cit.*, p. 30 with n. 155, where it is quoted *verbatim*; cf. for 'P. Pensabene (personal communication)', *op.cit.*, p. 31 n. 161; there are also discussed 'R. Delbrück 1907, C. Reusser 1993, H. v. Hesberg 1995, and P.L. Tucci 2005'. I have shown in my talk the drawings after these architectural fragments published by Delbrück 1907-1912, I, pp. 44-46, Abb. 41-42; cf. II, Taf. 3.

been forgotten, see on **Fig. 6** the label: FORUM ROMANUM, which indicates its true location. Scholars in past centuries had tried to locate the Roman Forum, *inter alia* by studying another such 'cluster of toponyms' which centers around the *Saxum Tarpeium* ('the rock of Tarpeia'), that, as we know from literary sources, had been visible from the Roman Forum. T.P. Wiseman<sup>27</sup> has studied the four different locations on the Capitoline Hill that in the past have been identified as the *Saxum Tarpeium* (together with the resulting four different locations of the Forum Romanum). Wiseman's location of the *Saxum Tarpeium* on the south-east side of the *Arx* (cf. **Fig. 6**, label: SAXUM TARPEIUM) is now *communis opinio*, but although also one of the above mentioned authors who discussed the architectural fragments accepted this<sup>28</sup>, he overlooked that previous authors, on whose opinion he had based his own hypothesis, had (erroneously) located the *Saxum Tarpeium* on the *Capitolium* right above the Church of S. Omobono (for that church, cf. *infra*). Further difficulties, which this author did not realize, lie in the fact that the ruin of the ancient temple of Saturn had accommodated in post-antique times various buildings, for example the Church of S. Salvatore de Statera. This fact had been forgotten soon after the temple had been cleared of most of these later additions in the early 19<sup>th</sup> century in the course of its first 'excavation'<sup>29</sup>. When Pirro Ligorio described in 1528 the architectural fragments discussed here, he referred to this Church (which existed at his time), by saying that they had occurred in its vicinity, as well as in the vicinity of a hospital, the former location of which I have likewise marked on **Fig. 6** to the south-west of the temple of Saturn (labels: AEDES: SATURNUS / S. Salvatore de Statera; site of the Ospedale di S. Maria in Portico per le donne<sup>30</sup>).

Because S. Salvatore de Statera (and therefore the temple of Saturn) had erroneously been located by some authors north of S. Omobono (**Fig. 6**, label: S. Omobono) - this erroneous location of S. Salvatore de Statera depended on the erroneous location of the *Saxum Tarpeium* above S. Omobono, mentioned earlier - this author did not realize that at the site in question had stood the contemporary Church of S. Stefano "de Fovea"<sup>31</sup> (cf. **Fig. 6**). Also the Church of S. Omobono represents the center of an own 'cluster of toponyms'. The just described error could not be recognized because of two facts, which further complicate the situation. (1) the orientation of S. Omobono had been changed after a major landslide occurring on the *Capitolium* (for the following cf. **Fig. 6**). The new Church of S. Omobono was built in the second half of the 15<sup>th</sup> century and was oriented north, towards the road currently called Vico Iugario. This is the still standing Church of S. Omobono. Like the previous church (that had been severely damaged by the landslide) it is accommodated in the ancient temple B within the "Area sacra [di] S. Omobono", but the previous church had been oriented south, towards the road currently called Via Bucimazza<sup>32</sup> (cf. **Fig. 6**). The here discussed author did not realize these facts, when analysing one of the modern literary sources which mention S. Omobono and came therefore to wrong conclusions. (2) hospitals usually had, when built (or already existing) at Pirro Ligorio's time, a house for men and a house for women. The latter fact which was unknown to this author is crucial for the understanding of Pirro Ligorio's report on the architectural fragments discussed here. All the above mentioned errors taken together had far reaching consequences for this author's<sup>33</sup> own (erroneous) location of the temple of Fides which once stood on the *Capitolium*.

<sup>27</sup> Cf. T.P. Wiseman, "Saxum Tarpeium", in: *LTUR* IV (1999), pp. 237-238, fig. 114; Häuber 2005, p. 33 with n. 192.

<sup>28</sup> Reusser 1993, p. 30 n. 40, p. 35 n. 11, p. 113 n. 1; Häuber 2005, p. 33 with n. 192.

<sup>29</sup> Cf. Häuber 2005, pp. 31-32 with ns. 168-173.

<sup>30</sup> Cf. Häuber 2005, p. 33 with n. 184, fig. 5, label: B; *ead.* 2014, pp. 874-875, Map 5.

<sup>31</sup> Cf. Häuber 2005, p. 32 with ns. 180, 181: "Diese beiden Kirchen [*scil.* S. Salvatore de Statera and S. Stefano 'de Fovea'] sind nun nicht etwa identisch, denn sie werden beide im Pariser Kirchenkatalog von ca. 1230 genannt", 'these two churches are not identical, since both are mentioned in the Paris catalogue of churches of ca. 1230' (with references).

<sup>32</sup> Cf. Häuber 2005, p. 32 with n. 179.

<sup>33</sup> Reusser 1993, *passim*; cf. Häuber 2005, pp. 23-34, figs. 3-5.

Solutions to complex problems like this are only obtainable thanks to an interdisciplinary and at the same time diachronic approach. We need in this example to know, for what purpose the ancient buildings (here the temple of Saturn) had been used in post-antique periods, before they were 'excavated' and studied. We need also to know all available archival data and old maps relating to this area, knowledge, which enables us then to find on such old maps and in archival documents that in this area there had been an 'Ospedale di S. Maria in Portico' (which had changed its name several times over the centuries and is documented on all old maps of Rome), to which two separate buildings had belonged, one for men and one for women. The hospital for the "Uomini feriti" ('wounded men'), as it is called on G.B. Nolli's large map (1748), had been accommodated in a building immediately to the south of that for the women<sup>34</sup>, which is currently housing the fire brigade, see the following label on **Fig. 6**: Cortile Caserma Vigili Urbani.

### **The controversy concerning the locations of the toponyms *Velia*, *Carinae*, *Mons Oppius* and *Fagutal***

With this, my most complicated example, I reach the end of Part I of my talk. My map on **Fig. 7**<sup>35</sup> shows a detail of the archaic procession of the priests called *Argei* that has been described by Varro (*Ling.* 5,45-54). One of the aims that I am pursuing with my maps is to support people, who want to visualize processes within the city like the one shown here, which is indicated by the yellow arrows. On the other hand this map shows the ancient toponyms *Velia*, *Carinae*, *Mons Oppius* and *Fagutal*, the locations of which are controversial (we know from literary sources that the hill-top *Fagutal* was part of the *Mons Oppius* and that both the *Mons Oppius* and the *Mons Cispius* belonged to the Esquiline; cf. **Fig. 7**). Again, all these toponyms are the centres of own 'clusters of toponyms', but the main difference between those multifaceted scholarly opinions lies in the fact that most scholars locate the *Fagutal* near the Church of S. Pietro in Vincoli (a Church located slightly to the east of the lettering 'MONS OPPIUS' on **Fig. 7**), whereas others locate the *Fagutal* near the Church of S. Martino ai Monti and near the cistern called 'Sette Sale' (as I do on my maps; cf. **Fig. 7**, label: FAGUTAL). Both hypotheses have consequences for all the other here mentioned toponyms.

Which one of these hypotheses is correct? I believe Filippo Coarelli's suggestion<sup>36</sup>, whom I follow on my maps. In addition to Coarelli's own arguments, I believe his hypothesis is true, because scholars, who locate the *Fagutal* near S. Pietro in Vincoli, neglect much of the research that has been conducted since the 1970s<sup>37</sup> on the eastern part of the Mons Oppius (an area comprising the eastern half of **Fig. 7**), especially in the course of research projects initiated by Eugenio La Rocca<sup>38</sup>. A recent analysis of part of this material proves that the highest point of this area (57,03 m above sea level), where in my opinion the *Fagutal* should be assumed (**Fig. 7**, labels: 57,03 m; FAGUTAL), was occupied by an archaic settlement that had previously been overlooked<sup>39</sup>. Latin inscriptions found in this area prove that Iuppiter was worshipped here, which is a clear indication that the hypothesis to locate the *lucus* (sacred grove) of *Iuppiter Fagutalis* in this area is true. Besides, Iuppiter was always worshipped on the highest hilltops, the alternative location of the *Fagutal*, the area where the Church of S. Pietro in Vincoli stands, is only 43,69 m high (cf. **Fig. 7**)<sup>40</sup>.

<sup>34</sup> Cf. Häuber 2005, pp. 32-33 with ns. 182-184. For Nolli's map, cf. *infra*, n. 77.

<sup>35</sup> Cf. Häuber 2014, pp. 355-394, **Appendix V**, pp. 874-875, 876, Maps 3; 9.

<sup>36</sup> Cf. F. Coarelli, "Argei, Sacraia: Regio II - Esquilina, 1.", in: *LTUR* I (1993) 123; *id.* 2001; Häuber, Schütz 2004, pp. 110-113; Häuber 2014 (cf. *supra*, n. 35).

<sup>37</sup> Beginning with Rodríguez Almeida 1970-71; cf. Häuber 2014, pp. 883-945 (bibliography).

<sup>38</sup> Cima, La Rocca 1986; *id.* 1998; cf. Cima, Talamo 2008; Häuber 1986/1991-2014.

<sup>39</sup> Cf. Häuber 2013, pp. 152, 155, fig. 1, labels: PORTA ESQUILINA; FIGLINAE; ARCH. SIEDLUNG; FAGUTAL; *ead.* 2014, pp. 387-390 cf. p. 366, Map 3, map in inserted box (= here **Fig. 5**), labels: ESQUILINE; PORTA ESQUILINA; FIGLINAE; archaic settlement; FAGUTAL.

<sup>40</sup> Cf. Schütz 2013; Häuber 2014, esp. pp. 365-366.

From the last example in Part I of my talk, in which I have shown you a distinct scholarly approach to reconstructions of ancient Rome, we move in Part II to a different aspect of reconstructions, one, which is interesting for scholars and tourists alike. We therefore turn to a different area of the City, the Porta del Popolo in the Aurelian Walls, and to an event that took place about 2000 years later.

### **The entry of Martin Luther (1483-1546<sup>41</sup>) into Rome through the Porta del Popolo (1511)**

When in Rome 1972, Prof. Menning led us to the Porta del Popolo within the Aurelian Walls (**Fig. 8**), because for about 1500 years this was the main entrance of Rome in the north<sup>42</sup>, which means that also all the pilgrims, artists and other visitors to Rome from north European countries had entered the 'Eternal City' through this gate. Our teachers wanted at least in the case of two of these individuals that we should try to imagine what their feelings might have been like. In the case of Martin Luther, Prof. Menning even suggested to 'follow his path' from the moment he arrived at the Porta del Popolo all the way to the Vatican. I wish to alert you with this example to the great importance that itineraries have in the shaping of the image of a city and in the shaping of our memories of it. Itineraries were already published in antiquity and since the Middle Ages countless guide-books have been written about Rome which have greatly influenced our understanding of the City<sup>43</sup>. Adjacent to the inner side of the Porta del Popolo there is the Church of S. Maria del Popolo (**Fig. 8**).

When Luther came to Rome in 1511, he was not yet a Reformer. Heinrich Gelzer wrote about him: "A vow had led young Luther into a monastery; another vow (added to a commission from his monastery) took him to Rome"<sup>44</sup>. At that stage, Luther was an Augustine monk, which is why he stayed overnight at the former Convent of the Augustines which had belonged to the Church of S. Maria del Popolo, and stood adjacent to it in the south-east. This Convent<sup>45</sup> was destroyed in the early 19<sup>th</sup> century to make space for the much enlarged Piazza del Popolo (**Fig. 8**). Whereas we had no problems to imagine that, Luther's further walk towards the Basilica of St. Peter was quite a different matter. Also in retrospect I must admit that it would be extremely difficult to reconstruct a possible itinerary, because the earliest measured map we could use for the purpose, that by Leonardo Bufalini, was only published in 1551.

### **Postcards showing St. Peter, Castel S. Angelo, Via della Conciliazione, Bernini colonnades<sup>46</sup>**

Apart from the castle Castel S. Angelo none of these buildings existed already, when Martin Luther visited the City of Rome. Prof. Menning's plan that we should re-enact Luther's shock about the new Basilica of St. Peter was a great success. Although this is not my major concern here, let me add the observation that, contrary to what was thought in the 19<sup>th</sup> century and still in 1972 about Luther's motives to become a Reformer, more recent scholars do not consider this aspect of Luther's experiences in Rome at that stage as of so much importance any more<sup>47</sup>. For my talk I had deliberately chosen postcards that show the buildings in question, because, apart from the famous itineraries through Rome published in guide-books, it is these sights, as captured in earlier centuries on paintings and etchings (the so-called *vedutes*) and nowadays on postcards, that shape our 'memory' of cities like Rome, and of course also our expectations. 'Hunting down' famous sights does not help to understand a city, of course, because these buildings are like famous arias of an opera or songs of a musical that everyone knows - only when one sees this opera or musical on stage, the *context* of these 'highlights' will be fully understood.

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<sup>41</sup> Krischer, Wendt 2011, p. 94.

<sup>42</sup> Cf. *TCl-guide Roma 1999*<sup>10</sup>, p. 698.

<sup>43</sup> Cf. Schudt 1930; *id.* 1971; S. Le Pera in this volume, cf. pp. 68-87.

<sup>44</sup> Gelzer 2009, p. 22; 1. ed. 1847.

<sup>45</sup> For that, cf. P. Buonora *et al.* in this volume, pp. 88-107, figs. 2; 19.

<sup>46</sup> I have shown in my talk two postcards of my own collection.

<sup>47</sup> Cf. Genthe 2010, p. 64.

In order to teach us contexts, Prof. Menning had thought of guiding us through Rome 'following the paths' of famous visitors, which could help us to understand their time. He chose, apart from Martin Luther, the poet and scientist Johann Wolfgang von Goethe because his sojourn in Rome and Italy had a great impact on Goethe's own work, and *Kronprinz* Ludwig, the future King Ludwig I of Bavaria, because he had been an important sponsor of artists. He entrusted the elaboration of the latter two itineraries to *me*. Unfortunately, I did not succeed in planning either itinerary, and I tell you this here, because later, when living in Rome (1980-85) and working there occasionally as a tourist guide, I made very similar experiences again<sup>48</sup>.

### **The entry of Christina of Sweden (1626-1689) into Rome took place on December 23<sup>rd</sup>, 1655 through the Porta del Popolo**

But let's go back to the Porta del Popolo once again (**Fig. 8**). Our teachers had discussed with us the entry into Rome through this city-gate of two individuals, Martin Luther and the abdicated Queen Christina of Sweden. Christina, the daughter of the Swedish King Gustav II Adolph, one of the protagonists of the Thirty Years War on the protestant side, succeeded her father as heiress presumptive at the age of six. When eighteen, she became Queen of Sweden<sup>49</sup>. In 1654, she abdicated, converted to catholicism and decided to live in Rome<sup>50</sup>.

### **Eight ancient marble statues of Muses once in the possession of Queen Christina of Sweden**

I wish to mention Christina of Sweden here, because it is (1) typical for tourists to visit sights (in Rome) to which they have some kind of personal relationship; and because (2) we heard stories about Christina of Sweden when in Rome 1972 which sounded even more fantastic than the facts. As for my first point, one of our teachers, Dr. Karina Türr, had just published her *Dissertation* in Classical Archaeology. In this book, she had also discussed the eight ancient statues of Muses<sup>51</sup> that had once been in the collection of Christina of Sweden, who had acquired them in Rome and that are now in the Museo del Prado at Madrid. (2) as the following will show, we were often unable to distinguish between historical facts and stories. I will also tell you why we - unconsciously - made up ourselves some (details) of the stories we told each other on site - this too is obviously typical for all tourists.

### **The Mausoleum of the Roman emperor Hadrian/ Castel S. Angelo**

The reconstructed ground-plan of the Mausoleum of the Roman emperor Hadrian (built in the 120s until 139 AD)<sup>52</sup> that I showed in my talk was copied after the *Atlante di Roma antica* by Andrea Carandini and Paolo Carafa<sup>53</sup>, whereas in my own map **Fig. 8**, drawn after the photogrammetric data of the Comune di Roma/ Roma Capitale, the ground-plan of the building appears as it looks like today, the castle Castel S. Angelo. The ancient tomb consists of a 'solid cylinder set in a square base, the cylinder was 225 Roman feet in diameter (ca. 64 m), 72 Roman feet high (or higher; ca. 21 m), rising out of a base 300 Roman feet wide (ca. 89 m), 40 Roman feet (ca. 15 m) high'<sup>54</sup>. Our little group reached Castel S. Angelo that day when we wandered

<sup>48</sup> We have formulated many of the involved problems in a "Topographisches Manifest" (topographical manifesto); cf. Häuber, Schütz 2004, p. 109; Häuber 2013, pp. 150-152.

<sup>49</sup> Cf. *Cristina di Svezia* 2003; Buckley 2011, pp. 27ff.; F. Craaford, in: Di Palma *et al.* 1990, pp. 243-268; Bierman 2012, p. 20.

<sup>50</sup> Buckley 2011, pp. 210ff. For her entry through the Porta del Popolo, cf. T. Bovi in Di Palma *et al.* 1990, p. 16; Biermann 2012, pp. 10-11, fig. 1, pp. 81-82, cf. *passim* and esp. pp. 14-82 (for her abdication); *TCI-guide Roma* 1999<sup>10</sup>, pp. 698-699.

<sup>51</sup> Cf. De Rossi, Maffei 1704; Türr 1971. Most scholars (erroneously) assume that all eight statues were found in the Villa Hadriana near Tivoli. In reality four of them were found in the *Horti di Maecenas* on the Esquiline in Rome; cf. Häuber 1991, pp. 194-207; *ead.* 2014, pp. 518-521, 524-530, figs. 13; 14 and *infra*, n. 81.

<sup>52</sup> Claridge 1998, p. 370; *ead.* 2010, p. 411.

<sup>53</sup> Carandini, Carafa 2012, Tavole fuori testo no. 8, label: Sepulcrum Hadriani.

<sup>54</sup> Claridge 1998, p. 371; *ead.* 2010, p. 414; cf. Coarelli 1980, p. 366; *id.* 2003, p. 444.

from the Porta del Popolo to the Basilica of St. Peter, in order 'to follow the path of Martin Luther'. We came from the east and saw the building, in front of it a road, and to our left the Tiber.

**Kurt Sandweg, seeing Castel S. Angelo and its distance to the Tiber, said:**

**"Das schafft sie nie" ('she can't make it'), meaning Floria Tosca**

Kurt Sandweg was my teacher in sculpture and when he shook his head and said 'she can't make it', we all knew he was talking about the character Floria Tosca in Giacomo Puccini's<sup>55</sup> opera *Tosca*. Following his eyes, we all imagined her jumping down from Castel S. Angelo in the direction of the Tiber - and agreed with him that she could not possibly have reached the river. Our historian, Dr. Stephan Türr, smiled and said: don't worry, the road in front of Castel S. Angelo did not yet exist at the time, when the opera *Tosca* is set (i. e. on the 17<sup>th</sup> and 18<sup>th</sup> June of 1800). Dr. Türr explained to us that the embankments of the Tiber together with the roads on both sides of the river, built on top of them, were only planned after the great flood of the river in 1870, and built in the 1880s-1890s. But we were sad that we did not have *vedutes* or maps of Rome at hand which could have shown us what the area around Castel S. Angelo had looked like in 1800. But note that our entire discussion was based on an error, as we shall see in a minute.

**programme of the opera *Tosca*, Theatre National Opera de Paris 1982**

Because I wanted to know, how the director of the opera would solve this - presumed - problem, I went on July 12<sup>th</sup>, 1982 in the *Opera de Paris* to see *Tosca* (this did not solve my problem though, since, as usual in all performances I saw so far she just jumped into the off). By reading as preparation for this talk how Giuseppe Giocosa and Luigi Illica, who wrote the *libretto* of the opera *Tosca* for Puccini, comment on this scene, I finally realized that they do not say at all: 'Tosca jumps into the Tiber', but rather that she jumps *down* - meaning from one of the terraces of Castel S. Angelo, and thus to her death. This is, of course, perfectly possible, when considering the enormous height of this building.

After our discussion about Floria Tosca, we bought ourselves tickets and visited Castel S. Angelo. As soon as we had reached one of the terraces on top, someone of our group, looking in the direction of the Pincio, said: and from here or a point near-by Christina of Sweden must have shot the cannon ball, with which she hit the portal of the Villa Medici over there to remind a friend of their appointment<sup>56</sup>. This caused another vivid discussion, this time about *militaria*, of which I did (and still do) not understand a word. Anyhow, our question concerning the distance to the portal of Villa Medici I can answer now, as the brown line on my map **Fig. 8** indicates: the shortest distance (as the crow flies) between Castel S. Angelo and the portal of Villa Medici is 1350 m. By looking from Castel S. Angelo towards the Pincio (**Fig. 8**), we had, of course, our doubts whether the story about Christina of Sweden hitting the portal of Villa Medici with a cannon ball could be true. Being up there and looking down to the ground, I had also doubts concerning another story which is connected with Castel S. Angelo - again, these doubts were based on an error. Now it was my turn to tell the others, because Prof. Menning had given me the relevant book.

***Leben des Benvenuto Cellini, florentinischen Goldschmieds und Bildhauers, von ihm selbst geschrieben. Übersetzt und herausgegeben von Goethe, 1818***

Parts of the autobiography by the Florentine sculptor and goldsmith Benvenuto Cellini (1500-1571) have been translated by Johann Wolfgang von Goethe<sup>57</sup> (1749-1832). What I found most

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<sup>55</sup> Giacomo Antonio Domenico Michele Secondo Puccini (Lucca 1858 - 1924 Bruxelles). For Puccini and *Tosca*, cf. Unseld 2009, pp. 459-461 (S. König).

<sup>56</sup> Cf. *Rome the culture of water* 2004, pp. 14-15; *TCI-guide Roma* 1999<sup>10</sup>, p. 371; James Anderson, *Fountain of the Villa Medici* c. 1865.

<sup>57</sup> Cf. Goethe 1818.



interesting in Cellini's book is his description how he, being imprisoned under Pope Paul III (Alessandro Farnese; Pope 1534-49) on Castel S. Angelo (after 1535 and before 1537), managed to escape. That happened some early morning in 1539. He used a linnen rope fixed to a crenellation of the castle, and when standing on one of the terraces of Castel S. Angelo looking down, I could not imagine how on earth you can create from your bed sheets (in a prison!) a rope long enough to reach the ground. Reading this text again when preparing my talk, I realized he describes his bed (a "Strohsack" translates Goethe), a straw pallet, but no bed sheets, and also that he only mentions 'linnen', without telling us, how he had gotten hold of this material. Anyway, after reaching safely the ground, he has to climb over another wall. Miscalculating its height, he jumps off too early, breaking his right foot. Unable to walk, he crawls towards the Borgo (the still existing city quarter immediately adjacent to the Papal Palaces 'in the Vatican' which are surrounded by walls that are today the boundaries of the Vatican City), hoping to reach the palace of the Duchess, the natural daughter of the Emperor (*scil.* Karl V). But before Cellini can get there, a servant of Cardinal Cornaro recognizes him in the street. As a result of this, Cardinal Cornaro, who lives in the Papal Palaces, hides Cellini for some time and a medical doctor takes care of his broken foot.

Cellini's text can be read under many different perspectives, mine back in 1972 was concentrated on the description of the castle and of its surrounding area. First of all Cellini's escape - although his description of the procedure is very detailed, we could not verify it on site. Because his book was published in his lifetime, we thought that his description should have sounded convincing to his contemporaries. But because Castel S. Angelo and its surroundings have been changed so much since then, we simply gave up on that point. The next thing I wanted to know back in 1972 was: where exactly did Cellini want to go? At the time, none of us could solve this problem, because we did not know where in the Borgo the palazzo of the Duchess mentioned by Cellini was, what the Papal Palaces looked like at his time, let alone where exactly Cardinal Cornaro had resided.

### The 'Porta Magica' in the former Villa Palombara on the Esquiline

The etching on Fig. 9<sup>58</sup> shows a curious marble monument in Rome, the 'Porta Magica' ('Magic Gate'). It is so named because of its inscriptions in Latin and Hebrew as well as its seven signs, each of which represents a planet and a metal and is accompanied by a *motto*, written in Latin. Both the *motti* and signs express alchemistic beliefs, and individually, as well as in their entirety, they have magical meaning(s). Thanks to this 'Porta Magica', the foreigner Christina of Sweden has even made it into the folklore of Rome.

The 'Porta Magica' was commissioned (presumably in 1680) by Marchese Massimiliano Palombara (Roma 1614 - Roma 1685) for his Villa on the Esquiline. He was himself the author of the texts incised in the 'Porta Magica' and also of its entire iconographic programme, in addition he made his Villa 'his preferred meeting place with the foremost scholars of his day' - facts, none of which the reader would expect when hearing the folklore version of the story, to which I will come below. Marchese Palombara was an alchemist, Christina of Sweden was also an expert in alchemy<sup>59</sup> and Marchese Palombara was her *gentiluomo* ('gentleman'; *scil.* in her service) since 1655/1656, when the abdicated Queen had put up residence in Rome for the first time.

When in 1981 I first read Lanciani's below quoted account on the 'Porta Magica', I wanted to know, where exactly the Villa Palombara was, that was not marked on any map known to me at the time, and where exactly within this Villa had been Marchese Massimiliano Palombara's laboratory, in which he had allegedly tried to make gold. This case-study would have ended

<sup>58</sup> Cf. M. Gabriele, in: Cardano 1990, fig. on p. 27; N. Cardano, in: Cardano 1990, front cover, p. 99 with n. 4. For the 'Porta Magica' and Marchese Massimiliano Palombara, cf. Pirrotta 1979, esp. pp. 27-30; S. Rotta, in: Di Palma *et al.* 1990, pp. 106-107 with n. 16; Cardano 1990; Gabriele 2014. The following is discussed in detail in the 'long' version of my talk, cf. *infra* p. 62 n.\*.

<sup>59</sup> F. Abbri, in: Di Palma *et al.* 1990, pp. 49-68.

like all the previous ones of 1972, told in this Part II of my talk so far, had not the scholars of the Comune di Roma/ Roma Capitale - and at The British School at Rome - taught me the relevant methodology, with which problems of this kind may be solved. With this story about Christina of Sweden ends my talk, and in a certain sense this example is a combination of both of its Parts.

The small size<sup>60</sup> of this gate (**Figs. 9-11**) and the text of the Latin inscription on its architrave show that the 'Porta Magica' was the entrance to a 'magical garden of the Hesperides', where according to this inscription the golden fleece was kept. This unusual combination of two ancient myths shows that Marchese Palombara knew an ancient tradition, according to which gold can artificially be made by applying certain chemical operations. Marchese Palombara himself wrote that 'in his Villa there was a grotto and a palisade surrounding the golden fleece'<sup>61</sup>. His grotto was, as Marchese Palombara wrote, 'the cave of Mercury, the most beautiful place in the world'<sup>62</sup>. According to the belief of alchemists, the 'cave of Mercury' contained the treasure given by God to humans to heal them from all illnesses, the *lapis philosophorum*. This treasure comprised seven metals; the 'Porta Magica' refers also to seven metals. Besides, the 'golden fleece' (which could also be understood as a book of wisdom) and the 'philosopher's stone' could have identical meanings for alchemists. The signs of the seven planets/ metals on the 'Porta Magica' could also have an eschatological meaning, hinting at the 'journey of the soul', as imagined by alchemists. The aim of 'alchemy or transformation magic' was to follow a prescribed 'path' with the aim of self-realization. The audience for the inscriptions of the 'Porta Magica' must have been 'initiated' people; Massimiliano Palombara himself is believed to have been a member of a secret brotherhood of alchemists called *Rosacroce* (*Rosenkreuzer*, Rosicrucians). Members were initiated and according to their own theology lived to serve humans, predicating altruism. The assumption that Marchese Palombara was a Rosicrucian, a brotherhood, to which many now famous scientists belonged, could explain the assertion that his Villa 'was the preferred meeting place of the foremost scholars of his day'. By erecting his 'Porta Magica', Marchese Palombara thus invited people to enter his garden of the Hesperides, where they could conquer like Jason the golden fleece, meaning that they could begin the self-transformation process that was the aim of alchemy, in which the ultimate state of personal perfection was *compared* with gold. The 'Porta Magica' may therefore be regarded as an example of spiritual alchemy rather than of the operative one. But Marchese Palombara had also owned an inscription relating to the *production* of gold, which was found within the area of his former Villa in the course of the 'excavations' in 1874.

The folklore version of these proceedings, told by Rodolfo Lanciani, who based his account on Francesco Cancellieri<sup>63</sup>, knows nothing about the magical garden of the Hesperides with the golden fleece within Villa Palombara, to which the 'Porta Magica' once belonged. It (erroneously) asserts instead that Marchese Palombara put up the 'Porta Magica' on the public road Strada Felice/ Via Sistina that bounded his Villa in the north (**Figs. 12; 14**), close to the main entrance of his Villa, in order to 'publish' its content that he allegedly did not himself understand - hoping some future passer-by would possibly explain the content to him. The folklore version of the story asserts that these inscriptions contain the recipe to make gold.

Lanciani wrote: the area on the Esquiline, the ancient history of which he had discussed on the previous pages, "acquired fresh notoriety in 1620, when they became the property of the Marchesi di Palombara and the scene of their mysterious meetings with Christina, Queen of

<sup>60</sup> Cf. V. D'Urso, in: Cardano 1990, p. 39: "Attualmente [on the Piazza Vittorio Emanuele II, see here **Fig. 11**] la porta si trova ad una altezza di metri 2,35 dal suolo ed ha una ampiezza di metri 1,33".

<sup>61</sup> So M. Gabriele, in: Cardano 1990, p. 22.

<sup>62</sup> M. Gabriele, in: Cardano 1990, p. 24 with n. 55; cf. A.M. Partini, in: Cardano 1990, p. 34.

<sup>63</sup> Cf. Lanciani 1901, pp. 225-229; on p. 225 he quotes Cancellieri 1806, p. 42, n. 2; for the single quotations, cf. the 'long' version of my talk, *infra*, p. 62 n. \*.

Sweden<sup>64</sup>, then engaged in the follies of necromancy, and in the search for the philosopher's stone and perpetual motion. Contemporary chronicles relate how the queen, having taken up her abode in Rome in 1655, set up a laboratory for experimenting in occult sciences, with the help of the most distinguished alchemists of the age. One day a youth ... presented himself before the queen, and asked permission to work in her laboratory, in order to investigate the manner of making gold. Having obtained this, he presented himself again to the queen, after a few days, telling her that he had need of going in search of a certain herb, in order to complete the operation, and entreating her to grant him a hiding-place in which to deposit during his absence two vases of a liquor which, mixed with the herb, would become gold". Because the young man did not return, the Queen "caused the hiding-place to be opened by force, and found the liquor solidified into gold in one vase and into silver in the other". Marchese Massimiliano Palombara, "a famous alchemist", when hearing this story, made fun of the Queen "for having allowed such a master in this art to escape without revealing his secret. The marquis was then occupying his Esquiline villa, where, one morning in 1680, he saw an unknown person enter the gate on the side of the Via Merulana [see Fig. 12], and examine attentively the ground, apparently looking for some mysterious plant. Surprised by the servants, the pilgrim declared that he was in search of an herb of marvellous virtue, and that, knowing how much interested the proprietor of the villa was in the art of making gold, he wished to demonstrate to him that the work, though difficult, was not impossible".

The Marchese then invites the 'pilgrim' to demonstrate his work in his own laboratory in his Villa. Lanciani continues: "The pilgrim crised and pulverized the herb gathered in the garden, threw it into the crucible, which was full of a mysterious liquor, and promised his host that on the next morning not only would the process be completed, but the secret should be revealed to him". On the next morning the 'pilgrim' had disappeared. "The guest had however liberally kept his promise, for not only from the broken crucible had flowed upon the pavement a long stream of the purest gold, but on the table lay a roll of parchment, upon which were traced and written various enigmas, which, says Cancellieri, no one has been able up to this time to explain, nor ever will. The Marquis Palombara caused a memorial of the mysterious pilgrim, and the recipes left by him for the manufacture of gold, to be cut in marble and exposed to the eyes of the public ..." (meaning the 'Porta Magica' with its inscriptions). Anna Maria Partini asserts that according to Francesco Cancellieri the 'pilgrim' had transformed lead into gold<sup>65</sup>. She concludes: 'obviously Marchese Palombara had to keep silence not only about his hermetic activity (to avoid charges from the authorities of his time that were hostile against such doctrines), but also about his secret knowledge of how lead could be transformed into gold, perhaps even performed in practice, for which the Porta Magica has become the symbol over the centuries'<sup>66</sup>. Lanciani continues: "I remember having seen this curious document of human idiosyncrasy in my youth ... The door was covered with strange symbols in Latin and Hebrew letters, and astronomical and cabalistic signs of obscure signification; and every week ... the Magic Gate witnessed an assembly of aged and filthy beggars, trying to get the key to the meaning of the signs, and secure a good >estrazione< ['extraction'] from the weel of fortune"<sup>67</sup> - with n. 1: "The public lottery is drawn every Saturday ..." <sup>68</sup>.

After my talk I found out that the 'herb gathered by the >pilgrim< in Marchese Palombara's Villa', that he had (allegedly) used to produce gold, is the well-known "*Chelidonium majus* L.,

<sup>64</sup> For those meetings, cf. also Pirrotta 1979, p. 30.

<sup>65</sup> A.M. Partini, in: Cardano 1990, p. 29 with n. 3, quoting Cancellieri 1806, pp. 42-49, where this is not explicitly stated, as I could verify in the Library of the BSR on December 21<sup>st</sup>, 2012.

<sup>66</sup> A.M. Partini, in: Cardano 1990, p. 35 with n. 32.

<sup>67</sup> Lanciani 1901, pp. 227-228.

<sup>68</sup> Lanciani 1901, p. 228 n. 1.

*Papaveraceae*" (**Fig. 13**), called in English "Celandine", in Italian "Cinerognolle ... celidonia", and in German: "Schöllkraut"<sup>69</sup>.

#### The 'Porta Magica' on Photo Parker 961 (1867-1868)

The position of the 'Porta Magica', as related in this folklore version of the story, is known from a documentation of 1806<sup>70</sup>. The Englishman John Henry Parker (London 1806 - Oxford 1884) stayed in Rome from 1864-1877 and the photographs he commissioned and then sold in the collection *Photo Parker* are today of the greatest scholarly importance. Not surprisingly, given Parker's encyclopaedic interests, the *Photo Parker* showing the 'Porta Magica' *in situ* (**Fig. 10**)<sup>71</sup> is the only immediately published one that we have of this situation. After the expropriation of the Villa Palombara in 1873, which was then destroyed to make space for the new city quarters on the Esquiline, the 'Porta Magica' was removed in 1876<sup>72</sup> from its previous place and (in 1888) put on display in the garden on the newly created Piazza Vittorio Emanuele II. **Fig. 11** shows the 'Porta Magica' after its recent restoration that occurred in 1989<sup>73</sup>. In this installation of the late 19<sup>th</sup> century, the 'Porta Magica' is flanked by two modern marble statues of the Egyptian god Bes that had been 'excavated' in the 19<sup>th</sup> century on the Quirinal<sup>74</sup>.

The 'Porta Magica' appears in a Rome guide for children under the rubric: "Sprechende Steine", where an interesting interpretation of its meaning and installation is offered: "Porta Magica. Dieses alte >alchemistische Tor< steht in einem Park in der Nähe des römischen Hauptbahnhofs. Es heißt, wenn man die geheimnisvollen Inschriften an der Tür richtig deutet, gelangt man durchs Tor in ein unbekanntes Reich. Die Wächter vor der Porta stellen den ägyptischen Gott Bes dar"<sup>75</sup>.

#### The former Villa Palombara on my own maps

The Archivio di Stato di Roma owns a report concerning the expropriation of Villa Palombara in 1873 comprising very detailed information concerning this Villa, its Vigne ('vineyards') and all pertaining buildings<sup>76</sup>. The area in question is visible on numerous old maps since the 16<sup>th</sup> century. The same topographical features and buildings that appear on the maps contemporary to Marchese Massimiliano Palombara still appear on G.B. Nolli's large Rome map (1748)<sup>77</sup> and some still in the 'Catasto Pio-Gregoriano' (drawn 1819-1824; published 1866)<sup>78</sup>. Because of the well known precision of his map, I copied those cartographic details from Nolli's map. **Fig. 12** shows the Villa Palombara and adjacent to the south the Vigne Palombara. As the map **Fig. 12** shows, there were altogether four buildings within Villa Palombara that have on the 'Catasto Pio-Gregoriano' the numbers 318, 319, 320 and 323<sup>79</sup>. **Fig. 12** shows to the west of the Villa Palombara the "Orto del duca di Acquasparta"<sup>80</sup> (= Villa Caserta). I have marked this estate here as well, because four of the ancient marble statues of Muses, once in the possession of Christina

<sup>69</sup> All quotes are from Madaus 4 1988, p. 916; cf. pp. 916-927; cf. De Witt 1964, p. 129; and the 'long' version of my talk, cf. *infra*, p. 62 n. \*.

<sup>70</sup> Cf. N. Cardano, in: Cardano 1990, p. 100, fig. 98 (a map in which this location of the 'Porta Magica' is marked).

<sup>71</sup> *Photo Parker* 961; cf. *Un Inglese a Roma* 1989, p. 225; cf. N. Cardano, in: Cardano 1990, p. 99, fig. 97.

<sup>72</sup> So Lanciani 1901, p. 229.

<sup>73</sup> Cf. P. Masini, R. Santangeli Valenzani, in: Cardano 1990, p. 112, fig. 112.

<sup>74</sup> Cf. N. Cardano, in: Cardano 1990, p. 105 n. 31; P. Masini, R. Santangeli Valenzani, in: Cardano 1990, pp. 111-115; P. Rockwell, in: Cardano 1990, pp. 117-119, Tav. 8-10.

<sup>75</sup> *Für Eltern verboten! ROM* 2012, p. 59.

<sup>76</sup> Cf. *infra*, n. 88; B. Jatta, M. Tobia, in: Cardano 1990, pp. 93-97; Cardano 1990, pp. 143-157, Appendice documentaria, and *passim*.

<sup>77</sup> So also Pirrotta 1979, pp. 15-16, 32 (with a map of the Villa and Vigne Palombara, drawn after Nolli's map). For Nolli's map, cf. S. Le Pera in this volume, pp. 68-87.

<sup>78</sup> Cf. <<http://www.dipsuwebgis.uniroma3.it/webgis/>>.

<sup>79</sup> Cf. B. Jatta, M. Tobia, in: Cardano 1990, p. 94 with n. 15, p. 123, Tav. 3.

<sup>80</sup> Pietro Santi Bartoli, *mem.* 23; cf. Häuber 2014, p. 525 with n. 13.

of Sweden, had been found there<sup>81</sup>. **Fig. 14** shows my diachronic map<sup>82</sup>. The research, on which this map is based, has shown that the four buildings that existed within Villa Palombara at Marchese Massimiliano's time had been accommodated in ancient structures<sup>83</sup> - which is why their ground-plans are drawn red on my maps. It is interesting to note that neither Marchese Palombara, who owned ancient inscriptions<sup>84</sup>, nor Christina of Sweden, an important collector of ancient art, nor any of the 'foremost scholars of the day', who frequently met with Marchese Palombara in his Villa, took an interest in the ancient history of this site which was to yield an enormous quantity of archaeological finds in the centuries to come<sup>85</sup>.

### The two known locations of the 'Porta Magica' on my own maps

On **Fig. 14** the two known locations of the 'Porta Magica' are indicated by the relevant asterisk, labels: \* "Porta Magica" (1806); \* "Porta Magica". The location of the 'Porta Magica', documented in 1806, is the situation shown on the *Photo Parker* **Figure 10** and described by Lanciani in the just quoted text<sup>86</sup>. More to the north appears on **Figure 14** the current location of the 'Porta Magica' on the Piazza Vittorio Emanuele II, a situation visible on the photograph **Figure 11**.

### Marchese Massimiliano Palombara's 'cave of Mercury' rediscovered?

We may wonder - as I have only realized after my talk - whether the 'cave of Mercury', that Marchese Massimiliano Palombara himself asserted to have had in his Villa, actually existed until the very moment in the late 19<sup>th</sup> century when his former estate with all its buildings was (almost) completely destroyed. I am referring to an ancient building comprising an accessible underground chamber with a natural spring that one could duely have called a cave or a grotto - as he himself had called his 'cave'<sup>87</sup>. As we know from old maps this architecture was visible above ground at Marchese Palombara's time and has the number 318<sup>88</sup> on the 'Catasto Pio-Gregoriano'<sup>89</sup>; cf. **Figure 14**, labels: H; 9; 318 Natural spring; Marchese M. Palombara's "cave of Mercury"? It appears on the plan drawn by Costantino Sneider (Konstantin Schneider?) in the late 19<sup>th</sup> century<sup>90</sup>, from which it was copied into recent maps where it is marked with the number "9"<sup>91</sup>. Remains of it were rediscovered in a recent excavation (in the relevant plans it is marked "H")<sup>92</sup>.

To conclude<sup>93</sup>, facts and stories like those presented in this talk are the reasons for me to draw digital maps of Rome. These maps show both the ancient and the current topography, as well as

<sup>81</sup> Cf. *supra*, n. 51.

<sup>82</sup> For an earlier version of this map, cf. Häuber 2014, Map 3.

online at: <[http://www.rom.geographie.uni-muenchen.de/horti/maecenas/hm\\_map6.html](http://www.rom.geographie.uni-muenchen.de/horti/maecenas/hm_map6.html)>.

<sup>83</sup> Cf. *infra*, n. 88.

<sup>84</sup> Cf. e.g. Häuber 2014, p. 857, s.v. *CIL*, VI, 2234, fig. 1 on p. 29.

<sup>85</sup> For the ancient history of the area, cf. the important studies by J. Bodel, and his contribution in this volume on pp. 177-195; for the relevant references and the archaeological finds that have occurred in this area, cf. *supra*, ns. 37-38.

<sup>86</sup> Cf. Lanciani 1901, p. 227.

<sup>87</sup> Cf. *supra*, ns. 61, 62.

<sup>88</sup> Häuber 1990, p. 73 n. 214: "ASR Camerale III Roma Palazzi e Ville b 2100 1840-1878 Villa Massimo (Villa Palombara e Villa Giustiniani) no. 5, >L'anno 1873 li 21 Gennaro< [expropriation of Villa Palombara, owned by Principe Don Camillo Massimo; cf. Cardilli-Alloisi 1983, p. 256 with n. 9], *op.cit.*, p. 16 no. 2 [= 'Catasto Pio-Gregoriano' no. 318]: >Fabbricato a destra del Viale maestro, ed in prossimità dell'ingresso sulla via di S. Croce [= Strada Felice / Via Sistina] ... Si eleva sopra una pianta di figura semiesagona sopra ruderi antiche, nei quali è ricavato anche un piccolo sotterraneo, al quale si accede per una scala esterna. E composto di un androne con pavimenti selciato di bastardon in calce, e ricoperto da volta a botte, ha le pareti intonacate, ed a destra un pozzo con acqua sorgiva".

<sup>89</sup> Cf. *supra*, n. 78.

<sup>90</sup> Cf. Häuber 1990, p. 33, fig. 20,2; Asor Rosa *et al.* 2009, p. 79, fig. 14.

<sup>91</sup> Cf. Cima 1986, p. 55 ("strutture non identificate n. 9"), Pianta 2; Häuber 1990, Karte 1, no. 9.

<sup>92</sup> Cf. Asor Rosa *et al.* 2009, p. 75, fig. 6, p. 79 with n. 13, figs. 13; 14 (in both this structure is labelled: H).

<sup>93</sup> Cf. the long version of my talk, *infra*, p. 62 n. \*.

buildings and roads of the post-antique phases of the city: many of these topographical features have disappeared in the meantime, and some buildings have either been renamed or adapted to different uses. These maps, together with texts and a database, are also published free access on the internet. Printouts of these maps can be used on site, or interactively researched on computer.

\* The first draft of the 'long' version of my paper, delivered at the Symposium, dates from December 24<sup>th</sup>, 2012 (cf. <[http://www.rom.geographie.uni-muenchen.de/publications/haeuber\\_rome\\_memories.html](http://www.rom.geographie.uni-muenchen.de/publications/haeuber_rome_memories.html)>; later additions refer to works that were published in the meantime). The here published text is a 'short' version of it. I wish to thank the following individuals: Karina Türr and Lavinia Cozza for providing me with portrait photographs of Wilhelm Menning and Lucos Cozza respectively, and for kindly granting me the permission to publish them; Franz Xaver Schütz, whom I thank for discussing this text with me, has also taken photographs for me; Amanda Claridge supported my work thanks to her much appreciated 'telephone-help-line'; and Gordon Winder has revised the English of my text. Valerie Scott, Francesca Deli and Beatrice Gelosia (the librarians of The British School at Rome [BSR]), Ruth Lucy Toepffer, and my colleagues at the LMU München, Maria Beck, Andrea Beigel and Monika Popp, as well as Ingo Herklötz (Universität Marburg) and Esther P. Wipfler (Zentralinstitut für Kunstgeschichte München), provided me with books and references. The *Photo Parker* 961 shown here is kept in the Deutsches Archäologisches Institut (DAI), Abteilung Rom and is published with kind permission. I also thank Thomas Fröhlich (the Direktor of the library of the DAI Rom), who was so kind as to scan for me from the copy of the book in this library the "Titelvignette" in F. Cancellieri (1806) that shows the 'Porta Magica' (Deutsches Archäologisches Institut, Abteilung Rom, Bibliothek, Sig. R 119 e Mag), and for granting me the permission to publish it.

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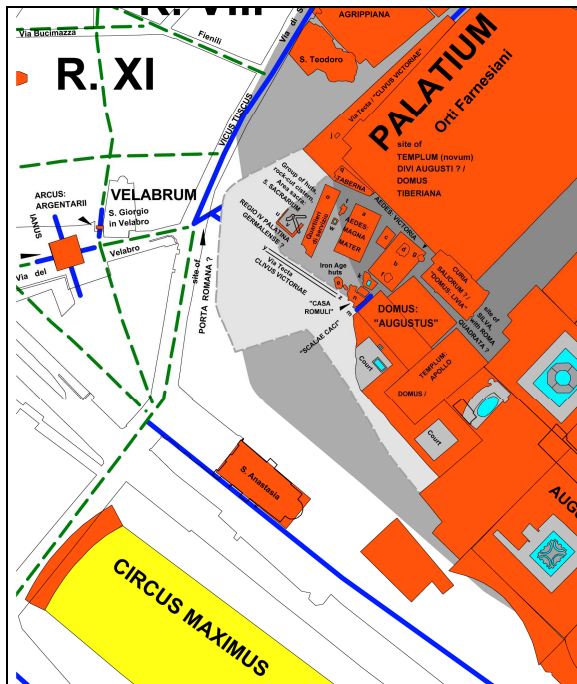


Fig. 3. Map showing the so-called house of Augustus on the Palatine. C. Häuber, "AIS ROMA".

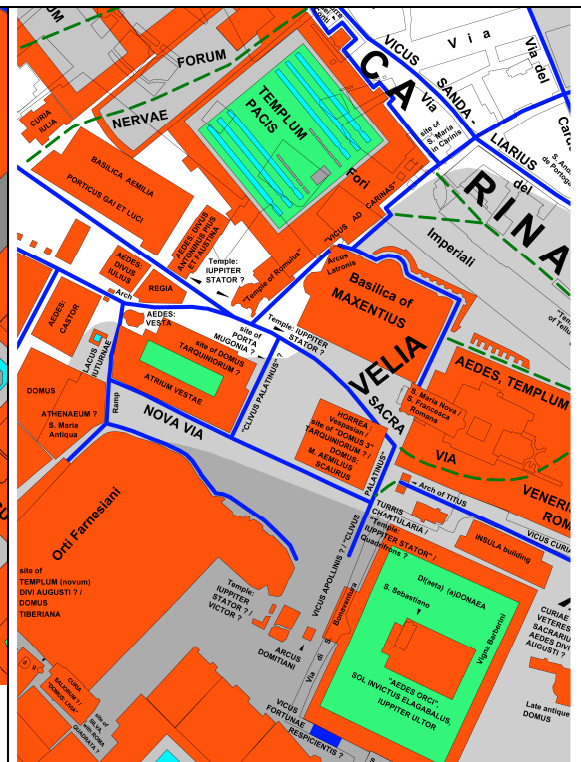


Fig. 4. Map showing the five different locations suggested for the temple of Iuppiter Stator. C. Häuber, "AIS ROMA".

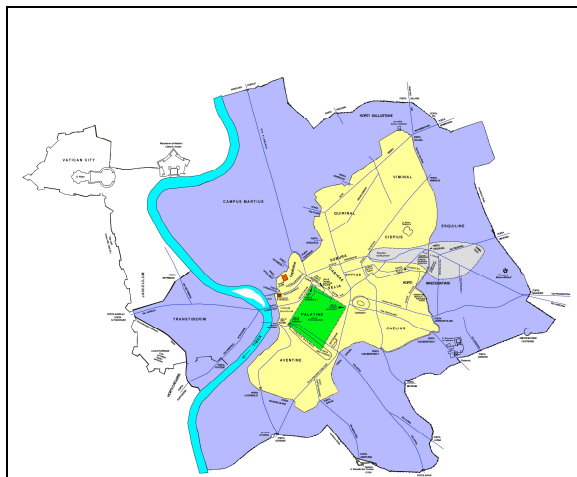


Fig. 5. Map showing Rome's various city walls. C. Häuber, "AIS ROMA".

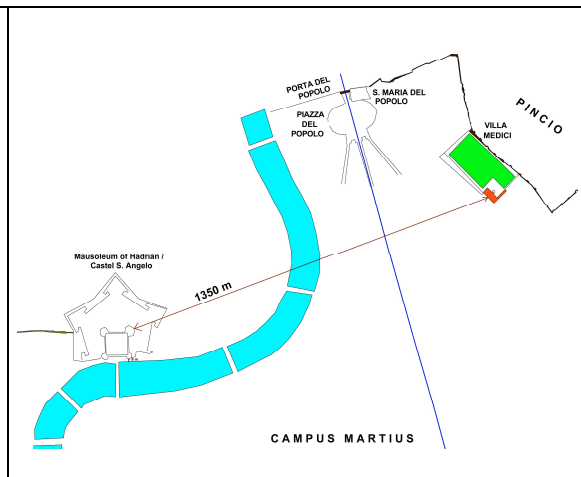
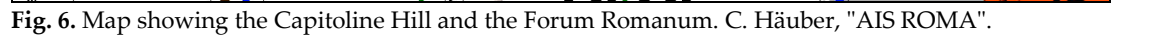


Fig. 8. Map showing Castel S. Angelo, Porta del Popolo, S. Maria del Popolo, Piazza del Popolo and Villa Medici. C. Häuber, "AIS ROMA".

[illegible]



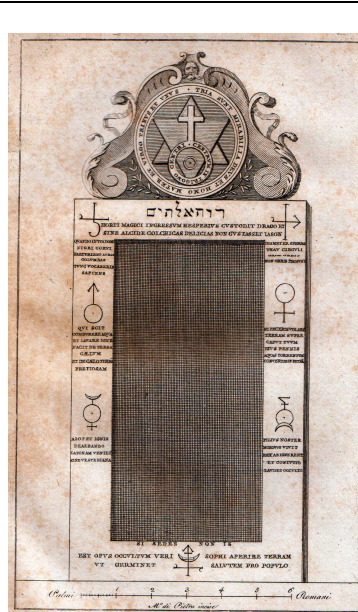


Fig. 9. Etching showing the 'Porta Magica' (from F. Cancellieri 1806).

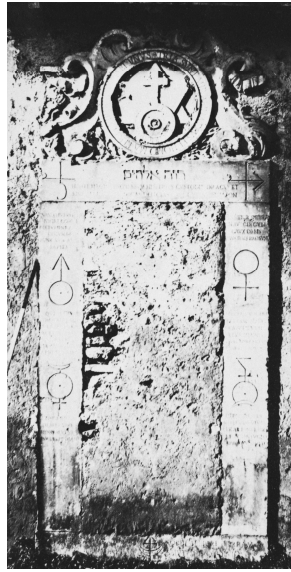


Fig. 10. The installation of the 'Porta Magica' at the surrounding wall of the former Villa Palombara. Photo Parker 961 (1867-1868).

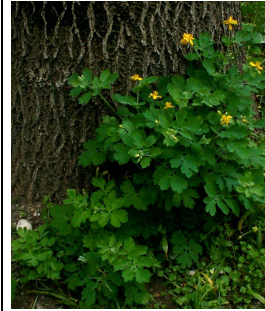


Fig. 13. *Chelidonium majus* L., *Papaveraceae*; celandine/ celidonia/ Schöllkraut (photo: F.X. Schütz).



Fig. 11. The current installation of the 'Porta Magica' on the Piazza Vittorio Emanuele II (photo: F.X. Schütz).

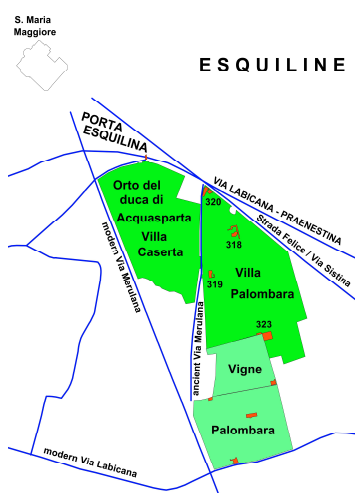


Fig. 12. Map showing the former Villa Palombara on the Esquiline. C. Häuber, "AIS ROMA".



Fig. 14. Diachronic map showing the two known locations of the 'Porta Magica', C. Häuber, "AIS ROMA".

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## 1446, *De Roma Instaurata* – 2012, *Nuova Forma Urbis Romae*. Attempts to Reconstruct a Complex Urban Landscape over the Centuries

Susanna Le Pera

Few cities in the world can boast of a topographic literature as rich and continuous as that of Rome. The Eternal City's catalogue of graphic representations is impressive as well: from the first medieval efforts that attempted to depict the city's image through schematic cartographic designs intermixed with symbolic representations; through the centuries of the Renaissance and Baroque periods, when the art of drawing bird's eye view maps reached heights that are now almost lost, up to the modern maps that show the configuration of the terrain and road networks with scientific accuracy, the image of Rome has been depicted in an uninterrupted series of cartographic documents, which often have a considerable artistic value as well as being of scientific interest. The study of the development of these representations is therefore of great interest not only in the field of Roman topography, but also for the history of cartography in general.

It is no wonder then that the study of Rome's topography<sup>1</sup> – or rather the attempts to piece together the image of ancient Rome and to capture the evolution of its urban landscape – have, since the very beginning, found the city maps instrumental for this research.

The first "classical-style" representation of the city dates to the end of the 13th century, in a vulgar version of the "*Historia Romanorum*" (12th century): "*Roma edificata a muodo di lion*"<sup>2</sup> (Rome in the Shape of a Lion): the city walls outline the shape of a lion with its jaws wide open; three figures pull on its tail; outside the walls one can read "*thermas Diocletiani*" (Baths of Diocletian); below that we can see the fortress of the *Militia*; in the head "*thermae antoniniane*" (Baths of Caracalla), then "*Salustio*", "*Theatrum*", and finally "*Palatium Maius*" between the lion's paws (pl. 1).

This image, therefore, depicts almost exclusively the most ancient<sup>3</sup> features of the city. For a more recognizable representation of Rome, we need to look at Paolino (a Minorite friar from Venice who was very active in political-diplomatic missions) who includes a map in his work "*Chronologia Magna*"<sup>4</sup> (1346) (pl. 2). The map is anything but realistic in the modern sense of the term: the city is oriented to the north-west and appears to be surrounded by formidable walls. Religious monuments are prevalent (*S. Pietro*, *C. S. Angelo*, *S. Apostoli*, *Aracoeli*, *Sancta Maria Rotunda*) although alongside these there are some buildings and sites of ancient Rome, the same ones that are often mentioned in the *Mirabilia Romae*: the *Capitolium*, the *Mons Tarpeius*, the *Palatium Senatorium*, the colosseum and the *Palatium Neronis Lateranense*. But it also includes the very first depiction of the equestrian statue of Marcus Aurelius and the colossal bronze head of Constantine that are now in the Capitoline Museums.

Serious study of the topography of Rome began with a controversial figure and his unscrupulous actions. The humanist Giovanni Francesco Poggio Bracciolini (Terranuova, 1380 – Florence, 1459) found himself, due to his position as *Apostolicus Secretarius*, traveling through

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<sup>1</sup> The distinctive tools of this field include a very broad overview that ranges from archaeological field research to integrated exegetic systems (such as the use of literary, epigraphic, iconographic and archaeological sources), bibliographic and archival sources, medieval and modern historical documents of various kinds (cartographic, illustrative, toponymic), comparative reading of the historical cartography, etc.

<sup>2</sup> *Liber Ystoriarum Romanorum*", c. 107v. (18th Century, Hamburg, Staats- und Universitätsbibliothek).

<sup>3</sup> With the same "legendary" vision and dating from the same period (12th Century with editions that continued for centuries) are the *Mirabilia Urbis Romae*, genuine "travel guides" that accompanied travelers to the Eternal City though their entire visit. Although these guides were mainly intended for pilgrims, their indication of pagan monuments were of particular accuracy, and they contained fanciful tales from other sources that would "explain" the structures' appearance and names.

<sup>4</sup> *Chronologia magna* (mas. Venice, Bibl. Marc. Cod. Lat. 399; Paris, Bibliothèque Nationale Lat. 4939).

Germany and France. An insatiable hunter of unpublished manuscripts, Poggio Florentinus, thanks to his position in the Roman Curia, had the opportunity to study (although his “research” more often resembled theft) in the libraries of the monasteries in the area surrounding Konstanz, where he “rediscovered” many ancient works which in Italy<sup>5</sup> at that time had been considered lost forever.

The greatest discovery attributed to Poggio Bracciolini in the field of Roman topography was perhaps that of Vitruvius’ *De Architectura*, which should have an enormous influence on Renaissance architecture (and indeed up until the 19th century). However, we know that in reality some copies of the manuscript had already been documented in Italy in the 14th century, for example those owned and studied by Petrarch and Boccaccio.

Nikolaus von Kues described Poggio Bracciolini as a drunkard and a whoremonger; Lorenzo Valla regarded him as a buffoon. Indeed, Poggio Bracciolini admittedly despoiled the *scriptoria* of European monasteries in his hunt for ancient manuscripts: however his searches lead to the discovery of several works such as Frontino’s *De aquaeductibus* and the compilation of inscriptions by the author known as *Anonymus Einsiedlense* (an itinerary compiled in the 8th century by an anonymous pilgrim and intended for future use by his brothers).

“Anonimo” (anonymous), who may have been a Benedictine monk, visited Rome, studied its monuments and took part in Christian and pagan ceremonies, describing their liturgies. Most of all, however, he collected and copied Latin inscriptions both in order to study the language and in search of the names of magistrates and historical figures in the texts as well as to identify buildings and temples. He compiled a text that is a priceless resource in the study of Rome’s topography during the early middle ages.

Poggio Bracciolini’s systematic explorations led to a description of what structures had survived from the past: the “*De varietate fortunae*”<sup>6</sup> (pl. 3) was a text (begun just after Pope Martin V’s death in 1431 and released only in 1448) that showed how much the ruins of Rome represented a significant example of the instability<sup>7</sup> of fortune.

It was in the work of Poggio Bracciolini that archeology, perhaps for the first time ever, assumed a new aspect, both less speculative and more experimental. It seems that he was particularly interested in the ancient city gates and he studied the materials of their construction and dated them through epigraphical artifacts. He was similarly interested in what are known as the Servian Walls<sup>8</sup>, however he was unable to reconstruct its original perimeter. In his

<sup>5</sup> Most of those works were well known in German-speaking Europe, as confirmed by citations from medieval authors. Though Poggio Bracciolini was not a skilled *amanuensis*, he personally copied many of these manuscripts and sent his hasty copies to Italy pending payment; he often went so far as to destroy the original documents in order to prevent anyone else from threatening his “monopoly.” This is how the Italian humanists became familiar with works such as many of Cicero’s orations, Publius Papinius Statius’ “*Silvae*”, Silius Italicus’ “*Punica*” and, most importantly, a copy of Lucretius’ “*De rerum natura*”, a text that epitomized the literary resurgence in Italy.

<sup>6</sup> *Historiae de varietate fortunae libri quatuor*, ex ms. codice Bibliothecae Ottobonianae nunc primum editi et notis illustrati (BAV, cod. Ottoboniani latini, 1863).

<sup>7</sup> “... È un’onta e un abominio vedere i porfidi e i marmi strappati a questi antichi edifici e trasformati continuamente in calce...” (“It is a shame and an abomination to see the porphyrs and marbles ripped off these ancient buildings and continually transformed into mortar”), he wrote with sincere indignation in one of his letters from Rome (II, 98-101; III, 7). Poggio, in the first book of “*De varietate*”, tells the story of a horse ride with his friend Antonio Loschi to the Capitoline Hill; this rhetorical device uses the image of the Roman ruins to illustrate the principal theory of his work: that of human history as the succession of good and bad fortune, in which the glory of the past is contrasted with the decadence of the present day.

<sup>8</sup> He was the first to analyze the monuments’ structure and building technique: before Poggio Bracciolini, for example, no clear distinction had ever been made between the “Servian Walls” and the “Aurelian Walls”. He was the first to deny that a circuit of walls with towers could be attributed to Servius Tullius. He examined the structure in brick and deduced from the different building techniques used along different sections of their perimeters that the walls were built in different periods. He also realized that several public and private buildings had been incorporated into the Aurelian Walls, and noted in particular that the section between the Porta Tiburtina and the Porta Nomentana were built incorporating

observations of the Pyramid of Cestius he wondered how Petrarch could have believed that it was the tomb of Remus, when its inscription clearly indicated a different origin. He attempted a complete analysis based on the actual physical make-up of the ancient structures, but he was by no means an archaeologist, or a systematic researcher.

Flavio Biondo (Forlì, 1392 – Rome, 1463) was the first to analyze with scientific exactitude and true archaeological method the ancient monuments of Rome<sup>9</sup>. A notary of the Apostolic Camera and a secretary under four popes – Eugene IV, Nicholas V, Callixtus III and Pius II – he lived through an extraordinary time of humanistic studies and authored three encyclopaediae that are the foundation of all later Renaissance works on Roman antiquities. His three guidebooks to the ruins of ancient Rome were systematic and documented, and earned him his fame as one of the first archaeologists. At that time in Rome much of the identity of the ancient buildings the ruins of which were still emerging had largely been lost to history<sup>10</sup>. Flavio Biondo and his fellow humanists such as Leon Battista Alberti began to interest themselves with the architecture, topography and history of ancient Rome both by studying the texts of classical authors and exploring and examining the ancient remains. Flavio Biondo's first work was published in three volumes between 1444 and 1446. "*Roma Instaurata*" ("Rome Restored") is a reconstruction of ancient Rome's topography, based on the remains that were visible at the time, and included a list of churches and chapels as well. As a master in this new search for single details, his work was a precursor to handbooks of antiquities, and he is considered the pioneer of modern scientific research as applied to antiquities.

Flavio Biondo's new spirit of inquiry gave him a way to strip all the magical elements from the ruins and to paint a plausible picture of the ancients' public and private life. In the old ruins he recognized the still living parts of the glorious past of the city, though his love for the past did not blind him to the new Rome that was then rising around the ancient one<sup>11</sup>. His devotion to ancient Rome was only second to his religious devotion, for which he was grateful because he felt that Christianity had saved the ancient Roman glory from complete obliteration<sup>12</sup>. To see, and most of all to show to others what classic Rome had been was for him a mission. With the "*De Roma instaurata*", he tried to reconstruct, at last, a clear idea of ancient Rome: not only the ancient topography but also the development and the function of the buildings. With this work he revealed himself to be not only an archaeologist but a historian and scholar of ancient institutions; a true humanist and a consummate expert of the classics.

For Leon Battista Alberti (Genoa, 1404 – Rome, 1472), however, humanistic education and literary experience were closely tied to the arts and technical skills. He considered his stay in Rome to have been decisive for his education. In Rome he began to study the ancient ruins, measuring them with a method he had learned in Florence from Brunelleschi, but mainly appreciating them from a historical point of view. The result of his studies was summarized in the *Descriptio Urbis Romae*<sup>13</sup>. In Rome, among other tasks, he was assigned to direct the restorations of Acqua Vergine and the Ponte Milvio; he worked on the Basilica of St. Peter, and

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a public building with a square plan made from excellent brickwork: this is what today we now know to be the *Castra Praetoria*.

<sup>9</sup> He was also the first scholar to conceive of a "*media aetas*" from the Ancient History to his time, and coined the phrase "Middle Ages" to describe it.

<sup>10</sup> In 1430, when Poggio Bracciolini climbed the Capitoline Hill, what he saw around it were only abandoned fields: the Roman Forum was inhabited by pigs and wild vegetation.

<sup>11</sup> We must admit, however, that the love of the Renaissance for the past was the reason that more ancient remains were destroyed than in any other period of history.

<sup>12</sup> H. GÜNTHER, *L'idea di Roma antica nella Roma Instaurata di Flavio Biondo*, in ROSSI S. (a cura di), *Le due Rome nel Quattrocento*, Roma, 1997, pp. 380-393.

<sup>13</sup> In the 15th century the planimetric survey of the city was considered a fundamental science for urban knowledge. It meant the evolution of direct and indirect measurement systems and new tools were developed. The cartographic survey of Rome's perimeter, consisting of the Aurelian Walls, has not survived to our time, but the methods and tools used for measurements are described in the *Descriptio Urbis Romae*, which was probably intended as a commentary to the map.

in his *Ludi mathematici*<sup>14</sup> he attempted to solve important geometric problems and described the various tools he invented or perfected: the “equilibra” or pendulum level and the “odometro” or surveyor’s wheel. And so, owing much to Alberti’s contributions as well as to those of the great Tuscan architects, new means for representing the city were developed to document Rome’s topography through the correct location of its monuments both ancient and modern.

Among other things, Leon Battista Alberti’s (1404-1472) *Descriptio Urbis Romae*, included, for the first time ever, a series of measurements of the distances between the main buildings of significance. Though probably never completed, the intention of this geometric grid was to formulate a map of Rome’s ancient structures<sup>15</sup> (pl. 4).

Unfortunately, the map of Rome by Pietro del Massaio<sup>16</sup> (pl. 5) that came to light some time after Alberti’s death does not do justice to the measurements and the precision of the previous architect; it is little more than a schematic illustration in which ancient ruins and more recent buildings are placed side by side.

It was, once again, a truly humanistic “challenge” to read the contemporary city as an heir to the ancient one, in its long process of growth and the superimposition of the modern structure onto the grand classical remains. Therefore the origin of Rome’s cartography, starting from the early Humanism, lay in a continuous dialogue between old and modern, giving rise, over time, to an exceptional series of reconstructions of the ancient city map and generating a spectacular abundance of maps of the modern city. But the dream of the Renaissance architects such as Alberti was not to rebuild the Rome of Caesar or Trajan: their ambition was to build the ideal city, based on Vitruvian principles or still visible and “measurable” examples of ancient urban planning. In short, the ruins suggested how a perfect monument would be and gave access to its secrets – the shapes, measurements and symmetries – thus allowing modern man to equal the ancients in beauty and technical mastery. The effect of the Roman ruins on Leon Battista Alberti was no mere theoretical nostalgia for glories past; they drove his search for ancient construction techniques and principles and philosophical tenets. He is to be credited for having made a crucial contribution to the dissemination of the Vitruvian text *De Architectura*. In true humanist spirit, he embraced its values and information, but he also indicated its limits: “...quelli antichi scrittori furono uomini, come testè siete voi...” (“those ancient writers were men, just as you are..”)

In 1465, Rome’s topography appears for the first time ever as a subject of study in the “*Studium Urbis*”, the first university in Rome, established in 1303. The first accounts of the teaching of Roman history using its sites and monuments date back to the second half of the 15th century and the humanistic courses held by Pomponius Laetus (1428-1497) at the Università La Sapienza for over thirty years<sup>17</sup>. We have the extraordinary good fortune to still have many of his course notes in the form of chirographic documents, that is, handwritten texts that he used

<sup>14</sup> The original title now acknowledged by scholars is *Ludi rerum mathematicarum* and it was written around 1450. It was printed in Venice, by Cosimo Bartoli, in 1568, almost one century after its author’s death.

<sup>15</sup> *La città di Roma nel quattrocento*, a cura di E. GUIDONI, *Planimetria ricostruttiva della rete viaria e dei principali edifici antichi e moderni all’anno 1500. Le porte della città e i monumenti trapiantati dalla torre del Campidoglio* (L. B. ALBERTI, *Descriptio Urbis Romae*), Ricerche e elaborazione grafica di C. CRISTALLINI, in E. GUIDONI, *L’urbanistica di Roma tra miti e progetti*, Roma-Bari 1990, pp. 112-113; J. Stamp, *Leon Battista Alberti, il primo digitalizzatore*, in [smithsonianmag.com](http://smithsonianmag.com): “Alberti tried to counter the failings of analog images by digitizing them, in the etymological sense: replacing pictures with a list of numbers and a set of computation instructions, or algorithms, designed to convert a visual image into a digital file and then recreate a copy of the original picture when needed”. M. CARPO, *The alphabet and the algorithm*, Cambridge 2011: the author shows that Alberti has transcribed the map of Rome “by inventing a kind of algorithm” that anyone could use to produce copies of the map without any distortion.

<sup>16</sup> Pietro del Massaio, *Veduta di Roma dalla Cosmographia di Tolomeo* (1469), Vat. Lat.5699, sheet 127.

<sup>17</sup> More precisely, between 1465 and 1497, the year of his death. There were two hiatus in his work; the first was due to a long trip abroad, the second to an even longer time spent in prison, first in Venice under accusation of sodomy, then at Castel Sant’Angelo where he was jailed together with the members of the Accademia Romana under the charge of conspiring against the Pope.

as outlines for his lessons. We also have his margin notes in the classic volumes he used for his studies and his teaching. Lastly, we have his *dictata*, the notes written by his students (pl. 6-7).

With remarkable precision and an extremely concise style, Pomponius Laetus describes the archaeological remains; his knowledge of the ancient texts appears extensive, but the most modern trait of his teaching is perhaps the extreme caution he practiced in drawing conclusions; thus many questions were left unresolved. Among his contributions to specific issues of Rome's topography, worthy of mention is his establishment of the exact position of some of the hills, particularly the Quirinal Hill, which up to that time was mistaken for the Pincian Hill.

With this new approach we see the characteristic expression of the humanistic spirit which privileges observation and the direct study of the structures alongside attempts to achieve an objective architectural reconstruction. It is true that Pomponius Laetus did not produce a comprehensive description of classic Rome as Flavio Biondo had done. But if Biondo and Poggio were the pioneers of the ancient study of the city, Laetus' was surely the model of study for the next generation<sup>18</sup>. Indeed, his work on ancient Rome's topography not only included an analysis of the monuments, but also a philological review of the "*Notitia regionum urbis Roma*" that went well beyond mere amendments to the text. His most significant work, however, is the text of the *Excerpta*<sup>19</sup> and the *Stationes Romanae*<sup>20</sup>. According to many scholars, the map by Alessandro Strozzi (1474) (pl. 8) and the map by Marliani (1534)<sup>21</sup> (pl. 9) stemmed from the same "archetype", probably through Flavio Biondo's library<sup>22</sup>. Alongside Leon Battista Alberti's

<sup>18</sup> A. Modigliani, P. Osmond, M. Pade, J. Ramming (edd.), *Pomponio Leto tra identità locale e cultura internazionale* (Atti del convegno internazionale, Teggiano 3-5.10.2008) 199-217. A tutor of the eminent Farnese family, thanks to his teaching ability he educated the most illustrious members of the Italian aristocracy, with a profound influence on the concept of classical antiquities and views of paganism. Together with Lorenzo Valla, Filippo Bonaccorsi and Bartolomeo Platina he conceived and developed the categories of classical studies and therefore the method of the modern topographic study.

<sup>19</sup> *Excerpta a Pomponio dum inter ambulandum cuidam domino ultramontano reliquias ac ruinas Urbis ostenderet* (ed. De Rossi).

<sup>20</sup> *Stationes Romanae quadragesimali ieiunio*, published in Franz Schott, *Itinerarii Italiae rerumque Romanarum libri III*, Antverpiae, 1600. For the Pomponian studies of Rome's topography, see G.B. De Rossi, *Note di Topografia romana raccolte dalla bocca di Pomponio Leto e testo pomponiano della Notitia Regionum urbis Romae*, in «Studi e Documenti di Storia e Diritto», 3 (1882), pp. 49-87; V. Zabughin, *Giulio Pomponio Leto. Saggio Critico*, II, Grottaferrata 1910-1912, pp. 170-194; C. Mitchell, *Pirro Ligorio's Roman Antiquities. The Drawings in ms. XIII.B.7 in the National Library in Naples*, London 1963; M. Accame Lanzillotta, *Pomponio Leto e la topografia di Roma*, in «Rivista di topografia antica», 7 (1997) [1999], pp. 187-194; ead., *Pomponio Leto. Vita e insegnamento*, Tivoli 2008 (Biblioteca Pomponiana, 1), pp. 174-185.

<sup>21</sup> In May 1534, Bartolomeo Marliani published his most famous work, the *Antiquae Romae topographia, libri septem*, a guide to Rome's antiquities complete with engraved plans and drawings of monuments. This reconstructive study of Rome's ancient topography was primarily based on classic literary and epigraphic sources. The author was also concerned with keeping up with the archaeological discoveries that were becoming very frequent in those years. The extraordinary zeal brought to the study of antiquity in those years is demonstrated by the fierce criticism of Marliani's text brought forward by major contemporary humanists. Pirro Ligorio provoked a lengthy controversy centering on the supposed mistakes made in his reconstruction of Rome's topography, particularly the placement of the Roman Forum between the Arches of Titus and Septimius Severus, instead of between the Capitoline and the Palatine Hills, and regarding the identification of the Temple of Saturn with the site of the church of S. Adriano (i.e. the Cura Iulia). Marliano replied to these accusations in a second edition of the *Topographia*. M. Benedetto Egio, in his copy of the second Roman edition of the *Topographia* (1544) added his own strongly critical annotations; he even went so far as to accuse Marliani of errors in the translation of the classical sources, and of having copied the texts and the theories of Flavius Blondus and Andrea Fulvio.

<sup>22</sup> G. Scaglia, "The origin of an archeological plan of Rome by Alessandro Strozzi", in *Journal of the Warburg and Courtauld Institutes*, XXVII (1964), pp. 137-159. Scaglia notices a strong correspondence, in both monuments and captions, between the *Roma instaurata* and the archaeological map in the Cod. Laurenz. Redi 77 (1471); he considers it a copy of a prototype dated before 1450 that was also known to Piero del Massaio (1452).



project, one must not neglect to mention Raphael's great undertaking of a systematic series of studies, surveys and excavations in order to reconstruct an archaeological map of Rome<sup>23</sup>. This project, conducted by the first papal antiquary<sup>24</sup> resonated greatly among scholars and intellectuals of the day (who unfortunately did not see it completed due to both the objective difficulties involved and Raphael's<sup>25</sup> premature death), and enjoyed a large following over the course of following centuries. Pope Leo X, Raphael and Baldassarre Castiglione were united by personal friendship and a shared passion for the city and its monuments; they devoted their energies to an ambitious project that began with the Pope's erudite quest to rediscover the original form of Rome, reconstructing the appearance of the ancient buildings through the study of ruins and the use of modern surveying instruments. The map and the drawings were under the responsibility of the artist, while Castiglione<sup>26</sup> was to have written a dedicatory and illustrative preface. That is how the drafting of a great map of Rome was planned, with the reconstruction of its monuments, divided into three stages: the Romulean City, the Servian City and the Imperial City. The map was to be divided according to the Augustan regions, complete with separate enlargement detailing single buildings, technical annotations regarding the surveying of the monuments and scholarly commentary. Raphael enlisted Marco Fabio Calvo from Ravenna and Andrea Fulvio, a great expert in ancient topography, to assist with the drafting of the maps. The first plates were probably completed in 1519 and the project was judged worthy of being submitted to the attention of the pope.

All that remains today of this ambitious effort is the pale echo that can be found in the *Antiquae Urbis Romae cum Regionibus Simulacrum* of Fabio Calvo (1527)<sup>27</sup>, the first example of a map (pl. 10-11) that attempts to reconstruct ancient Rome; nevertheless, the drawings and surveys of monuments that were undertaken by Raphael<sup>28</sup> are no less important (pl. 12): to understand the form of the ancient city a map was planned to be drafted in which the monuments would be positioned precisely. Furthermore, these monuments were planned to be documented one by one by skilled architects that surveyed and mapped them in horizontal, vertical and cross-section alignment (that is, following the rules of orthogonal projections, not the misleading rules of perspective); technical and structural annotations would then be added to the drawings. The attempts to draw diachronic maps that depicted the reality of the ruins of a city

<sup>23</sup> The only project that was completed in the early years of Raphael's office as "*Praefectus marmorum et lapidum omnium*" was that of a great epigraphic collection: in 1521 Jacopo Mazochi published, with the contribution of Mario Maffei and Andrea Fulvio, the *Epigrammata Antiquae Urbis*.

<sup>24</sup> Attempts to coherently summarize the legislation regarding the protection of antiquities between the 15th and 16th centuries are quite difficult as the Capitoline and Papal jurisdictions overlapped one another. The legal acts are scattered amongst civil and papal collections though the papal acts have been published as "papal bulls" or "municipal charters"; cf. A. Lanconelli, *Manoscritti statutarî romani. Contributo per una bibliografia delle fonti statutarie dell'età medioevale*, in M. Miglio (a cura di), *Scrittura biblioteche e stampa a Roma nel Quattrocento*, Records of the 2nd Seminar May 6-8 1982, Città del Vaticano 1983, 305-321. See also C. Chelazzi (a cura di), *Catalogo della raccolta di Statuti, consuetudini, leggi, decreti, ordini e privilegi dei comuni, delle associazioni e degli enti locali italiani dal Medioevo alla fine del secolo XVIII*, Roma 1963, VI, 143-206.

<sup>25</sup> "*Tanti grandi antichi e tanta lunga età occorsero alla costruzione di Roma; tanti nemici e secoli occorsero a distruggerla. Ora Raffaello cerca e ritrova Roma in Roma: cercare è di uomo, ma ritrovare è di Dio*". This is the epigram that Celio Calcagnini, one of the greatest intellectuals of the Renaissance, wrote on the occasion of Raphael's death.

<sup>26</sup> E. Gambin, *La Roma archeologica di Raffaello*, in A. Beniscelli, Q. Marini, L. Surdich (a cura di) *La letteratura degli italiani. Rotte, confini, passaggi*, Atti del XIV Congresso Nazionale ADI, Genova, 2012, p. 48ss.

<sup>27</sup> Fabio Calvo was also entrusted with the task of a new translation of the *De architectura* that would have been used as a basis for the archaeological map of Rome. In 1527 Calvo published *Antiquae Urbis Romae cum regionibus simulachrum* that echoed – with modest results – the studies that Raphael had undertaken.

<sup>28</sup> The book includes twenty-one engraved maps with explanatory texts; the maps were based on Calvo's original drawings. R. Lanciani, *La pianta di Roma antica e i disegni archeologici di Raffaello Sanzio*, in *Rendiconti della Reale Accademia dei Lincei – Classe di Scienze morali, storiche e filologiche*, Serie V, vol. III, Roma 1894, 781-804.

in constant transformation may be considered both brilliant and very modern.

The outcome should have had a strong impact, as Celio Calcagnini mentions that Leo X praised Raphael as "un Dio antico tornato sulla terra" ("an ancient God returned to Earth"). According to Andrea Fulvio, Raphael had depicted, with his paintbrush, the division of the city into regions: "*egli stendeva un libro siccome Tolomeo ha isteso il mondo, su gli edifici antichi di Roma, mostrando chiaramente le proporzioni, forme et ornamenti loro, che, averlo veduto, arìa scusato ad ognuno aver veduto Roma antica, et già aveva fornito la prima regione*". Raphael embraced a dream and together with his illustrious coevals and immediate successors (Bramante, Baldassarre Peruzzi, Fra Giocondo, Pirro Ligorio, etc.), he defined what still today is considered the model of Rome's topography. But the project was interrupted, the letter that accompanied it was lost, and the drawings dispersed in countless collections. The only modern additions have been the introduction of ever faster techniques (print editions, electronic measurement systems, computers), though perhaps at the expense of a "communion" with the ancient relics.

In the 16th century, we see a relaunch of earlier unfinished projects which leads to improved precision in the description of places and monuments. In 1551, some thirty years after Raphael's experiment, Leonardo Bufalini completed a very detailed and almost modern map of Rome with an accurate depiction of its antiquities<sup>29</sup> (pl. 13). The countryside is depicted as devoid of houses, but the names of the owners of the agricultural lands are listed; the urban blocks are delineated only as far as their perimeters are concerned, and only the plans of the most important buildings are shown in details (pl. 14). On the map of modern Rome an innovative and concise graphic style also depicted the topography of the ancient city in which the visible ruins were represented; in the inhabited and in the vast uninhabited areas are indicated the names of monumental complexes that were lost but known from the sources<sup>30</sup>, cross-referenced and superimposed with the names of the modern owners. In the brief preface to his Map, Bufalini proudly proclaims to have designed the city of Rome "*non ad normam solum. et circinum, sed ad pyxidem etiam nauticam, coeli et solis situs et intervallorum ratione habita exactam*"; or rather with the exact measurements of the spaces and distances using the most modern systems. As a proper "geometrician", he portrayed himself on the lower border of his map holding his compass. He took meticulous care in reporting every measurement, including the details of the grand circuit of the Aurelian Walls<sup>31</sup>.

In the 16th and 17th centuries, the new development of printing techniques gave rise to numerous publications, which were, in part, intended for antiquarians and historians who wanted to study the grandeur of ancient Rome, in part for the faithful who flocked to the capital of the Christian world as an act of devotion, and lastly for those admirers of the magnificent examples of modern architecture in "Rome Reborn". In the long period between 1551 (in which Leonardo Bufalini publishes his great map<sup>32</sup> and 1750, in which no new maps of the city nor new editions of earlier maps were released, altogether relatively few maps were published,

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<sup>29</sup> The pontificate of Sixtus V (1585-1590), the pope who determined the direction of the city's development toward the east (the Pincian, Viminal, Esquiline and Monti hills) reinforced the importance of the Via del Corso, which began to become a centrally located arterial road.

<sup>30</sup> Bufalini's map shows how the urbanization of the northern area of Campo Marzio was almost complete at that time, as far as its western side was concerned (that is, towards the Tiber), while along the eastern side, the vast land holdings of the Monastery of Saint Sylvester and the long time it took to complete the construction of the Via Paolina (later renamed Via del Babuino) contributed to delays in the urbanization of these areas.

<sup>31</sup> His efforts were also appreciated by Onofrio Panvinio, who in his preface to *De Republica Romana* in 1558 (cod. Vat. Lat. 6683, p. 202) wrote that the map is the fruit of twenty years of study: "...*incredibili labore et pertinaci XX annorum studio*...".

<sup>32</sup> The main source of Bufalini's map is considered the map of ancient Rome by Bartolomeo Marliano (*Urbis Romae Topographia*, II ed. Roma, 1544) that shows the same orientation and an equal precision to detail. See: J. Mainer, *Leonardo Bufalini: il primo rilevamento scientifico della città (1551)*, in *Piante di Roma del Rinascimento e della Controriforma (1551-1625) Architettura, arte e scienza dal Bufalini al Maggi*, Atti del Convegno Internazionale, Roma, 2009; A. Ceen, *Bufalini 1551: Distortion and Rectification*, *ibidem*.

except an especially intense production during holy years<sup>33</sup>. It was in this period that the production of images of the city experienced a rapid-fire evolution. Italy in general (and Rome in particular) saw the invention of new cartographic models, and new measurement and graphic techniques were introduced. The city map becomes increasingly used for cultural and military purposes as well as for propaganda both political and religious.

Around the year 1562, the single most important discovery in the field of the study of the topography of ancient Rome occurred: in a plot of land behind the Basilica of Santi Cosma e Damiano several hundred fragments of a large marble map of Rome were found. Dating from the Severan era, the map had once adorned one of the halls of the *Templum Pacis*<sup>34</sup> (Temple of Peace). The great cardinal Alessandro Farnese ordered further excavation work to be carried out, in the hope – surely nurtured by the humanists that attended his court – of finding most of the fragments in order to reconstruct the colossal marble puzzle. A group of scholars started the work of reconstructing the map of Rome in the Severan era. Initially the group was led by Onofrio Panvinio, then later by Fulvio Orsini and included, among others, Dosio<sup>35</sup>, Du Pérac and Pirro Ligorio<sup>36</sup>. Riding the wave of enthusiasm caused by the discovery, virtually all of the scholars admitted to “the public school of the world” that was active in those years at Palazzo Farnese attempted a cartographic reconstruction of the image of ancient Rome. The cartography of Rome was divided into two distinct approaches (though often both made by the same mapmakers): the reproduction of the modern city and the reconstruction of its ancient topography.

We must also mention that in those years Ligorio was fighting against the systematic destruction of archaeological remains at the hand of collectors and hunters of construction materials, and Pope Pius IV gave him a special charge to monitor the monuments<sup>37</sup>. Only few months before the discovery of the marble fragments, Ligorio had published his great archaeological map *Anteiquae Urbis Imago*<sup>38</sup> (pl. 15-16), developed by comparing the ancient sources and numismatic images with the ruins that were visible at that time, and he was collecting materials for a “colossal” work on Ancient Rome<sup>39</sup>. The remaining manuscripts document his idea of completing a true “pictorial encyclopedia” of antiquity, characterized by a rather reckless preference for the reconstruction of the monuments, a tendency that often led him to the brink of falsification<sup>40</sup>.

<sup>33</sup> The Jubilee was celebrated in the years 1575, 1600, 1625, 1650, 1675, 1700, 1725, 1750.

<sup>34</sup> The discovery happened during the search for construction materials or valuable archeological relics that could be used to decorate buildings and enrich collections. Dosio immediately recognized the importance of the discovery and informed Torquato Conti, his patron and the owner (or emphyteuta) of the land, who immediately presented the fragments as a gift to cardinal Alessandro Farnese.

<sup>35</sup> What remains of the first studies of the fragments are the drawings included in the *Codex Ursinianus* (Cod. Vat. Lat. 3439), which are widely attributed to Dosio.

<sup>36</sup> Pirro Logorio's involvement in the discovery and study of the map's fragments is perhaps worthy of further investigation. Furthermore, Ligorio and Panvinio often conducted their studies jointly, to the point that Panvinio quotes entire pages of unreleased manuscripts by Ligorio in his *Commentari*. The two were even accused of being accomplices in the art of falsification.

<sup>37</sup> CASTAGNOLI 1952, p. 97 ff.

<sup>38</sup> P. LIGORIO, *Anteiquae Urbis Imago accuratissima ex vetustis monumentis, ex vestigiis videlicet aedificiorum moenium ruinis... descripta a Pyrro Ligorio romano*, Rome, 1561.

<sup>39</sup> The impossibility of its ever being published became proverbial in its day, to the point that Manuzio once said to a friend of his: “That book of yours grows so large that I don't believe it will be ever printed, just as the labors of Pirro Ligorio”.

<sup>40</sup> Ligorio's work was criticized by his contemporaries, and particularly by epigraphists and topographers of the 19th and 20th centuries. Only recently has his scientific work been evaluated from a more balanced and philological viewpoint. Maurizio Fagiolo describes Ligorio's work with enlightening words: “The image of chaos...presents itself as a metaphor of a tortuous historical development and as a template for a committed representation of the image of Rome... it marks the birth of a desire to reproduce the ancient city based on scientific and critical criteria, with a holistic investigation of archaeological data, historical sources and the compositive invention that listens to the past, the present and the future at the same time, establishing itself as memory and

*Urbis Romae Sciographia ex antiquis monumentis accuratissime delineata* was the title of a Rome map by Etienne Du Pérac which is notable for its extraordinary beauty and accuracy (pl. 17, 18, 19, 20). In its cartouche Du Pérac describes it as the fruit of a long work of comparison between literary sources, the study of the fragments of the Severan *Forma Urbis* and the archaeological remains that he had drawn and collected in his engravings for *Vestigi dell'antichità di Roma raccolti e ritratti in prospettiva con ogni diligentia da Stefano Du Perac parisino*<sup>41</sup>. His entire œuvre offers an image of a Rome that is as yet undefined, with piazzas of beaten earth and winding streets through medieval neighborhoods, ancient ruins alongside Renaissance palaces; with shepherds guiding their herds around the buildings, pilgrims walking the streets and knights jousting in the Vatican gardens.

Four years later in 1579, the map of Mario Cartaro<sup>42</sup> would rival Du Pérac's archaeological one. In the cartouche Cartaro makes mention of Du Pérac's two maps of modern Rome and the preparatory study method that included an analysis of its sources, the direct and indirect examination of monuments, and measurements made with precise measuring instruments. In the last decade of the 16th century, and throughout the 17th century, extraordinary maps of contemporary Rome were produced, perfecting the measuring techniques and graphic quality. We mention, among others, those by Antonio Tempesta (1593), Matteo Greuter (1618), Giovanni Maggi (1625) and Giovanni Battista Falda (1676). However, it was not until the next century and the great cartographic achievements by Nolli and Piranesi<sup>43</sup> that it was possible to see an original reconstructive map of ancient Rome.

The cartographic achievement by Giovan Battista Nolli is the fruit of the spirit of the enlightenment enjoyed by Rome at that time: Nolli aimed to create a large map of the entire city and its antiquities, geometrically exact and graphically perfect, achieved by using an innovative tool, the plane table (pl. 21). From the moment of its "commission" by Abbot Revillas, however, we can imagine how new and peculiar this "perfectly exact" large map of Rome must have seemed at the time. The contract, drawn up in 1736, stipulated a geometrically precise map, "*si per ciò che riguarda le misure, quanto quello, che appartiene agl'Edifici*", ("as far as both measurements and buildings are concerned") and it was to depict "*non solo le fabbriche moderne, che al giorno di oggi si vedono, ma in oltre tutte quelle che da due secoli in qua erano in Roma, e che poi sono state diroccate, il che si anderà ricavando da varie notizie, e dalle carte più antiche, che con tutta la diligenza di più si saranno segnate le fabbriche antiche nello stato in cui al presente si trovano, e ancora come due secoli addietro si vedevano innanzi la demolizione di molte di esse*" ("not only the modern structures that are visible today, but also every other structure that has existed at Rome over the last two centuries and later left in ruins. Gathering information through various sources, including older maps, one must depict the most ancient buildings in their current state and also their appearance two centuries ago, before many of them were demolished").

The map had to include "*un libretto a parte in cui ad ogni numero della carta corrisponderà la descrizione più accurata, che far si possa con tutte le maggiori notizie, che si potranno avere*" ("a separate booklet in which every number on the map will match the most accurate description

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prophecy. In this sense, a continuity exists between Ligorio and Piranesi" (M. Fagiolo, *Le piante di Roma dal Rinascimento ai Catasti*, in M. Bevilacqua, M. Fagiolo (a cura di) Roma, 2012, p. 23.

<sup>41</sup> Etienne du Pérac arrived in Rome around 1559 and immediately became part of the circle of authors and scholars that gravitated around the engraving workshop of Lafréry. He drafted very well-known Roman landscapes, and imagined reconstructions of ancient monuments and archaeological remains. Typically for that age, Du Pérac also drew the *Nova Urbis Romae Descriptio* (1577), a beautiful birds-eye view of modern Rome.

<sup>42</sup> Marius Kartarius Viterbensis, *Celeberrimae urbis antiquae fidelissima topographia*, 1579.

<sup>43</sup> Indeed, until the technical and scientific revolution of the 18th century that saw Nolli as its most eminent representative (and would then continue into the 19th century with the development of detailed cadastral surveys), the image of the city codified between the Renaissance and the Baroque was the basis of the modern representation of Rome.

available and with all the information of note that can be found")<sup>44</sup>. At that time Rome boasted an exceptional cartographic heritage, of which Nolli was well apprised, however he wanted to maintain a distance from the depictions of the previous centuries and was particularly determined to surpass Giovan Battista Falda's map which was unanimously considered insuperable. He chose to elaborate on both Leonardo Bufalini's iconography (pl. 22) – the first modern survey of the city – and on the Severan *Forma Urbis*.

The initial project included the systematic mapping of the ancient monuments<sup>45</sup>. This work marks the Roman debut of the young Piranesi, who in those years makes his appearance working for Nolli. Unfortunately, the announced reconstruction of the topography of ancient Rome would remain, once again, a project that was only completed in part, but it gave rise to a period of fervent activity in the field of ancient topography which would see Giovan Battista Piranesi as one of its major protagonists.

The young Venetian architect "*apprit à connaître surtout avec ce dernier (Nolli) jusqu'aux moindres vestiges des antiquités de Rome ... il courait sans cesse des Ruines aux bibliothèques pour trouver les noms, la position et la destination de ses masses, des bibliothèques aux Ruines pour admirer encore ces fabriques imposantes*" was soon engaged in drafting the map of Rome, divided into the fourteen Augustan regions, and in the re-release of the *Forma Urbis*<sup>46</sup>.

While Nolli inspired Piranesi's profound interest in cartography, the latter considered cartographic data merely as a means for understanding classic architecture and city planning: "... Il percorso iniziato a Venezia raggiunge nuovi esiti a Roma, dove nei primi anni '40 Piranesi con Nolli inizia a muoversi con familiarità e professionalità in ambienti che gli dovettero apparire intenti a realizzare, in uno spirito di libertà e magnificenza, quella sintesi tra pratica architettonica, ricerca antiquaria, diffusione calcografica e cartografia che rimarranno tra gli elementi fondanti della sua poetica (pl. 23-24). L'utopia monumentale e il furor inventivo del Campo Marzio, espressi in un linguaggio cartografico ineccepibile, senza dubbio parla ancora - se facciamo attenzione - di questi primi percorsi giovanili..." ("His education, beginning in Venice, reached new fruition in Rome where, at the beginning of the 40s, Piranesi, together with Nolli, began to become familiar and comport himself with professional confidence in a field that was then filled with freedom and magnificence, a synthesis of architectonic practice, the study of antiquity and calcographic and cartographic dissemination. The monumental utopia and the inventive ardor of Campo Marzio, expressed with an impeccable cartographic language, speaks of these early experiences...")<sup>47</sup>.

Between the 19th and 20th centuries, the archeology of Rome and its ancient topography began to take on shape and structure thanks to the great scholars who conducted and perfected the method of study that, as we have seen, had evolved through the centuries. The founding of the Istituto di Corrispondenza Archeologica, the consolidation of the foreign academies of archeology and the dissemination of university studies all contributed to the learning of the great archaeologists and scholars of Rome: from Antonio Nibby<sup>48</sup> – still immersed in 17th

<sup>44</sup> BAV, Capponiani 294, sh. 22, cit. in M. BEVILACQUA, *Roma nel secolo dei Lumi, Roma nel secolo dei lumi: architettura, erudizione, scienza nella pianta di G.B. Nolli "celebre geometra"*, Roma, p. 25.

<sup>45</sup> Nolli entrusted one of his collaborators, Ferdinando Mariani, to conduct a complete census of the ruins in Rome (*vat. Lat. 12502 II ff. 734-789*). On this topic, see: G.B. De Rossi - G. Gatti, *Note di ruderi e monumenti antichi prese da G.B. Nolli nel delineare la pianta di Roma, conservate nell'Archivio Vaticano*, in *Studi e documenti di storia e diritto*, V, 1884, pp. 109-147: 128 and also: D. Manacorda, *Nolli e l'archeologia. Alcuni aspetti*, in *Roma nel Settecento. Immagini e realtà di una capitale attraverso la pianta di G.B. Nolli* (C.M. Travaglini, K. Lelo a cura di), Roma, 2013, pp. 91 – 101.

<sup>46</sup> It is universally agreed that the collaborator entrusted to calculate the metric scale of the marble map and revise Bellori's plates was indeed Giovan Battista Piranesi.

<sup>47</sup> M. Bevilacqua, *Percorsi e incontri nella città del Settecento*, in "Nolli Vasi Piranesi. Immagine di Roma Antica e Moderna. Rappresentare e conoscere la metropoli dei lumi" (M. Bevilacqua, a cura di), Roma 2004, p. 62.

<sup>48</sup> Nibby is credited with the re-release of Famiano Nardini's *Roma antica*, enriched with notes and critical remarks (1818-1820) and *Roma nell'anno MDCCCXXXVIII, descritta da Antonio Nibby*. (4 voll.) Roma, 1838-1839; his collaboration with Sir William Gell led to the publication of *Mura di Roma disegnate da Sir William*

century culture – to Luigi Canina, Commissario delle Antiquità or papal antiquary in the first half of the 19th century, who cultivated his archaeological interests by linking them to his expertise as an architect<sup>49</sup>. His work on ancient architecture and his activities as a scholar and director of excavations resulted in a great number of publications; in particular, the first edition of the *Architettura romana* was the origin of the text that accompanied the *Pianta topografica di Roma antica con i principali monumenti ideati nel loro primitivo stato secondo le ultime scoperte, e con i frammenti della marmorea pianta capitolina disposti nel suo dintorno*<sup>50</sup>. A number of successive steps would lead, at the end of the century, to that monument of Roman topography that is Rodolfo Lanciani's *Forma Urbis Romae*<sup>51</sup>, judged by many scholars as “the first database of Roman archeology” (pl. 25).

If by “Geographic Information System” we mean a system that is able to archive various types of data according to a relational model, contextualizing them on a cartographic foundation, then we can assert that Lanciani's work is a hard copy GIS: the archaeological remains that were visible at the time or known from archaeological data are drawn to scale on a modern planimetric basis; the *Codici Lanciani*<sup>52</sup> bring together an enormous amount of “alphanumeric data” – sketches and notes that had largely been unpublished until that time. His annotations, plans, images and several hundred articles and books illustrate the state of topographic knowledge of the city of Rome at the end of the 19th century.

This is the history of the study of the topography of ancient Rome, which we continue today with ongoing projects to reconstruct the city of the past, attempts improved and modernized by the method of study so lucidly defined by Raphael and Alberti themselves. Of the most recent research projects, we will mention – for the sake of brevity – only one: the recent *Atlante di Roma Antica*<sup>53</sup>, the result of a study commissioned by the Soprintendenza Speciale per i Beni Archeologici di Roma, led by Andrea Carandini. This work, which uses modern processing instruments, is strongly influenced by the Renaissance methodology of Pirro Ligorio and Du Pérac, and its closest antecedents in terms of graphic presentation are the wonderful plates that *les architectes-pensionnaires* of the *École National des Beaux Arts* in Paris produced for the study of ancient monuments and complexes; indeed, this work not only offers a cartographic reconstruction of the topography of ancient Rome, but it is accompanied by an extremely rich body of illustrations and reconstructions of the monuments, with a diachronic view that starts from protohistory and ends with the period of the Barbarian invasions.

The work that the Sovrintendenza Capitolina has been carrying out since 1995 aims at the creation of a geographic information system called “*Forma Romae*” and was inspired by Rodolfo Lanciani, secretary of the Commissione Archeologica Comunale<sup>54</sup>.

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*Gell membro dell' Accademia Romana di Archeologia... illustrate con testo e note da A. Nibby, Roma 1820.*

<sup>49</sup> His first contribution to the studies of Rome's topography date to 1825: *Intorno un frammento della marmorea Pianta Capitolina riconosciuto appartenere alle Terme di Tito*, in *Mem. rom. di antichità e di belle arti*, II (1825), 4, pp. 119-128.

<sup>50</sup> From this work derive, in 1831 *Indicazione topografica di Roma antica*, and in 1840 *La pianta topografica della parte media di Roma Antica dimostrata con la disposizione di tutti quegli edificii di cui rimangono reliquie e delineata sulla proporzione di uno a mille*.

<sup>51</sup> R. Lanciani, *Forma Urbis Romae Consilio et auctoritate Regiae Lyncaeorum formam dimensus est et ad modulum 1:1000 delineavit Rodolphus Lanciani Romanus, Mediolani apud Ulricum Hoepli, 1893-1901*. Idem, *Intorno alla grande pianta di Roma antica*, 1876; D. Palombi, *Rodolfo Lanciani. L'archeologia a Roma tra Ottocento e Novecento*, Roma, 2006.

<sup>52</sup> The forty-two sheets that contain Rodolfo Lanciani's map of the topography of ancient Rome, complete with notes and drawings which up to that time had never been published, were donated by Lanciani to the Biblioteca Apostolica Vaticana in 1925 and were recompiled in the current *Codici Vaticani Latini 13031-13047*.

<sup>53</sup> A. Carandini (a cura di), *Atlante di Roma Antica*, Roma, 2012.

<sup>54</sup> In 1872, just twenty-five years of age, Rodolfo Lanciani became Segretario Archeologo of the Commissione “placed at the direction of the technical and scientific section, with a professional fee and benefits”. Despite lacking of financial means, the Commissione worked for the protection of the monuments, gathering and cataloguing the archaeological remains that emerged from the excavations.

It is an operation of titanic proportions: to survey and catalogue the entirety of the city's archaeological and monumental heritage in a GIS system that comprises the locations and plans of all the city's architectural heritage on paper. At the end of the 1950s, during a time of a rapid and voracious expansion of the city in the area outside the Aurelian Walls, the Soprintendenza alle Antichità e Belle Arti had partially suspended the project for extending and revising the *Forma Urbis*<sup>55</sup>, and began a census, impressive in scale, of the city's suburbia, which led in 1988 to a print edition of 38 sheets of the Carta Storica Archeologica Monumentale e Paesistica del Suburbio e dell'Agro Romano<sup>56</sup>.

Then, starting at the end of the 1990s, the Sovrintendenza di Roma Capitale equipped itself with a fact-finding tool aimed at the recognition, management and valorization of the extraordinary patrimony of the city's physical heritage that make up a wealth of history and beauty unique in the world, to present us with an image of the Eternal City's DNA. The real added value of a Territorial Information System lies in its dynamic character, that is, in its capability to depict the features of the territory not from a "photographic" view (as, for example, a map or a description), rather with what we may call a "cinematographic" one, an ever-changing vision that reflects the current ebb and flow of reality. This applies also to the complex system of the Comune di Roma (now Roma Capitale), where various offices are involved in constant monitoring, each according to its expertise. The Sovrintendenza deals with the aspects related to the Beni Culturali (cultural heritage), but its system is closely connected to the other ones which oversee the environmental, geological, administrative and planning aspects of the municipal territory. Through retracing the classical method of the study of architecture and ancient topography, a complex information system has been created in which miscellaneous alphanumeric data (bibliographic, iconographic, archival) are organized into a relational database on a geographic vectorized basis. In particular, there are two GIS systems currently in use, with the sole distinction between the two being that of the scale of reference, that is, the differing analytical approaches to data processing. The system of the Carta dell'Agro Romano takes in the entire territory of modern Rome outside the Aurelian Walls and uses a "geographic nominal scale" of 1:10.000<sup>57</sup>; the system of the new *Forma Urbis Romae* (pl. 28) takes in the area inside the walls and uses a scale between 1:500 and 1:1000<sup>58</sup>.

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The work was periodically published in the "Bullettino della Commissione Archeologica Comunale". Lanciani was secretary until 1890 and a member of the Commissione until his death in 1929.

<sup>55</sup> Repeatedly endorsed – among others – by Giuseppe Lugli, Guglielmo Gatti, Ferdinando Castagnoli, Lucos Cozza and Emilio Rodríguez Almeida, scholars of the topography of Rome who continued the centuries-old tradition of studying the fragments of the marble map of Rome and the study of ancient topography through literary sources, archival records and bibliographic data. Their work led to the scientific publication of more than one thousand marble fragments: cfr. G. Carettoni, A. M. Colini, L. Cozza, G. Gatti, *La pianta marmorea di Roma antica. Forma urbis Romae*, Roma 1960; E. Rodríguez Almeida, *Forma Urbis Marmorea. Aggiornamento Generale*, Rome, 1981.

<sup>56</sup> During the post-war period, the growth of the city that was part of the "Italian economic miracle", was devouring a territory extraordinarily rich in historical and archaeological heritage that in the most fortunate cases was preserved but taken completely out of the original context and suffocated by new construction rising around it. The cultural debate that arose from the Nuovo Piano Regolatore Generale di Roma (the Town Planning Scheme for Rome), gave rise to the need for the preservation of environment and landscape in the Roman suburbia. Today, through the succession of various stages starting with the *Carta dell'Agro*, we have now arrived at the *Carta per la Qualità* (pl. 26-27), a section of the Piano Regolatore that not only surveys the heritage of the Roman suburbia but also that of the historical center.

<sup>57</sup> In recent years, the webGIS of the Carta dell'Agro has merged into the SIMART, a gigantic database that includes over 21 archives of all the artistic, archaeological and anthropological collections and all of the monuments managed by the Sovrintendenza Capitolina. It is a patrimony of some 530.000 data-sheets including both alphanumeric and multimedia data.

<sup>58</sup> Both systems support the Laboratorio di Cartografia Informatizzata, which gathers together all the historic and current cartography pertaining the city's territory and is responsible for the Geo-referencing and superimposition of the same: the Ufficio Cavi e Scavi is responsible for the updating of the data each

The complexity of the various data and its correlations is evident from the logical outline provided in a graphic form ; nonetheless, this is none other than a faithful representation of the complexity of the interlacing of cultural heritage and territory (pl. 29). The methodological assumption underlying the design of the GIS for the New *Forma Urbis Romae* is based on the necessity to correlate all of the information relating to the knowledge of the ancient city to that of the topography of the modern city. Stock charts of cartography and the data-sheets of archives are, where possible, contextualized (topographically referenced) within the current urban fabric, so as to create multiple levels of information that, with pinpoint precision or within a range of reliability, can support the reading of the ancient context. The proposed GIS aims to provide access to the information regarding the area that is the subject of the query, without changing its structure or original characteristics<sup>59</sup>.

The analysis conducted on the available data has focused the attention on two main information categories: graphic and descriptive. The graphic elements are at times presented alongside the descriptive ones, although often the two elements do not co-exist or are not correlated. In this regard, while on one hand there is the problem to evaluate what is solely geometry, on the other hand there is also the need to contextualize mere descriptive information.

A fundamental change of our research aims was caused by the need to document on diachronic cartographic levels all of Rome's monumental sites within the Aurelian Walls, from antiquity to the 20th century. Thus, four types of documents are managed in our information system: basic cartography; historical cartography; graphic archives (archival and bibliographic); document archives (archival and bibliographic). As far as the current topography is concerned, the current vectorized photogrammetric data are used at the scale of 1:500. The *Forma Urbis Romae* G.I.S. also uses (in both raster and vector formats) some pieces of **historic cartography**, such as Lanciani's<sup>60</sup> *Forma Urbis Romae* (pl. 30), the Nolli map (pl. 31), the *Catasto Gregoriano urbano* (pl. 32) and Narducci's *Cabreo* (pl. 33). Furthermore, a G.I.S. of Rome's geology<sup>61</sup> indicating the measured heights of the anthropogenic layers of Rome's historical center (pl. 34) and a G.I.S. of Rome's urban transformations in the 18<sup>th</sup> and 19<sup>th</sup> centuries<sup>62</sup> have been integrated into the information system.

In the 1990s, in partnership with the Stanford University, a project (innovative for its time) was begun that consisted of the scan of over 1200 fragments from the Severan *Forma Urbis* and its 3D rendering. After a painstaking effort to generate the three-dimensional images, rendered at a high level of precision, a website was created, currently maintained by the *Sovrintendenza*

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time a new find is made. Lastly, the documentation center *Forma Romae* is entrusted with making all data available not only for the internal needs of the office, but also to the public.

<sup>59</sup> Each element in the system which is derived from processing logic lying outside of the project aims (for example the geological layer, or underground drainage systems) is not manipulated, and thus all the original data are preserved for future use; the integrity of the information is maintained and the possibility to acquire new updates and additional information directly from the knowledge management sources is guaranteed.

<sup>60</sup> Lanciani's *Forma Urbis* includes forty-six sheets at the scale of 1:1000 (each measuring 57 x 87 cm) and a separate sheet that unifies the plates into a single map. The entire map has been digitized under the direction of the Comune di Roma: first via rasterization in TIF format which was successively vectorized. The structure has been organized according to the graphic levels existing in the original cartography: the contemporary, modern, medieval and the imperial city (as much as is known from literary sources and through the discovery of ancient buildings) and the city of the Republican period with its water system, hypothetical reconstructions, slopes, escarpments and caves.

<sup>61</sup> Thanks to the collaboration with the late professor R. Funicello of the Dipartimento di Scienze Geologiche of the Università di Roma 3. The G.I.S., designed and built by professor Funicello, reconstructed the geological layout of the territory of Rome, assessing even the layers of "waste material" (man-made landfills). This information system provides for some areas of the city further information concerning the results of soil studies carried out by professor A. Ammerman.

<sup>62</sup> Carried out by a work group that included the Sovrintendenza di Roma with the Dipartimento Studi Urbani of the Università di Roma 3, the State Archives of Rome, the Archivio Capitolino; recently, the Istituto Nazionale per la Grafica joined the group (cfr. infra pp. 88).



*Capitolina* and currently undergoing renovation. Several years later, a project for a “vertical” GIS which aimed to place the 3D models onto the photogrammetric model of the *Templum Pacis* wall was presented at the CNR<sup>63</sup>. A census of the quantity and variety of the **graphic archives** will be conducted during the research. This will involve drawing up a plan for a challenging acquisition campaign in which for every single archive the drawings will be saved as images (postponing to later stages the interpretation of the planimetric maps and the consequent vectorization and georeferencing)<sup>64</sup>. The logical structure of the graphic elements has to conform, where possible, to that which has been defined for the archaeological map.

Convinced that a “holistic” approach was needed for the extremely vast documentation on Roman urban planning, the main **archival** and **bibliographical sources** have begun to be digitally catalogued: the *Registri dei Trovamenti*<sup>65</sup>, the notes of Antonio Maria Colini<sup>66</sup>, the drawings and archaeological surveys preserved in the *Archivio Disegni della Sovrintendenza Comunale*, at the *Archivio di E. Gatti*, in the *Fondo Ministero Lavori Pubblici, Commercio, Agricoltura, Antichità, Sez. V. Titolo I, Art. 5 – Antichità*. The cataloguing of all the data regarding excavations and studies of Rome's archaeology published in the 140 years of the periodical *Mèlanges de l'Ecole Française a Rome* was begun. The project will continue with the cataloguing of other fundamental publications, such as the *Notizie degli Scavi di Antichità*, the *Bollettino dell'Istituto di corrispondenza Archeologica*, etc.

The New *Forma Urbis Romae* database was conceived so that the cataloguing of all the archival, bibliographic, iconographic documents etc., regarding the findings can be directly linked to the data sheets of the monuments, which in turn are linked to the polygons of the vector cartography. We are well aware that the task we have set for ourselves exceeds our resources and is likely destined to become an eternal “work in progress”. Nevertheless, we take comfort in the memory of those who have preceded us through the centuries and our awareness that the many ambitious projects that have never been completed have contributed to the definition of a correct research method and, above all, a common sentiment of respect for the city and its monuments.

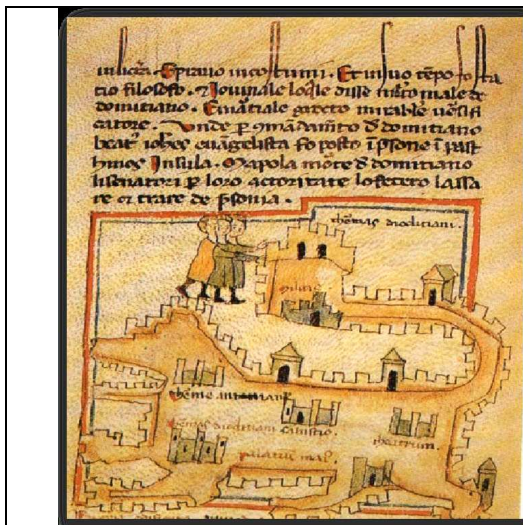
<sup>63</sup> S. Le Pera, L. Ferrea, L. Sasso D'Elia, *La pianta marmorea di Roma antica. Un tentativo di ricollocazione virtuale sulla parete del Templum Pacis*. In *Innovazione Tecnologica per l'Archeologia. Il rilievo e la rappresentazione digitale tridimensionale*, Roma 2009 (Atti della giornata di studi. In corso di pubblicazione)

<sup>64</sup> This procedure reduces acquisition times, minimizing the annoyances caused by the manipulation of operative archives, and employs specific personnel in two distinct stages of the process (technical operators and archaeologists) and guarantees the availability of the original documents. The data of each single archive contributes to the creation of specific cartographic levels referred to by the images, the plans deriving from the images and the pertinent document archives. While the acquisition of the images entails a remarkable financial and temporal burden, the production of planimetric maps requires an accurate stage of study to be carried out by specialists in the field.

<sup>65</sup> These are the manuscript volumes where, from 1872 to 1985, all the information (collected in 1300 records) that collected all of the archaeological excavations carried out. The volumes are preserved in the Archivio Storico della Sovrintendenza.

<sup>66</sup> C. Buzzetti, G. Ioppolo, G. Pisani Sartorio (a cura di), *A. M. Colini, Appunti degli scavi di Roma*, Rome 1998.

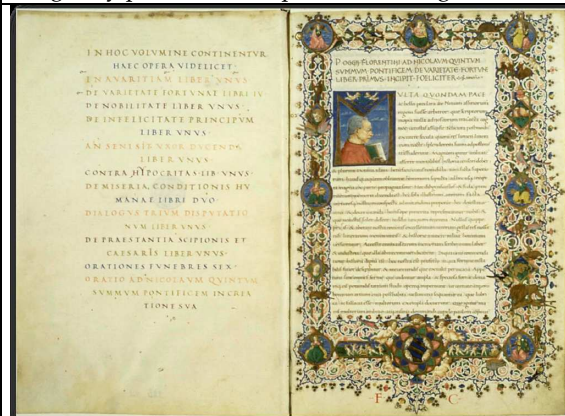
## Plates



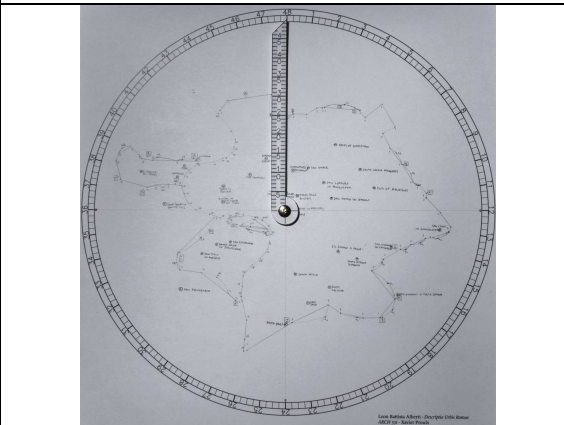
pl. 1: Roma edificata a muodo di liono (XIII sec). The greatness of ancient Rome was symbolized by an imaginary plan in the shape of an roaring lion.



pl. 2: Fra' Paolino Minorita da Venezia: Map of Rome (1323). At the bottom right, at the *Palatium Neronis Lateran*, are visible the representations of the equestrian statue of Marcus Aurelius and the bronze head of Constantine.



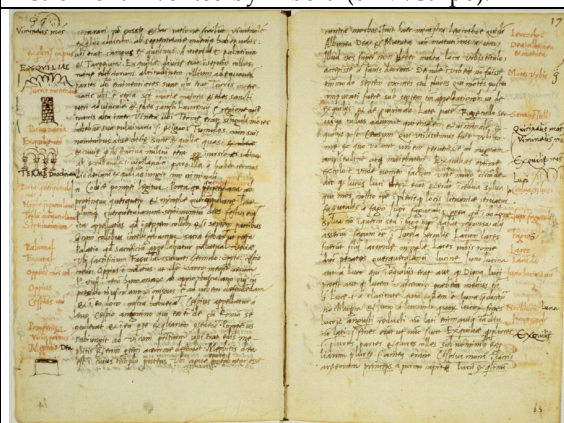
pl. 3: Poggio Bracciolini, *De fortunae varietate Urbis Romae et de Ruina eius descriptio* (1448, frontispiece).



pl. 4: Modern reconstruction of the measuring instrument invented by Alberti (di M.Carpo).

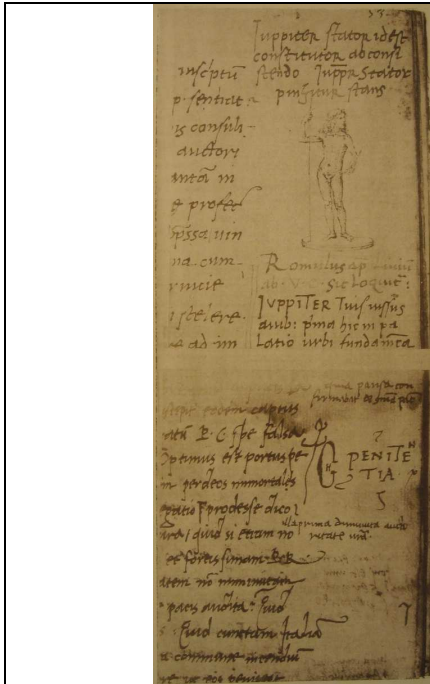


pl. 5: Pietro del Massaio, Map of Rome (1469-1472; in *Cosmographia* di Tolomeo, Biblioteca Apostolica Vaticana, cod. Vat.Lat. 5699, f. 127). In the Plan he begins to abandon the conventional representation of Roma in circular form, surpassing the figurative model of the Carolingian tradition.



pl. 6: Original manuscript of Pomponio Leto's lectures about *De lingua latina* di Varrone (1484).

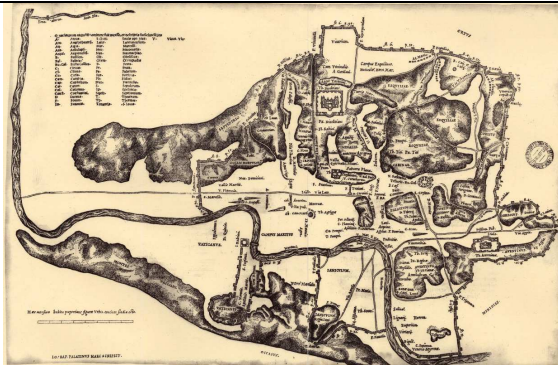




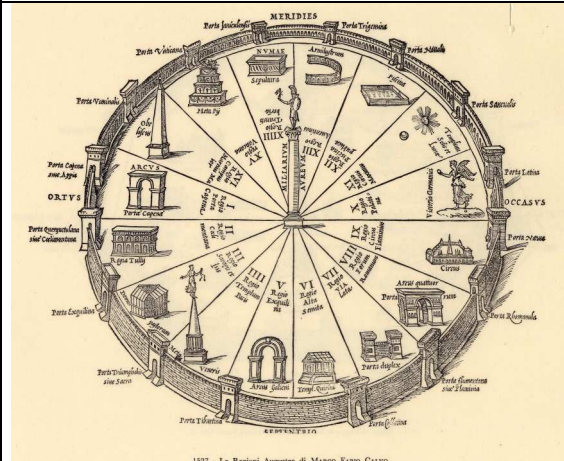
pl. 7: Pomponio Leto, notes and sketch of Jupiter Stator. (cod. Vat. lat. 3233 e 3229).



pl. 8: Alessandro Strozzi, Map of Rome (1474; Biblioteca Mediceo-Laurenziana, Cod. Redi 77, foll. VII v.-VIII r., da un originale del 1450).



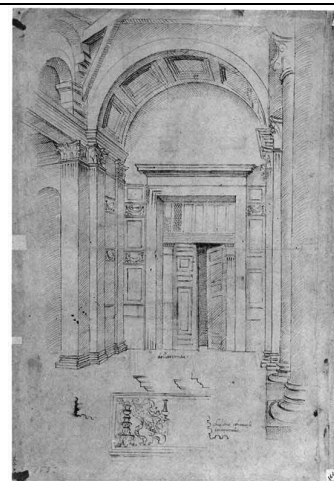
pl. 9: Bartolomeo Marliano, Map of ancient Rome (1544).



pl. 10: Fabio Calvo, The map of ancient Rome divided according to the fourteen Augustan regions (1527).



pl. 11: Fabio Calvo, The map of ancient Rome in the time of Pliny (1527).



pl. 12: Raffaello Sanzio, Drawing of the Pantheon.

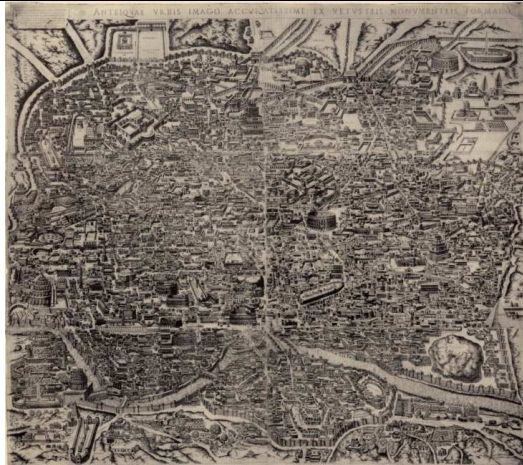




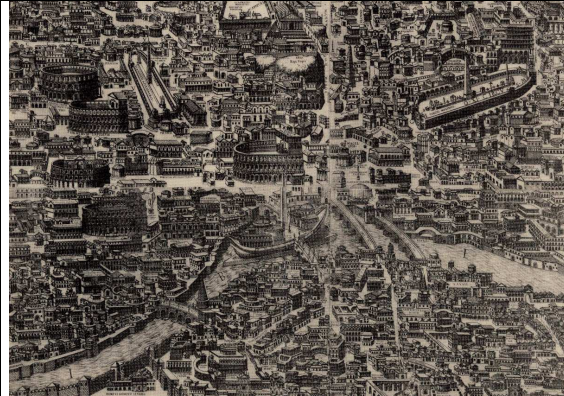
pl. 13: Pianta di Roma di Leonardo Bufalini (1551).



pl. 14: Leonardo Bufalini, Map of Rome, detail of the area between the Capitoline Hill and the Tiber.



pl. 15: Pirro Ligorio, *Antiquae Urbis Imago* (1561).



pl. 16: Pirro Ligorio, *Antiquae Urbis Imago*, detail of the area around the Theatre of Marcellus.



pl. 17: Etienne Du Pérac, *Urbis Romae Sciographia ex antiquis monumentis accuratissime delineata* (1574).



pl. 18: Etienne Du Pérac, *Urbis Romae Sciographia ex antiquis monumentis accuratissime delineata*, detail of the area around the Theatre of Marcellus.





pl. 19: Etienne Du Pérac, Theatre of Marcellus (*Vestigi dell'antichità di Roma*, engraving).



pl. 20: Du Pérac, *Vestigi dell'antichità di Roma* – View of the Roman Forum.



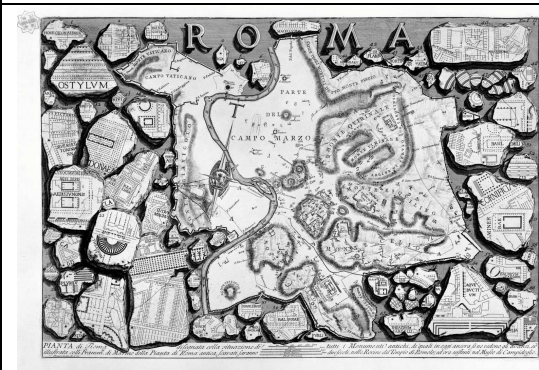
pl. 21: Giovan Battista Nolli, *Pianta di Roma* (small - 1748).



pl. 22: Giovan Battista Nolli, Map of Rome based on the map of Leonardo Bufalini (1748).

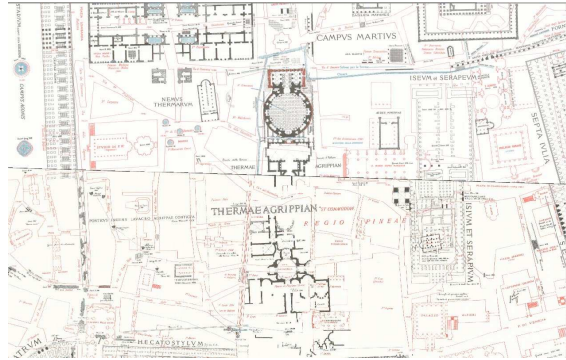


pl. 23: Giovan Battista Piranesi, *Incognita del Campo Marzio*.

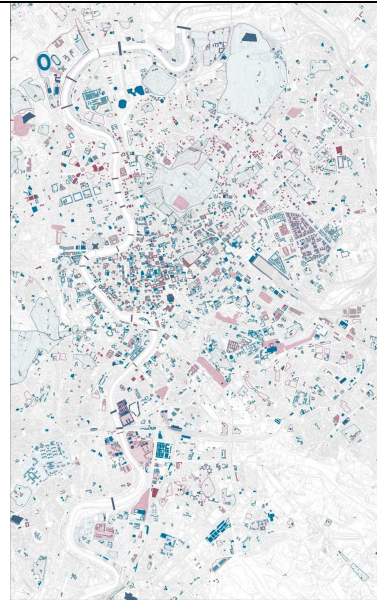


pl. 24: Giovan Battista Piranesi, *Pianta di Roma disegnata colla situazione di tutti i monumenti antichi, de' quali in oggi ancora se ne vedono gli avanzi, ed illustrata colli frammenti di marmo della pianta di Roma antica, scavati saranno due secoli, nelle rovine del Tempio di Romolo, ed ora esistenti nel Museo di Campidoglio*.

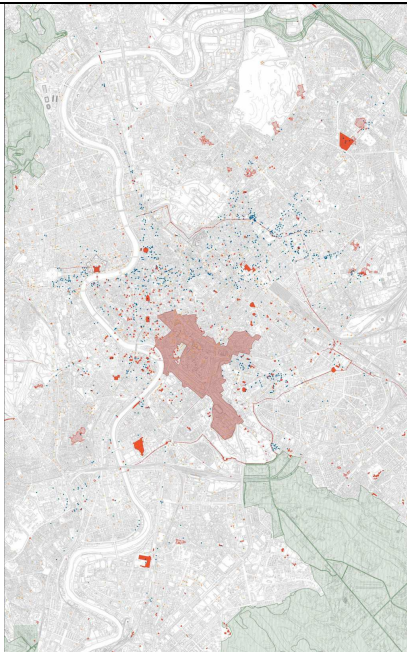




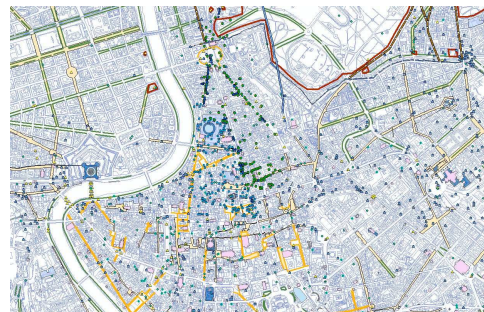
pl. 25: Rodolfo Lanciani, *Forma Urbis Romae* (1893 - 1901, detail).



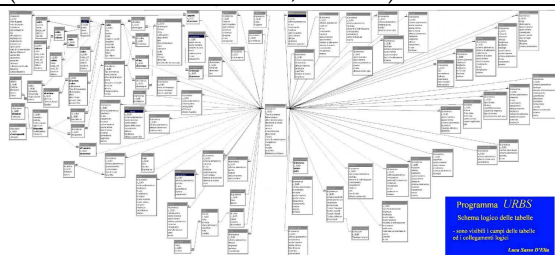
pl. 26: "Carta per la Qualità", an instrument for the protection of the monuments of the historical center (Master Plan of Rome 2008, fol. G1b).



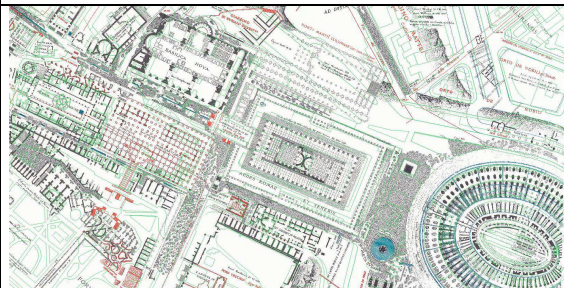
pl. 27: "Carta per la Qualità", the plan of the archeological remains in the historical center (Master Plan of Rome 2008, fol. G1b).



pl. 28: The GIS "Nuova Forma Urbis Romae" (work in progress).



pl. 29: *Nuova Forma Urbis Romae*, The logic diagram of the connections between the different types of data.



pl. 30: Vectorization of the 46 sheets of the *Forma Urbis Romae* by Rodolfo Lanciani.



RICERCA RAPIDA

ELENCO STRUTTURE:

Esplorago

Archivi Monumenti Antichi Area...

Archivio Cassa Museo Alberto Mo...

Archivio Storico Disegni

Centro Ricerca Documentazione...

Gimletti Storici

Collezione di giocattoli antic...

Fori Imperiali - Area Monument...

Forma Roma

Galleria Comunale d'Arte Moder...

Mercati di Trastevere - Sistema m...

Monumenti Contemporanei

Monumenti Medievali e Moderni

Ruote Capitalini

Ruote Capitalini - Ara Pace

Ruote di Villa Torlonia

Museo Barracco

Museo Carlo Blotti

Museo Napoleonico

Museo Pietro Canonica

Museo della Civiltà Romana

Museo di Roma

Museo di Roma in Trastevere

Museo di Villa Doria Pamphili

Pinacoteca Capitolina

Ville e Parchi Storici

GRAFICI GLOBALI SCHEDE DI CATALOGO

Schede totali per struttura

Schede totali per Struttura

RIEPILOGO GENERALE CATALOGO UNICO

Tipo	Totali	In Lavorazione	Disp. per Verif.	Verificate	Validate	Pubblicate
Archivi	98	1	97	0	0	0
Autore Foto Moderno	12	12	0	0	0	0
Cartografia storica	484	4	480	0	0	0
Convegni	24	2	22	0	0	0
Epigrafi - Iscrizioni	355	2	353	0	0	0
Iconografia	51,703	32,605	19,097	0	1	0
Miscellanea	90	82	8	0	0	0
Note	2,195	111	2,084	0	0	0
Riviste	166	11	157	0	0	0
Serie cartografica	18	1	17	0	0	0
Toponimi	1,179	1	1,178	0	0	0
elementi di confinazione	141	2	139	0	66	2
infrastrutture idriche	939	55	589	1	294	0
luoghi a uso pubblico	25	0	25	0	0	0
luoghi di attivita produttiva e commerciale	114	10	84	0	20	0
luoghi di culto	151	8	66	0	77	0
materiali mobili	1,456	30	1,426	0	0	0
monumenti	10	0	7	0	3	0
sistemi funerari	1,031	27	1,003	1	0	0
strutture abitative	208	6	89	0	112	0
strutture agrarie	2,716	29	1,360	2	1,325	0
strutture di consolidamento	13	0	12	1	0	0
strutture di fortificazione e/o militare	174	5	99	0	70	0
strutture/siti non identificati	476	6	466	1	3	0
viabilità e trasporti	660	33	604	0	23	0
villie, parchi, aree protette	55	0	55	0	0	0
TOTALE	64,523	32,967	29,535	6	1,994	0

http://simweb/SIMURT/Default.aspx

MONITORING



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## **DESCRIPTIO URBIS - A WEBGIS to rebuild the urban landscapes of Rome**

Paolo Buonora, Susanna Le Pera, Paolo Micalizzi, Luca Sasso D'Elia

Since its beginning, around the mid-fifteenth century, the study of the historical topography of Rome – that is, piecing together an image of the city as a whole throughout the evolution of the urban landscape – has relied on the irreplaceable tool of cartography. The layout of ancient and modern Rome is one of the most significant research topics in urban historiography, however the enormous quantity and dissemination of relevant documentation can make this subject difficult and we would say labyrinthine in the scope of its study.

This is why Rome is such a great challenge: the WebGIS that we are introducing here seeks to take on this challenge by contributing to the development of a completely new kind of Rome-based information network geared toward the international scientific community<sup>1</sup>.

The Geographic Information System (GIS) created in 1999 as the “Map of Rome for the Holy Year 2000”, has, up to now, been in continuous development almost without interruption, aided by the cooperation of several institutions: the Department of

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<sup>1</sup> The GIS, born in 1999 under the name “Pianta di Roma per il Giubileo del 2000”, was developed until today thanks to funding by Italy and Europe (Sovrintendenza Capitolina, in 1999, “Raphael” European Project in 1999); the latest phases have been financed by the “Fondazione CARIPLO” and the Dipartimento di Studi Urbani (DIPSU, now Dipartimento di Architettura) of the University “Roma Tre”.

The project, coordinated from the early stage by Paolo Micalizzi (University “Roma Tre”), has developed thanks to the contribution of Susanna Le Pera and Luca Sasso D'Elia (officers of “Sovrintendenza Capitolina di Roma”) and Paolo Buonora (officer of “Archivio di Stato di Roma” and current Director of the “Archivio di Stato dell’Aquila”).

The State Archive of Rome provided high-resolution images of the maps and registers of the Catasto Gregoriano of the city of Rome, together with professional competences in the interpretation of this complex historical source and other archival series as the Presidenza delle strade “Lettere patenti” and notaries papers. As the archivists open their collections to any discipline involved in the cityscape, a relevant role was also the help in “putting all together” the specific disciplines in a cross-domain approach, and enhance the collaborative strategy of the project. Namely, Paolo Buonora provided general strategic support and competences in the digital issues, Luisa Falchi had the role of the cadaster specialist and Orietta Verdi of notaries document specialist.

The University Roma3, in addition to coordinating the project, was responsible for the vectorization of the maps: the electronic design of the maps was coordinated by Stefano Magaudda and Antonio Cimino, the WebGIS structure was created by Giuseppe De Marco.

The Sovrintendenza Capitolina was responsible for geo-referencing the series of Mappe, Suddivisioni and Allegati. They also had the co-ordination of digitization of Brogliardi (I e II serie) and for the realization of the layer of the archaeological heritage.

The cadastral registers digitalization was coordinated by Antonella Cutuli.

Recently joined the research project the “Archivio Capitolino”, directed by Maria Rosaria Senofonte, with specialist contributions of Laura Francescangeli. The Archivio was responsible for the archival series named “Titolo 54”.

Architecture of Roma 3 University; the Archivio di Stato in Roma; the Sovraintendenza Capitolina and, most recently, the *Archivio Capitolino*<sup>2</sup>.

Although the first version was not available online, the latest two GIS (*DIPSU WEBGIS*<sup>3</sup> and *DESCRIPTIO ROMAE WEBGIS*<sup>4</sup>) have been independently published online as open source material and are freely accessible to everyone. The name of the new webGIS clearly took inspiration from Leon Battista Alberti's "*Descriptio Urbis Romae*". This is an important precedent for those of us who want to promote a radical modernization of the academic approach to the study of the city by archeological historians, urban planning researchers, archaeologists, and archivists, all of whom can now work with established sources of documentation.

This paper begins with a question: how can we capture the historical cityscape over time? What we are seeking is a fixed image to represent our organizational framework or "schema", a description combining social, economic, and demographic information about the use of urban space, about buildings and architectural choices. This snapshot, or *schema*, is our WebGIS. However, the subject of our photo-shoot is something that never stands still, something that changes every year, every month: the city.<sup>5</sup>

The concept of the project is to organize the enormous quantity of documents related to the urban history of Rome according to a "stratigraphic" model by registering every archive item, collection of engravings, lot of planimetric maps (in short, every existing document), into a geo-database utilizing the cartography of the same period, thus enabling the research to achieve an Aristotelian "unity of time and space".

Specialists and academics have easy online access to iconographic, archival and bibliographic data in a single place, instead of having to trace it down in the various locations where it is physically kept. We harbour no illusions that the use of an

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<sup>2</sup> Since the very beginning, this project has been notable for its interdisciplinary value. The initial group, made up of Paolo Micalizzi (architect), Paolo Buonora (archivist), Susanna Le Pera and Luca Sasso D'Elia (archaeologists), has, over time, expanded to include many other professionals: architects (Stefano Magaudo, Antonio Cimino, Valentina Iannone); engineers (Giuseppe De Marco); archaeologists (Antonella Cutuli, Roberta Lanna, Teresa Tagliaferri, M. Carmela Polisi, Alfredo Moraci); and archivists (Orietta Verdi, Luisa Falchi, Laura Francescangeli).

<sup>3</sup> <http://www.dipsuwebgis.uniroma3.it/webgis/>

<sup>4</sup> The new version of the webgis is online since November 2013.

<sup>5</sup> Let us take an example, concerning a place near the Tiber river, not far from the historical centre of Rome we examine today. In the medieval era, near the Ponte Marconi, there were a "fuller" for working wool along a secondary stream close to the river: it can still be seen on cartographic documents of the XVIIth century named "valca" or "valchetta" (by the German/Anglo term "walk", that means using "wooden feet" to improve the tissues): cfr. State Archive of Rome, Presidenza delle Strade, Catasto Alessandrino, 432/I: *Sviluppo della via Ostiense da Porta S. Paolo fino a Ostia e della via verso Ardea fino a S. Procula*, around 1661. Well, in the XIXth century Gregoriano Cadastre this ancient stone building is not represented any more, apparently because it is not used any more, and a cadastre is not interested to something not having an economic function. But, as a matter of fact, this building was still there, as we can see today as well in the Google map shot, unknown in his historic value and surrounded by a car parking.

information network is the answer to every aspect of our research, which focuses in particular on the transformation of the city in the eighteenth and nineteenth centuries, but we hope to be able to use it to construct a good starting point.

Nolli's map (fig. 1) was the first map that we georeferenced and vectorized in the 1990s (fig. 2), when we used it as a touchstone for the computerization of the *Catasto Gregoriano* (fig. 3). As we mentioned earlier, there is no way to have a historical map which is definitively enduring and representative of the city in any single historical period; this is why the cartographical base from which to outline a long-term urban structure must be chosen very carefully. Our choice was the "Catasto Urbano", the cadastral map that was drawn as part of the general Gregorian cadastre, and the first parcel cadastre in the Pontifical State. Today this map provides the most detailed schematic representation of the city inside the Aurelian walls from that time. It is really the best portrait of the "Ancien régime" city, drawn as it was at a point in time when the city's "process of evolution" had reached a certain state of perfection, and before all the changes that would occur with the creation of a new capital city in 1870 had taken place.

Let's describe briefly the origins of the Gregorian Urban Cadastre<sup>6</sup>. About seventy-five years before, in 1748, G. B. Nolli, geographer and architect, represented Rome in an excellent map. In this classical city map only buildings are described: every non-built item (gardens, open spaces) is graphically represented, but not described. On July 6th 1816 Pope Pius VII issued the *motu proprio* as part of the framework of a more general administrative reorganization of the Papal States. The *motu proprio* launched a census of the urban land plots of the city of Rome to draw up a new Cadastre, for the imposition of a tax for the maintenance of streets and the *dativa* tax<sup>7</sup>.

1817 saw the beginning of the survey work to design the cadastral map of the city of Rome; the *suddivisioni* or "subdivision" (fig. 4) of blocks were drawn from the Nolli map, and single buildings were identified first by the street number, and only later by the parcel numbers, which were chosen at the end of the survey. When this series of operational cartography was completed, 90 pages in A0 format were drawn to 1:1000 scale (fig. 5). Each series was organized according to the 14 *rioni* of the city. In this new map all urban elements were drawn, including palaces and "empty" spaces such streets, gardens, and fields as well as ruins, river ports, etc..

In addition to the final version of the 90 map sheets, the first series of registers (*brogliardi*) was edited: these registers listed the typology of buildings, owners, addresses, and economic value of the property for each parcel (fig. 6)

After that, a period of litigations began with regards to the appraisals of the values of properties. In 1824 in Rome the cadastre was put into use before anywhere else, using a new series of revised registers. The original version of the map/registers, stored in the main census office, the *Presidenza del censo* in Rome, was copied to be used in the local *Cancellerie del censo* established in the major towns of the Pontifical state. Their daily

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<sup>6</sup> L. Falchi, *Il catasto e le mappe della città di Roma*, in *L'assetto urbano di Roma nel catasto gregoriano - Archivio di Stato di Roma*, edited by Luigi Londei [S.l.:s.n.], 2009 (Città di Castello: Alfagrafica), pp. 5-12.

<sup>7</sup> A direct real estate tax.

use over one-hundred years is the reason for the frequent damage and archival losses we see in these local copies. For several decades, the cadastre kept recording the changes in the properties within the register series of *volture*, *trasporti* and *catastini* (handovers, transport and sub-cadastrates). In 1870 Rome became the capital of Italy and within a new framework of dramatic changes in the urban landscape, new map pages of *aggiornamenti* (fig. 7) were drawn from the old subdivisions in the *Presidenza* archive. These maps underwent continual modification until 1887, as we know from some notes on them: this draft shows in red ink the many changes that were recorded during those years, in yellow ink the demolitions (exactly as we still do).

This analysis of sources led to some conclusions about how to proceed in order to input all of this information in our GIS. Thus, turning to digital this long process, we decided to retrace the same path chosen by the so-called “architetti intraprendenti” (as they are called in the project contract). We then started with the Nolli’s map blocks, georeferencing it onto the technical map CARTESIA and vectorizing it by typological level<sup>8</sup>.

From the very beginning, this part of the project gave rise to many difficulties, especially due to the need to find precise correspondences between historical maps and current ones. As a rule, the correspondences were chosen using the boundaries of monuments or city blocks that have remained unaltered over time. Indeed, while in theory this does not seem to present any particular difficulty, in practice this issue is problematic, both due to the material mistakes made by the architectural surveyors and to the differences existing between the design framework and projection in Nolli’s map and those in the cadastral maps and the maps of today (cfr. fig. 3). In this regard, it is useful to emphasize that - to cite just one example - while historic surveys were carried out by measuring the buildings at their bases, current aero photogrammetric surveys record the surface areas of rooftops. In other words, photogrammetric surveys take into account the projection of ledges, roof protrusions as well as the type of protrusions that can be found on the upper elevations of city blocks (especially in courtyards and lightshafts).

Although derived from the Nolli maps, the original map sheets of the Gregoriano cadaster are a starting point from a logical approach, wherein georeferencing is the pivot of the entire system. Both the *Suddivisioni* and the later *Allegati* needed to be georeferenced starting from the original sheets, which only offer a complete map of the city of Rome when taken together as continuous whole: some blocks may be missing in these subdivisions and the revisions sheets. Contemporary copies (from the former *Cancelleria del censo*, that were given to the State Archive only in the 1950s by the *Ufficio tecnico erariale*) or later copies of the map sections<sup>9</sup> have also to be georeferenced starting from the original map sheets.

In the second stage of the project, the initial difficulties became more complicated because of the decision to go ahead with the production of the GIS with the maps from the Gregorian Cadastre: although beautiful from a design standpoint (the sheets are

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<sup>8</sup> Since Nolli’s map does not show partitions in cadastral parcels, the pertinent vectorization referred to larger graphic objects such as city blocks, streets and main buildings.

<sup>9</sup> As heliographies stored in the Municipal Office for Toponomastica di Roma, dating from about 1930.

painted in watercolor), they are lot less precise compared to Nolli's map. The State Archives of Rome scanned the documents to produce high resolution digital images<sup>10</sup> The first georeferencing task<sup>11</sup> was to identify the datum points in common between the cadastral cartography and the current aerophotogrammetric cartography; a selection was made of certain "fixed" points (churches, monuments, fountains, walls, towers) that have not undergone significant change since the early nineteenth century. The georeferencing model used was the polynomial of first degree (affine transformation) or second degree and, in general, the georeferenced maps have displayed an average quadratic error between 1 and 3 metres.

The partition and revision sheets were developed using the previously georeferenced cadastral maps as a base and following the procedure described above. During the georeferencing process it was essential to take into account a number of issues pertaining mainly to inaccuracies arising from the field survey as well as errors in the graphic transposition of survey data onto the maps. We note that there are very few of these kinds of errors within the developed area of central Rome, but they occur more frequently in rural areas. Some critical issues of the georeferencing process are shown in the illustrations (figs. 8, 9a - 9b).

We would point out the problem of the errors due to field surveys made by papal surveyors. In regards to this, in particular, it can be useful to refer, for example, to some glaring mistakes in the nineteenth-century survey of the Aurelian walls; mistakes that, in the graphic representations of the time, were solved by adding a segment of walls that simply did not exist, close to Porta Maggiore (fig. 10). To justify such a cartographic fabrication, we suppose that the papal technicians made the survey by dividing into two groups and starting from north (probably from Porta del Popolo) and progressing south, with one group following the perimeter of the walls clockwise, while the other one worked counterclockwise. When the two groups met at Porta Maggiore, their surveys did not match up, and therefore the gap in the walls had to be closed by resorting to the cartographers' imagination!

We decided to duplicate the original mistake, along with all the georeferencing problems that this choice entailed. This issue is also considerably important from a theoretical standpoint: if, on one hand, we have to accept this error (as part of the original document), on the other hand it is clearly obvious that maintaining the mistake in a georeferenced map leads to other distortions in several parts of the drawing. Thus it's necessary to evaluate, on a case by case basis, the most appropriate solution to minimize the lack of correspondence - which in any case can never be entirely eliminated - of the vectorial representation of the original document.

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<sup>10</sup> Color sheets (watercolor) from the Urban Cadastre ( in a scale of 1:1000, 60 x 90 centimetres, completed in 1824), *Suddivisioni, Allegati; Brogliardi* from the first and second series of the Gregorian Cadastre were reproduced in Jpeg2000 format. The cartography base used as a reference for the georeferencing is the numeric map of Rome developed in 2005 by Cartesia and provided by the Sovrintendenza Capitolina.

<sup>11</sup> The geographic reference system used for the Gregorian Cadastre's database is the "Universal Transverse Mercator fuso 33 Nord - European Datum 1950".

To solve the problems mentioned above it was necessary to put together a mosaic with numerous cadastral sheets to be able to insert more control points distributed over a larger surface, before the georeferencing process could even begin. This operation permitted us to manage and compensate for the errors in the cadastral map, as well as to enhance the correct fit with regards to the junction points between the sheets and the rioni (fig. 11). Other dissimilarities are due to the fact that the map we developed reassembles the drawings that were originally on approximately ninety sheets into a single representation of the nineteenth-century city. In order to achieve this, the margins of the original documents have been trimmed, georeferenced and then joined to one another in a sort of mosaic that was the origin for the vector base.

We then went ahead with the vectorization of the maps, drawing over 12,000 parcels and ascribing all the cadastral numeration (fig. 12). A number of distinct layers were used to distinguish buildings, courtyards, churches, farmlands, streams, flower gardens and vegetable gardens, etc. as well as a separate layer for streets and squares (fig. 13). One layer was expressly created for the “ruine”, or the archaeological remains visible on the maps (fig. 14); on this layer, we proceeded to position and systematize all the nineteenth-century reports, images and excavation surveys<sup>12</sup>.

At the same time, we started to digitize the cadastral registers, an apparently simple operation, one parcel – one line of register (fig. 15), but we underestimated the complexity of this work<sup>13</sup>. For a right comprehension of the text, the comparison between the cartography and, particularly for what concerns the first series of the Brogliardi, the *Suddivisioni* has been really important. The *Suddivisioni*, completed pre-emptively the realization of the real cadastral plan, also preserve the street numbers corresponding to the ones belonging to the original registers, which have always been helpful to recognize the data relative to the parcel itself.

In fact, the cadastral reference list follows a concentric route that covers the perimeter of the block from the main side of the building (fig. 16). Along this path, the ID number is specified only once and the data that don't present any numeration refer to already seen parcels or to-be-mentioned ones (cfr. fig. 6). The *Superficie de' Fondi* [Surface of the properties], expressed in *Tavole* [plates] and *Centesimi* [hundredths], is written only once in correspondence to the number of the Map and it shows the dimensions of the cadastral unity, including all the parts previously or later meant and the possible subalterns. The value of the *Numero de' piani* consists in the fact that it records by the number of the floors of the relative building because in a parcel, especially if very vast, can exist buildings of different heights.

It is necessary to focus on the fact that in this First Series we are never given precise information about the property portions, that can be distinguished only thanks to the different names of the their owners or, sometimes, by the different *Natura dei fondi* [Nature of properties], i.e. the typology of the real estates. The updates regarding the Brogliardi (Seconda Serie) show, just few years later, fundamental innovations on the

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<sup>12</sup> Cfr. *supra* S. Le Pera pp. 68 -87.

<sup>13</sup> The author of the text referring to the registers is the Dr. Antonella Cutuli. She directed the team that has digitized the Brogliardi.

transcription of the data (fig. 17). The documents contain more details that aim to determine the amount of taxes: first, the number of the rooms and the relative floors of every possessed part, then the *Pigione* [Rent] corresponding to the value of the benefit owned by the possession itself, and at last the *Estimo*, that equals the taxes to 8% of the *Pigione*. In both the first and the second Series of the Brogliardi, the *Natura dei Fondi* represents the only element that unifies the data in the real estate's characteristics: dimensions, position and property.

Therefore the *Natura* can be considered as the centre of all the information and on this principle is based our database. During the addition of the data we followed the original transcription that, anyway, shows low uniformity in the names of the owners. Sometimes their decoding has been made more complicate due to overlaps and cuts appearing when the number of owners increased for patrimonial reasons, further sells or orthographic mistakes. So we have created a list with the right surnames, or at least written in a most reliable way, to which have been connected various dictions in order to include vaster areas of research. In the same way, the database regarding the streets allows us to gather different transcriptions and to highlight the differences between the 19th century road net and the possible destruction of the urban fabric.

In this way, the first operation that can be accomplished using the WebGIS is the visualization of the historical cadastral data pertinent to a given parcel, which can be seen immediately by clicking on the matching graphic object (fig. 18). The operation can also be completed in reverse: any given graphic object can be found by typing the owner's name (or parcel number or address) in the search fields on the home page<sup>14</sup>. Lastly, the most intriguing feature of the WebGIS is that it will be possible to find all archived documents, images, and bibliographic data that have been input into the system and linked to the cadastral parcels.

Before our project started, DIPSU students produced a database, cataloging many graphic materials, both engravings and archival documents (fig. 16). Engravings were chosen by famous "views" of Rome like the ones in the Vasi album (fig. 19). Archival records were mostly selected from the building licenses released by the Presidenza delle Strade (State Archive of Rome) (fig. 20) dealing with the governance of streets, and by the communal authorities from XVIIIth to XIXth century<sup>15</sup>: Capitoline Archive, records from the series "Amministrazione, titolo 54: edifici, ornato, nomenclatura e numerazione civica" (fig. 21). The licenses were dealing with the respect of the

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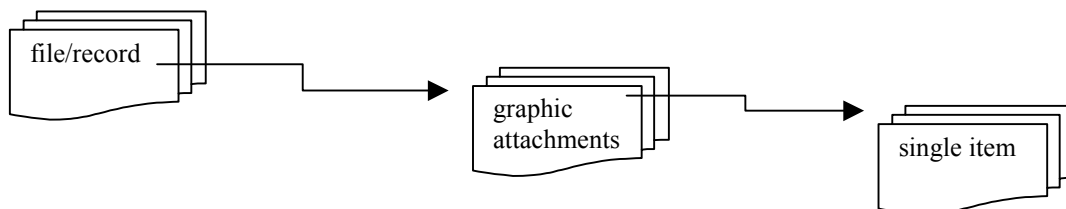
<sup>14</sup> However, the GIS has a much wider range of query options: to refer again to the cadastral data, search queries of the contents by subject can be made to extract all sorts of relevant data. For example, users can ask the System to find all the buildings with the same number of floors (along with their cadastral data), search for all the buildings owned by a particular individual, or of the same "cadastral type", or located on the same street or square, etc. Naturally, users can cross-reference different categories (for example, "cadastral type" and "location") to find, for example, information regarding the churches in Via Giulia, the "casamenti" (apartment buildings) in Via del Babuino or the buildings in Piazza Navona.

<sup>15</sup> L. Falchi, *Il catasto e le mappe della città di Roma*, in *L'assetto urbano di Roma nel catasto gregoriano - Archivio di Stato di Roma*, edited by Luigi Londei [S.l. : s.n.], 2009 (Città di Castello : Alfagrafica), pp. 5-12.



dimension of public streets, of the architectural shape of new façade in order to harmonize with the other buildings, and with the need to control the growth of the buildings when adding new floors was planned. All these graphic materials were mapped on the Nolli map blocks, and were after included in a first version of the WebGIS. Going ahead with the project, we met some problems. In the first version of the database, the goal was simply to collect pictures and description of graphic architectural materials to provide more information concerning buildings, but the relation to the Nolli map was loose, as this map do not split the blocks in single buildings and properties.

Now, the close partnership with the archivists – both from the State Archive of Rome and the Capitolino Archive – produced a different scenario: it was not any more a matter of enhancing a collection of archival references, but we needed to create a coherent relation between the WebGIS and the official finding aids produced and updated daily by the archivists. There is a big difference in between the two: it means not only to describe freely the signature of the document, but creating and maintaining in time two poles of a network, creating links, keys and relations between two (or more) description systems. The basic difference, in the two working approaches, is that the “architectural” description is “content-oriented”, and the archival description is traditionally “context-oriented”: these are two different ways to arrive at the same object (the drawing). So our problem was putting together the two ways, two description standards both useful for the user, and for our institutions as well. The strategical approach was to adopt a multi-level description, where the first level deals with the administrative context, the second with the graphic attachments, the third with the single drawing, or plan:



This is a classic 1-to-many relationship: in an administrative file we may find several graphic attachments (projects by different architects), each of them composed by several plans and drawings. In this way, it is possible to relate the administrative file to a general archival hierarchy, not losing the relation with it when archivists change something in their finding aids producing a new signature for the same items. It becomes also possible to describe the graphic document typology in a specific way, including author, sheet dimensions and scale, which is not used in an archival description *strictu sensu* <sup>16</sup>. It must be clear that this is quite different from a recursive

<sup>16</sup> It is worthwhile here to mention the 1.4 statement in the *Introduction* to ISAD(G) standard: “This standard contains general rules for archival description that may be applied irrespective of the form or medium of the archival material. The rules contained in this standard do not give guidance on the description of special materials such as seals, sound recordings, or maps. Manuals setting out descriptive rules for such materials already exist. This standard should be

multi-level description, as the ISAD (International Standard Archive description) standard is: in ISAD multi-level description any level has the same description field as the upper or lower level (recursive approach).

This model was implemented first for the new records to input in the system, and then for all the records that had been previously ingested with the first DIPSU project and by other partner institutions. The problem with the “flat” or mono-level description that was used before was that information which was fitted in a single field, or compressed in a too short field, had to be split in several child records or expanded in memo fields automating the migration process, as we had to manage about 3.500 first-level record. Anyway, the work was done in a few time, and all this information will be managed by a CMS (Content Management System) associated with the WebGIS. The interesting point is that this new data model provides the flexibility which is needed to relate with external systems, to create something that is not ending with the project itself, but keeps in time – as we mentioned before – a constant relationship in between partner institutions and with other cultural institutions as well, all dealing with the cultural heritage of Rome. In other words, we hope that our WebGIS becomes a gateway to specific descriptive systems online, a key strategy for creating a wide network, potentially including all catalogues and finding aids – online or not – concerning the archeological and architectural elements of the urban context<sup>17</sup>.

We are well aware that one of the issues of “our” information system is the number of documents that – over time – will be ingested into it. We know that in some way we have begun to weave something like the shroud of Penelope. It is a work that is doomed to never be completed, due to the worldwide diffusion of documents pertaining to seventeenth and eighteenth century Rome together with the ambition of everyone who has worked on the project to continue to expand, without predefined limits, the quantity of information fed into the GIS.

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used in conjunction with these manuals to enable appropriate description of special materials.” ([www.ica.org/download.php?id=1687](http://www.ica.org/download.php?id=1687)).

<sup>17</sup> Just to focus on some of these institutions, and the relevant projects that were carried on along these years to offer an online access to information and documents in the urban domain, we can mention:

- 1.The State Archive of Rome – Imago digital library; plans and drawings of buildings from notaries papers
  - 2.Capitolino Archive - Digital Library
  - 3.Sovraintendenza Capitolina – SIMURT and SITAR systems
  - 4.Istituto Nazionale per la Grafica – CalcoGRAFICA digital library (plans and drawings)
  - 5.Nolli map website – Oregon University (specific website for the G.B. Nolli map)
  - 6.Virginia University – Waters of Rome (website on roman aqueducts and waters, since ancient times to Renaissance)
- Ecc..

These are just the existing or ongoing projects we know that are mapping archeological and architectural information in the urban space, but it is obvious that there may be other projects we do not know or that will start in the next future. We are aware of the privilege to live and work in Rome, and we do not mean to create something unique or ultimate about the Eternal City: we just keep ready to manage a system open to any possible new partnership by Italian or international institutions working on our cultural heritage.

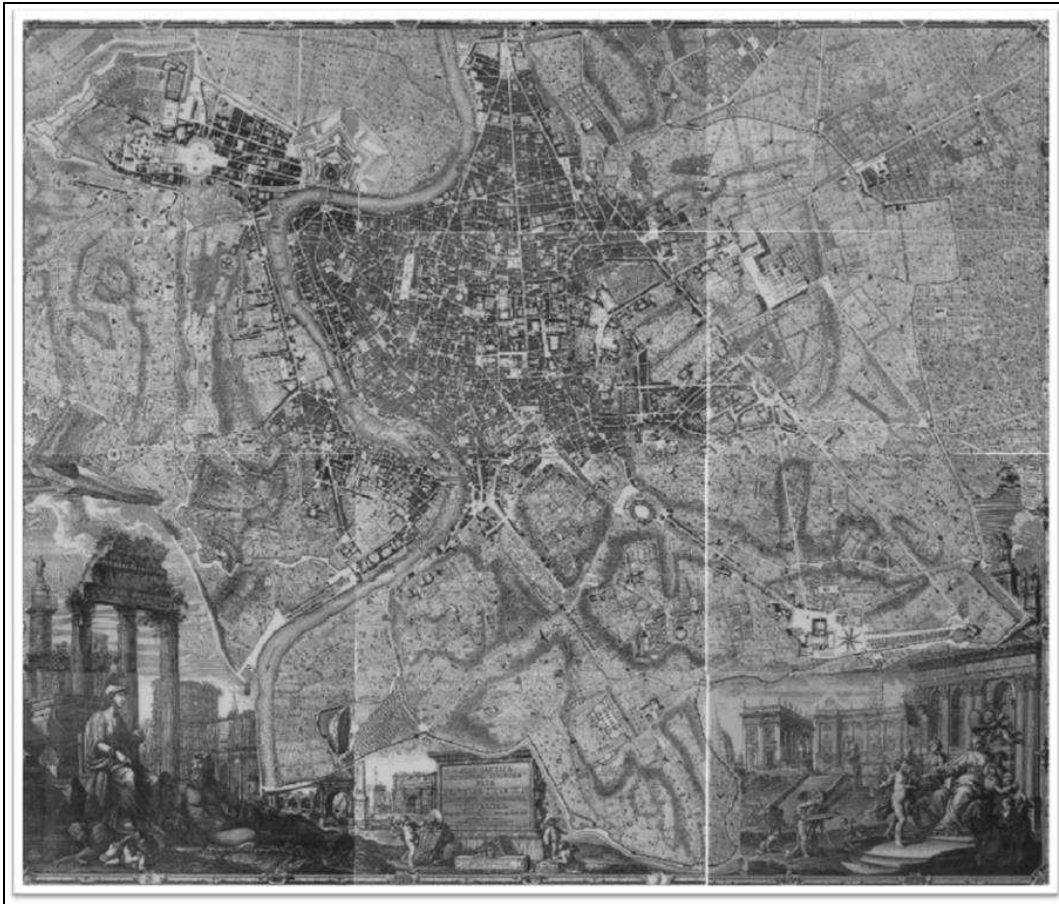


Fig. 1. Giovan Battista Nolli, La Grande pianta di Roma (1748).

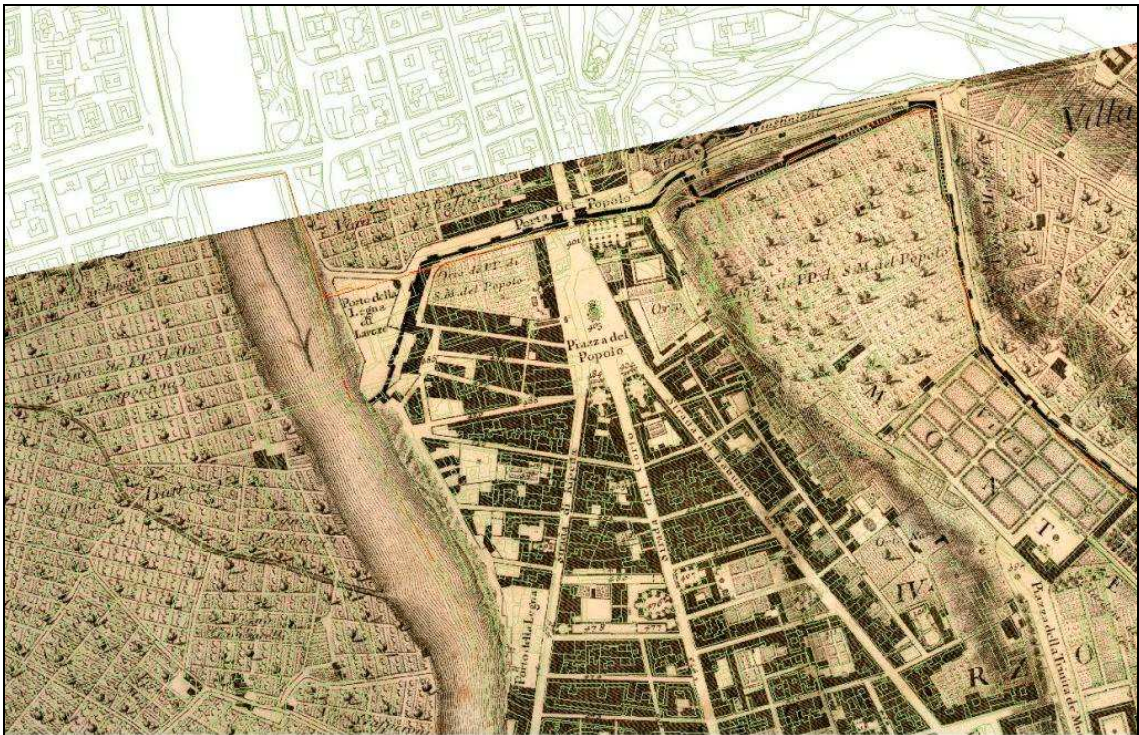


Fig. 2. Nolli's map georeferenced



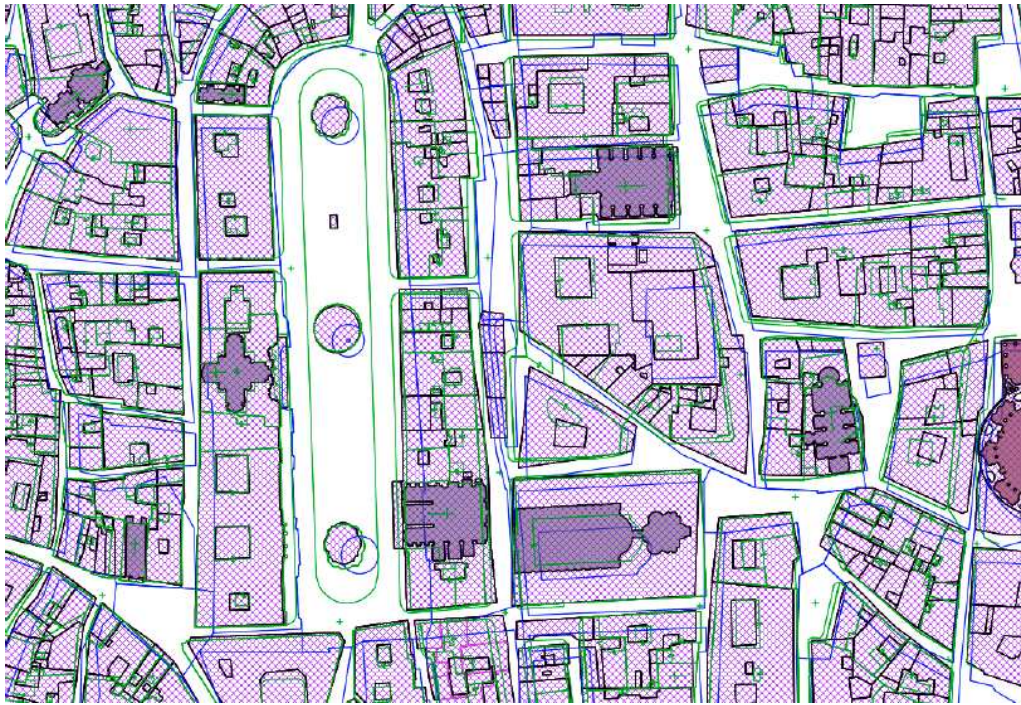


Fig. 3. Comparison between the vectorial polygons of Nolli's map (black), Gregorian's map (green) Cartesia 2005 (blue)

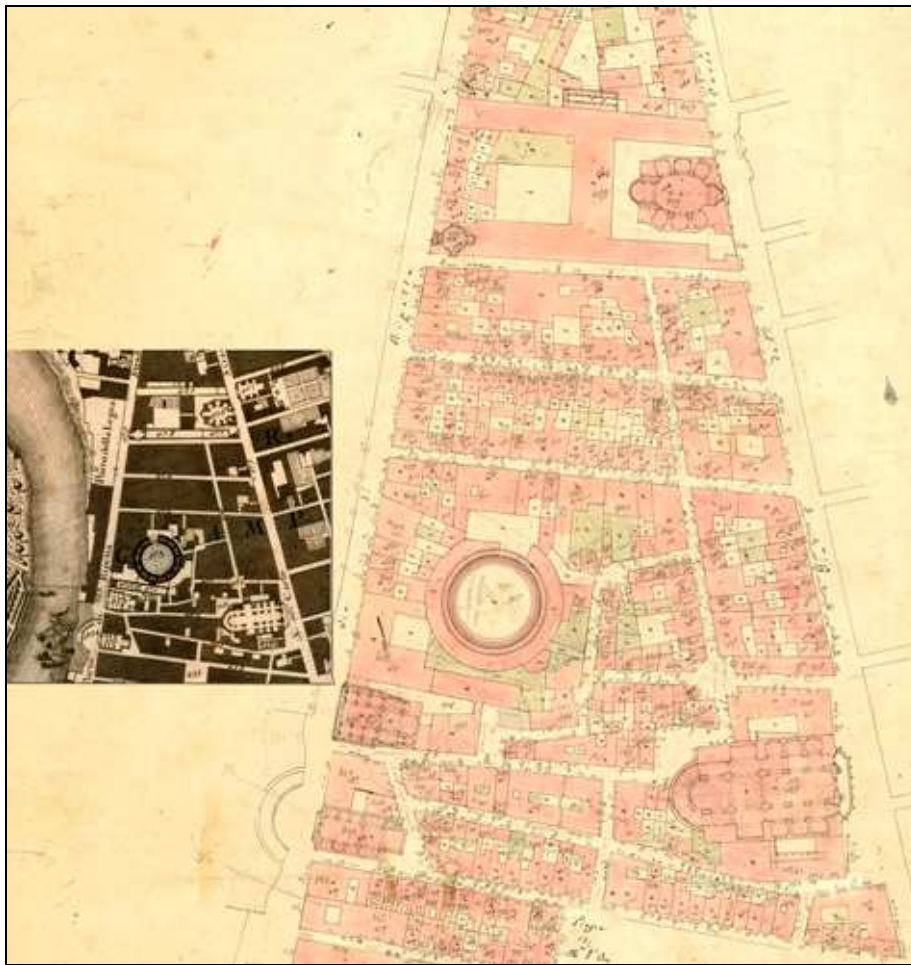


Fig. 4. Rione Campo Marzio, Serie delle Suddivisioni, tav. 3. The suddivisioni (series of preparatory maps) were drawn enlarging the blocks from Nolli's map.



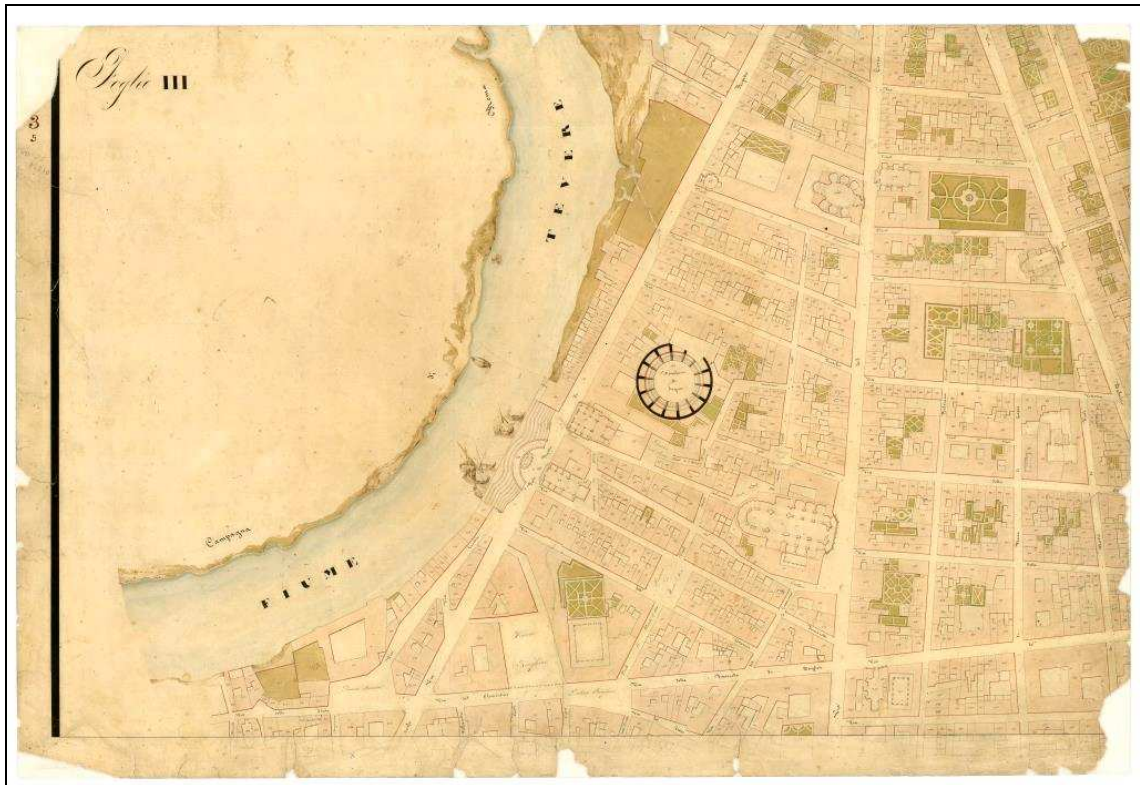


Fig. 5. Le "Mappe di impianto": rione Campo Marzio tav.1

Rione ~~Campo Marzio~~ Denominaz. della Mappa *Novia*

Rione ~~Campo Marzio~~ Denominaz. della Mappa *Novia*

NUMERO della Mappa	UBICAZIONE del Punt.	NATURA del Punt. e sua est.	NOBRE, COGNOME, E GENITORE del Proprietario.	SUPERFICIE in Punt. e in Tarde.	Conte.
19	Vicolo delle Sa. Cassini	19. Scafole	Giuseppe Salvi ter		32
20	Dem.	21. Dem.	Giuseppe Maria Dionisi del fu M. chile		40
21	Vicolo delle Sa. varie	5. Casa.	Antonio Salvi del fu Lorenzo	1	05
22	Vicolo delle Sa. gola	15. Casa di Cassini con fronzo del fu del fu Salvi della m.	Antonio Salvi del fu Lorenzo	1	05
22.5	Dem.	25. Casa di Cassini con fronzo del fu del fu Salvi della m.	Antonio Salvi del fu Lorenzo	1	05

NUMERO della Mappa	UBICAZIONE del Punt.	NATURA del Punt. e sua est.	NOBRE, COGNOME, E GENITORE del Proprietario.	SUPERFICIE in Punt. e in Tarde.	Conte.
23	Vicolo delle Sa. varie	1. Casa.	Christian. Campi del fu Giuseppe		25
24	Vicolo delle Sa. gola	22. Dem.	idem	1	31
25	Vicolo delle Sa. cine	17. Dem.	Antonio Salvi del fu Lorenzo	1	67
26	Vicolo delle Sa. gola	18. Dem.	idem	1	15

Fig. 6. Rione Campo Marzio, two pages of the first series of registers (brogliardi)

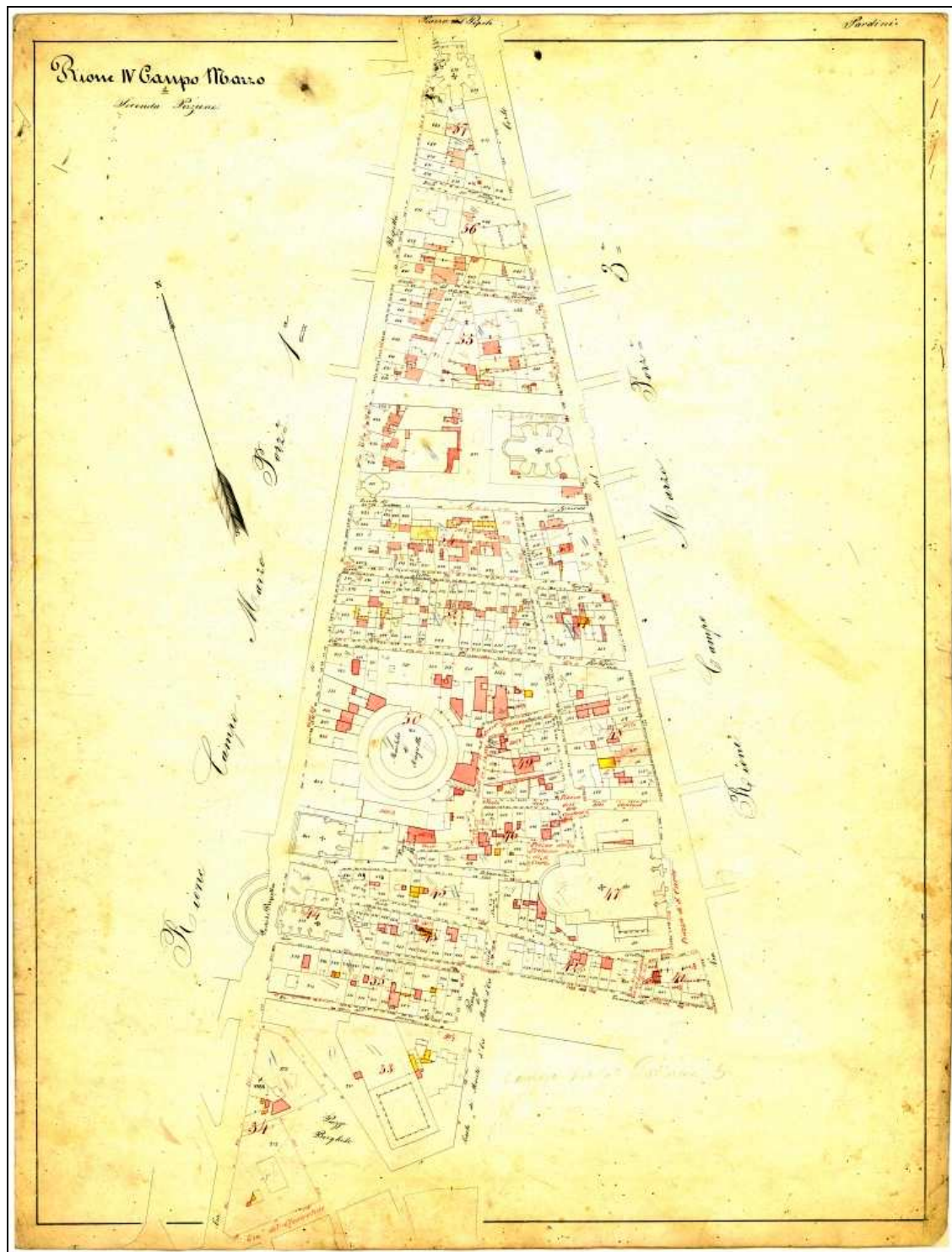


Fig. 7. The "Aggiornamenti". We can see the demolitions (yellow) and new construction (red)



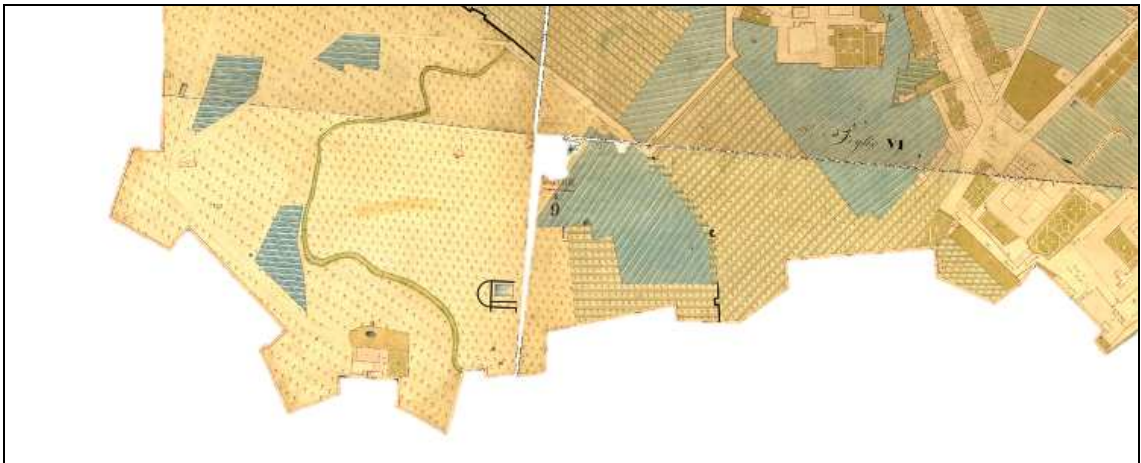


Fig. 8. Management of the junctions between the cadastral pages.

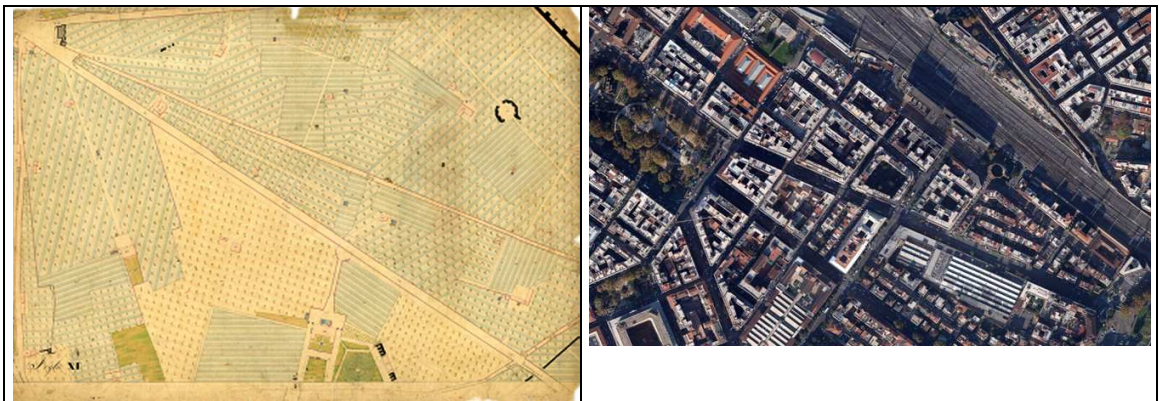


Fig. 9a,b Georeferencing the cadastral pages with scant datum points: the "disabitato di Monti" (9a) and the situation today (9b).



Fig. 10. Porta Maggiore



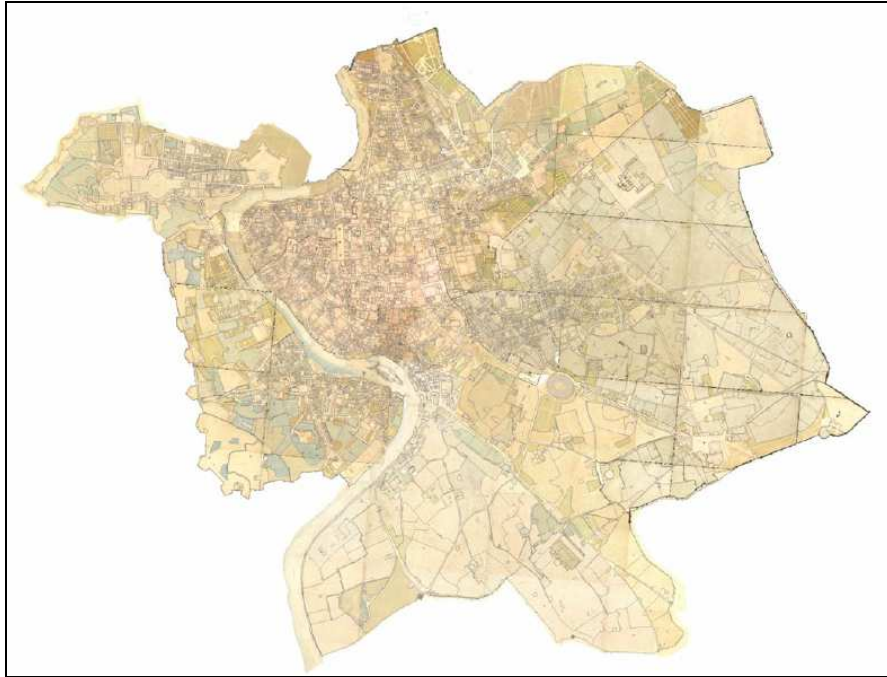


Fig. 11. The problem of the Aurelian Wall



Fig. 12. The mosaic of Gregorian "Mappe di impianto"

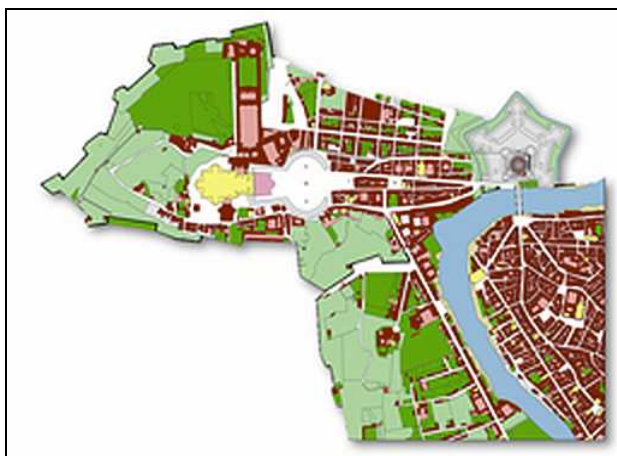


Fig. 13. Rione Borgo, the parcels

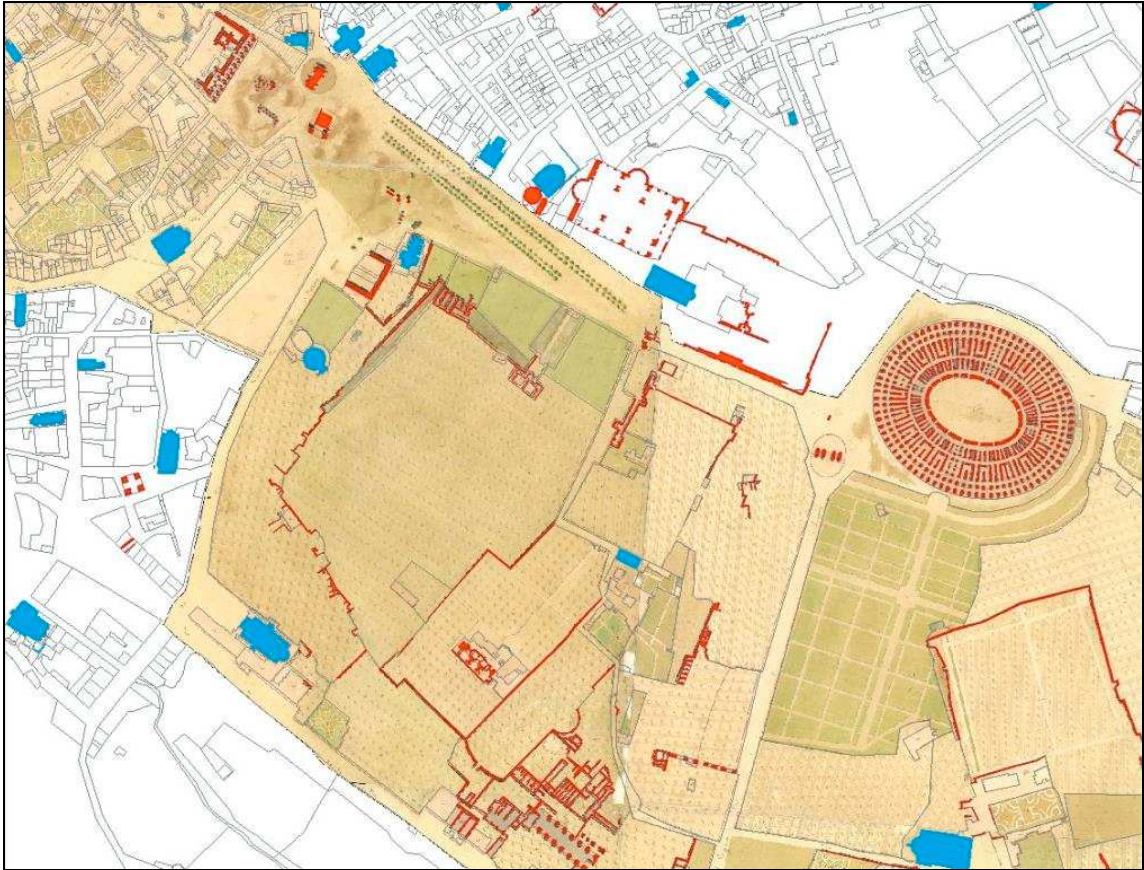


Fig. 14. The layer of streets and squares

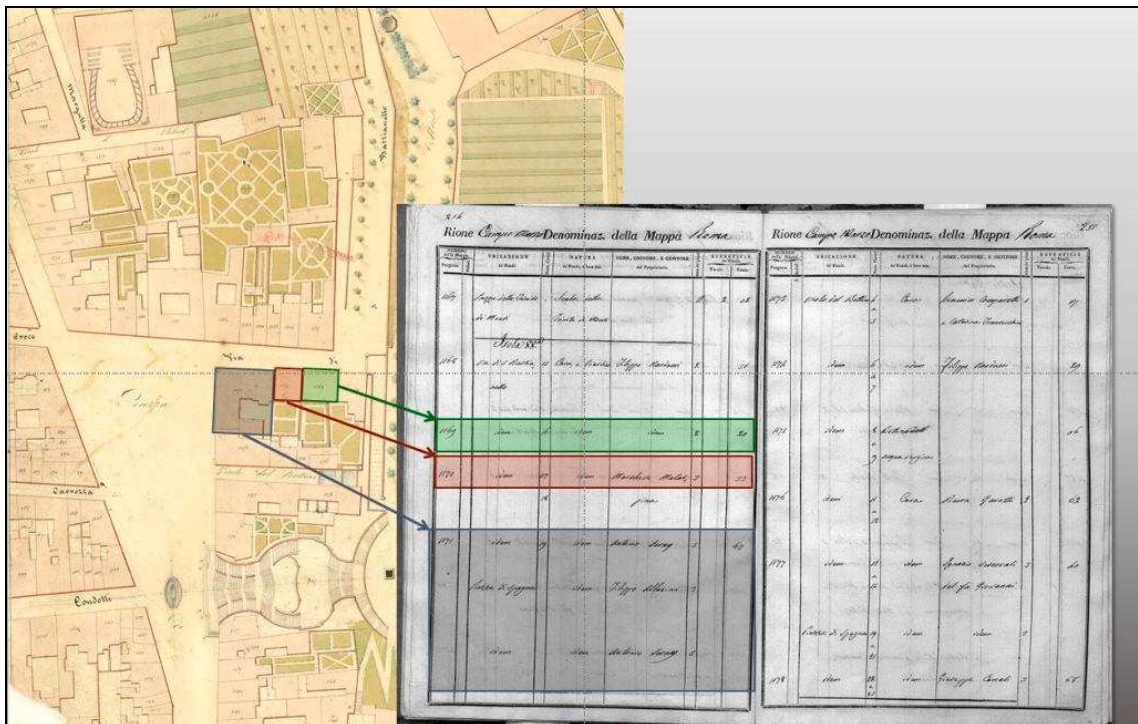


Fig. 15. The layer of archaeological remains



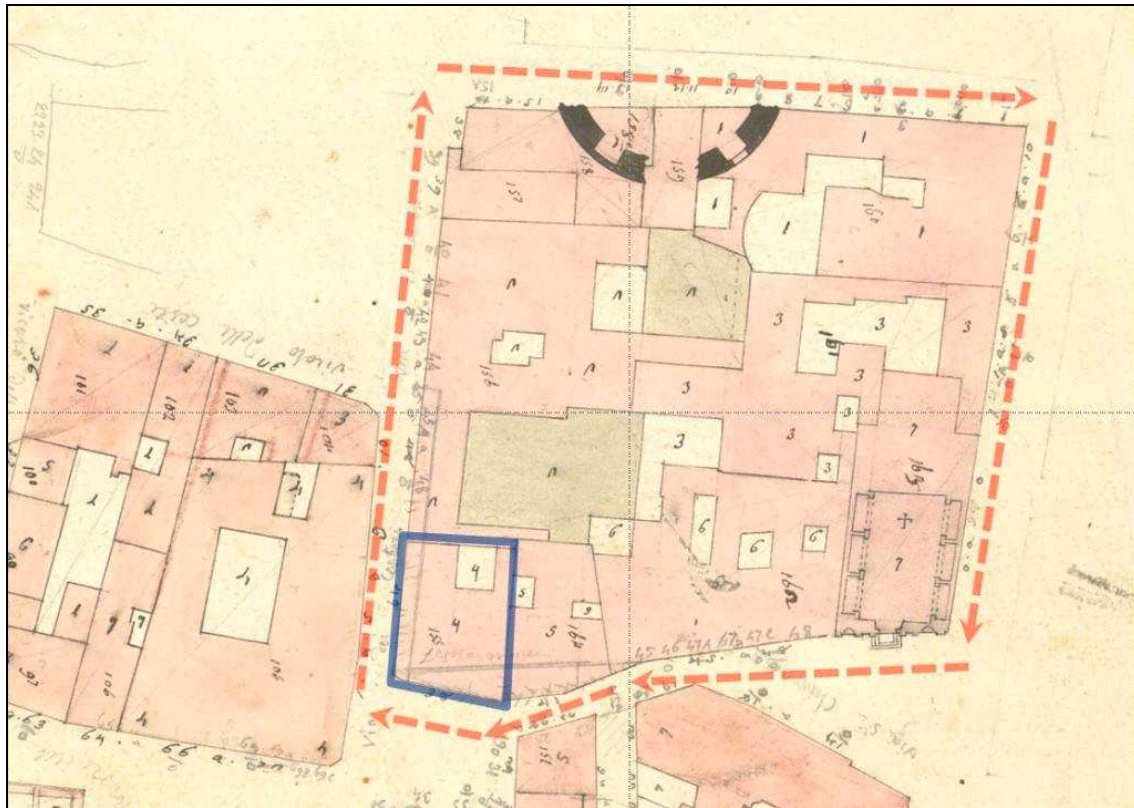


Fig. 16. An “analogue” Geographic Information System

Fig. 17. The “Architetti intraprendenti”'s method

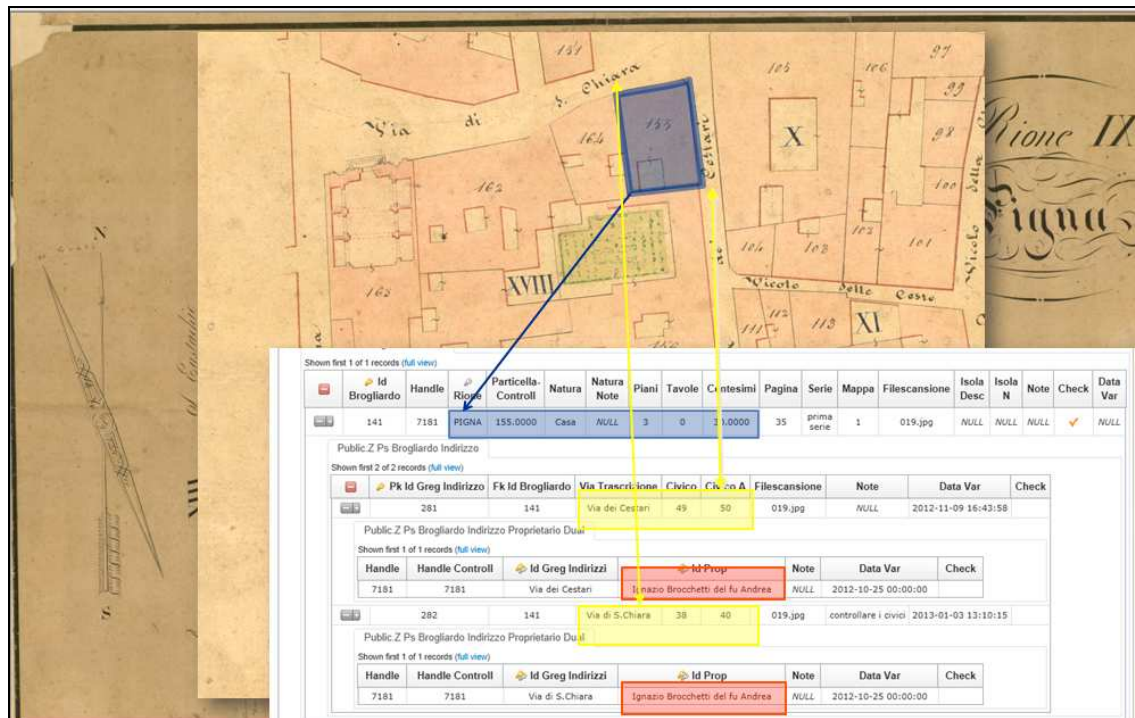


Fig. 18. The historical cadastral data pertinent to a given parcel.

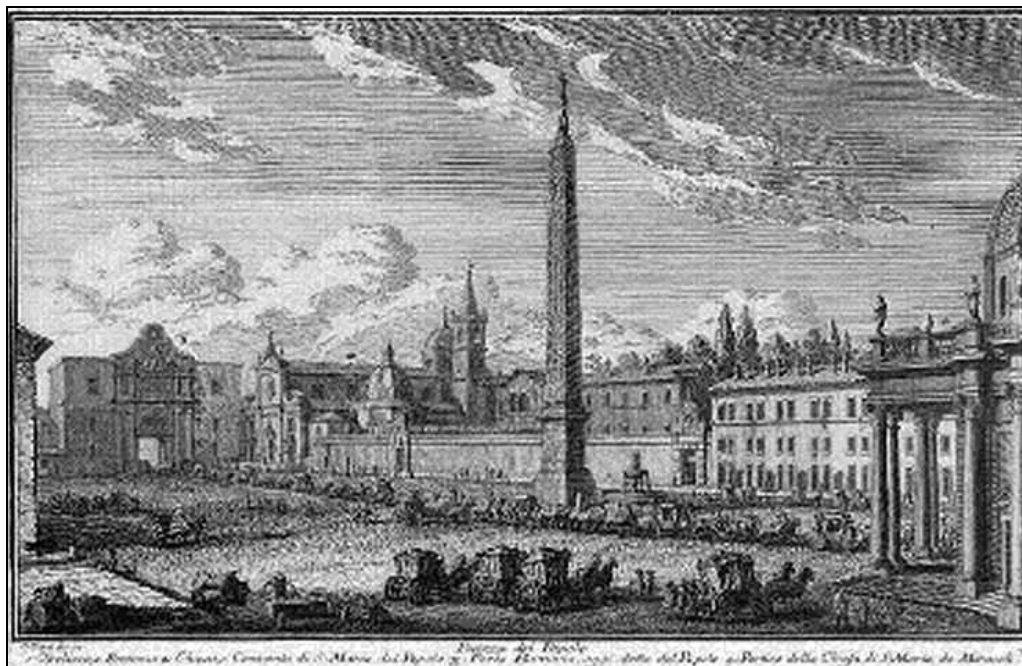


Fig. 19. Piazza del Popolo. G. Vasi, Delle Magnificenze di Roma Antica e Moderna. 1752



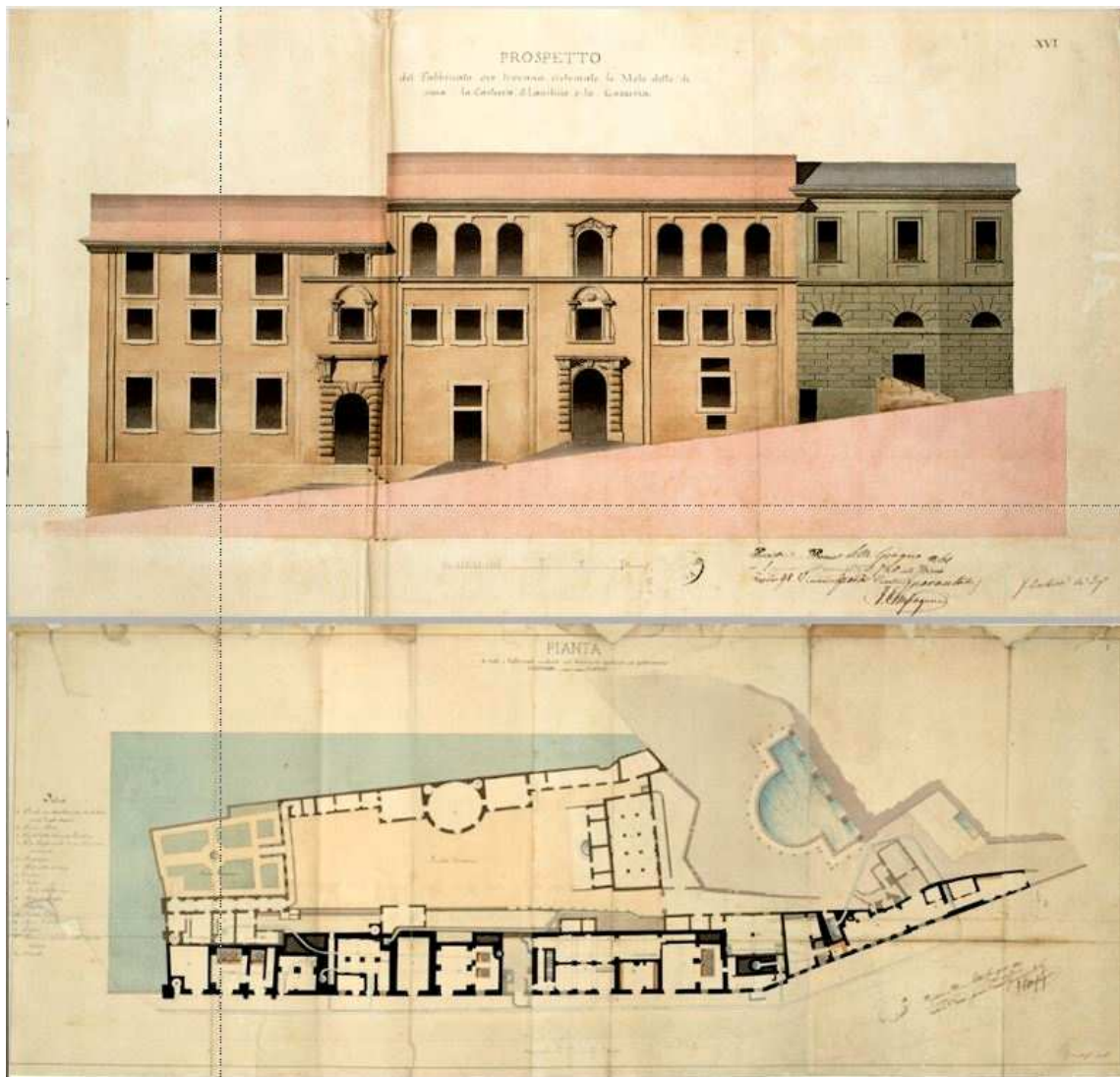


Fig. 20. "Building licenses released by the Presidenza delle Strade (State Archive of Rome)"

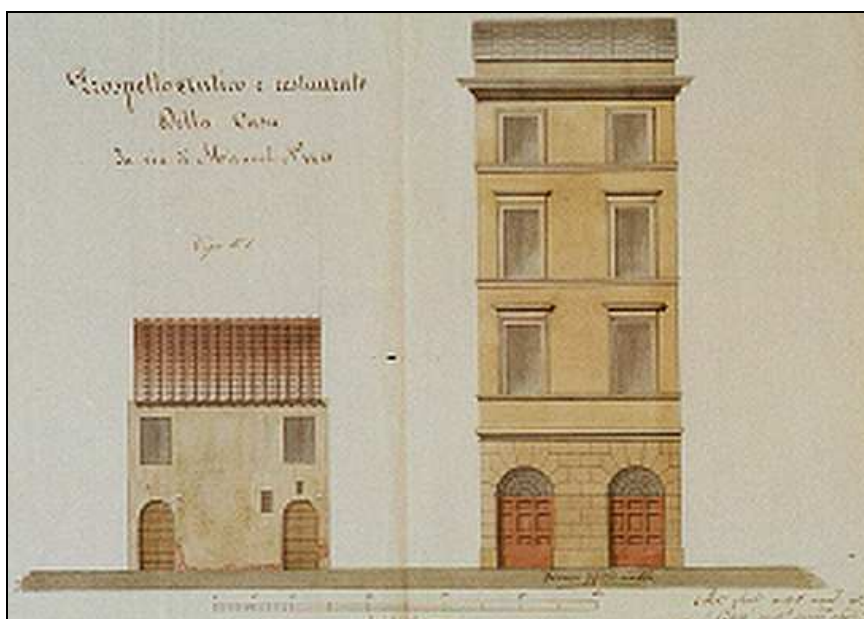


Fig. 21. Capitolino Archive, Amministrazione, titolo 54.

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## Why work with geographers in reconstructions and visualizations of ancient Rome? An application of the landscape(t)-model

Franz X. Schütz

### Abstract

This paper deals with digital modeling, reconstruction and visualization of urban landscapes, especially with the City of Rome. A new model is presented here: the landscape(t)-model. I will give a short summary of current attempts to model, reconstruct and visualize (ancient) Rome or parts of the City. A short overview on the development of digital spatio-temporal methods, especially on databases and technology of geographic information systems (GIS) is given to see the differences between conventional methods and my object-oriented approach concerning the landscape(t)-model. Apart from this I will present some other research questions and current subjects in geography like resources (urban mining) and sustainability in urban spaces, where geographers, archaeologists, historians and scholars from many other disciplines can work together in a very fruitful way. A central question in that research will be: what can we learn from the past for future developments? Such research needs an interdisciplinary, integrative approach with special attention to the human impact on cityscapes and the integration of archaeological and historical evidence.

**Keywords:** Geography, Archaeology, History, Landscape(t)-model, object-oriented database, reconstruction, Rome, Spatial Information Science, spatio-temporal modeling, sustainability, urban research, urban mining, visualization.

### Rome

The area in which I tested the landscape(t)-model is located on the Esquiline Hill in the City of Rome. Fig. 1 shows the photogrammetric data of Rome within the Aurelian City Wall with my test area highlighted in blue colour on the Esquiline Hill. I have chosen this area because Chrystina Häuber is conducting research on this area since 1981 (HÄUBER 1983) and because she provided me with many archaeological and historical data and information concerning this area. Since the last 20 years we are working together in this area. In VENTRIGLIA (1971), GIOIA (2004) and HEIKEN, FUNICIELLO, DE RITA (2005) we find a summary of the development from ca. 5 million years ago until today of the area of the current City of Rome from a geological perspective. An overview of the development of the city from a geographical perspective gives PASQUINELLI D'ALLEGRA (2007). CLARIDGE (2010) wrote about the City from an archaeological viewpoint.

Fig. 2 shows the area on the Esquiline Hill between the two buildings "Sette Sale" and the so-called "Auditorium of Maecenas". On Fig. 2a we see the photogrammetric data with an orthophoto as overlay as it looks like today. On Fig. 2b we see the same photogrammetric data with an overlay of Nolli's map (1748).



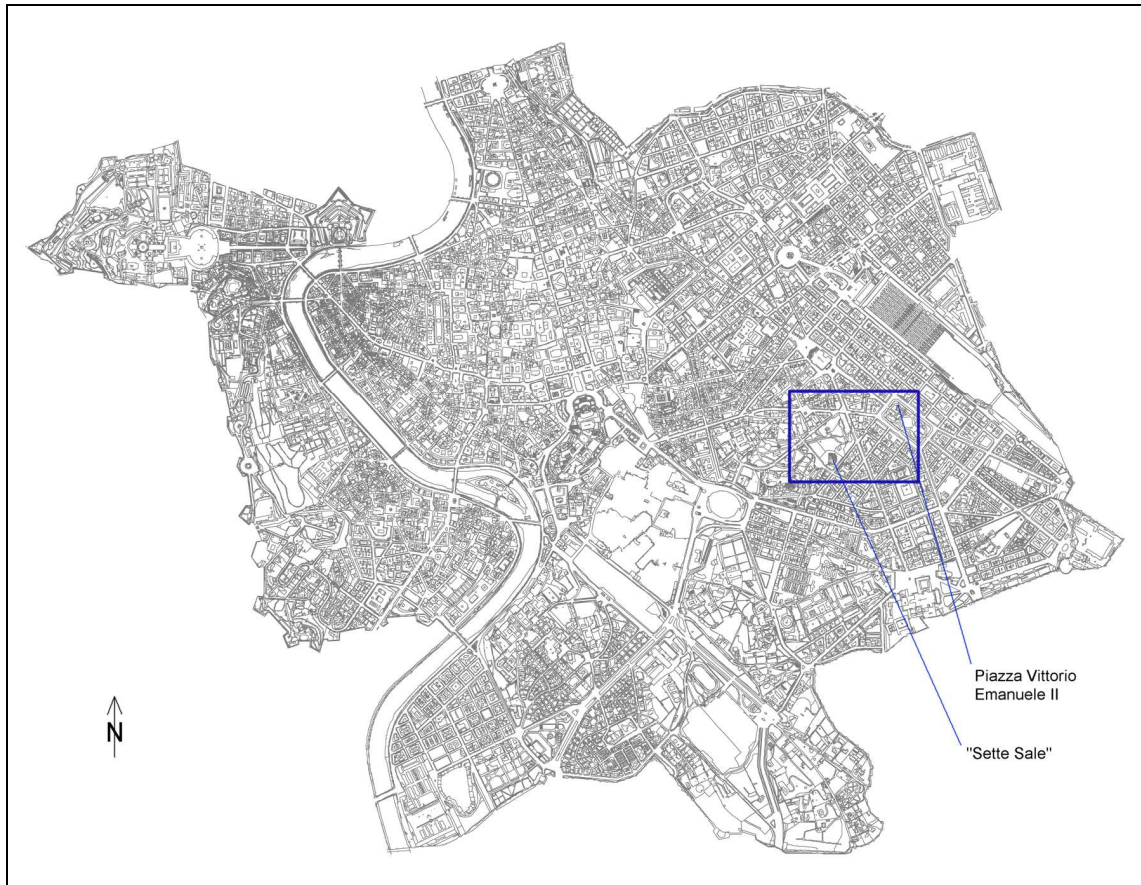


Fig. 1: The photogrammetric data of Roma Capitale within the Aurelian City Wall with the test area

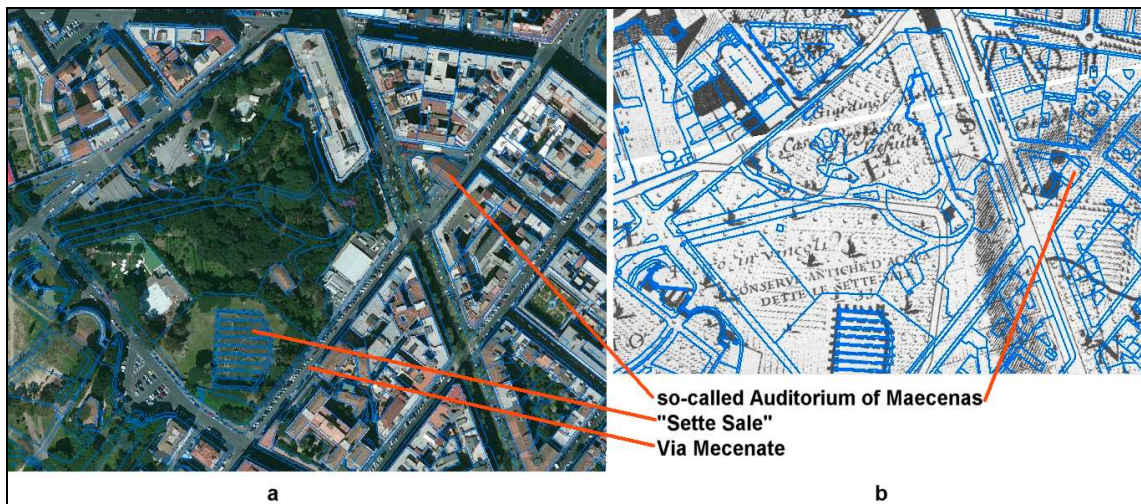


Fig. 2a: Detail of the test area, photogrammetric data and orthophoto (2012),  
2b: Detail of the test area, photogrammetric data and Nolli's map (1748)

Nolli's map is very accurate and all "dark" buildings are ancient structures (cf. for Nolli and GIS, BRIENZA 1998). We see on Fig. 2b that at Nolli's time the "Auditorium of Maecenas" was covered with earth. Only parts of the "Sette Sale" were visible. The

"Auditorium" was excavated in 1874, see below and Fig. 5a. I have chosen this area to demonstrate some functionalities of my landscape(t)-model, such as spatio-temporal modeling, reconstruction and visualization.

### **Modeling, Reconstruction and Visualization**

Visualizations of the City of Rome were already created in antiquity. One in fragments still existing example is the "FORMA VRBIS ROMAE" (or "Forma Urbis Marmorea"), the Severan marble plan of Roma created at the time of the Roman emperor L. SEPTIMIUS SEVERUS (cf. OBERHUMMER 1907; CARETTONI, COLINI, COZZA, GATTI 1960, see also LA ROCCA in this book Fig. 1, p. 28 and Fig. 7, p. 32). On this marble plan the regions of Rome are indicated and until today Rome is divided into regions, today called "Rione", e.g. rione Esquilino.

With the development of new digital technologies it became possible to create digital models and visualizations of the City of Rome. According to LONGLEY, GOODCHILD, MAGUIRE, RHIND 2011, p. 404 "spatial models" have two key requirements: "1. There is a variation across the space being manipulated by the model" and "2. The result of modeling change when the locations of the objects change--location matters". The authors also point out that "Models do not have to be digital, and it is worth spending a few moments considering the other type, known as *analog*" (p. 404).

My idea to reconstruct the ancient landscape of Rome (as a digital model) is of course not new. For the field Geography I should like to mention for example Karl Diwald who was a geomorphologist from Vienna. His idea was to collect all information concerning "ruins" ("Ruinen") and all information pertaining excavations of the past ("aller erreichbaren früheren Grabungen") in the City of Rome. Unfortunately he died before he could publish his material. Armin von Gerkan published some of the research he had conducted together with Karl Diwald (GERKAN, 1952 p. 393) and later gave the material to Prof. Kirsten, then Institut für Historische Geographie und Antike Topographie der Universität Bonn (cf. GERKAN 1952, p. 433).

Lorenzo Quilici was in the 1960s one of the first, who, obviously paper-based ("analog", see above), tried to reconstruct the morphology of archaic Rome. His work has the title "Forma e Urbanistica di Roma Arcaica", cf. QUILICI (1990). Quilici quotes LUGLI 1951 and VENTRIGLIA 1971 as references for the changes of the geomorphology within the current area of the City of Rome. In QUILICI, 1990, p. 30 appears a map drawn by hand (L. QUILICI 1967), carrying the title "1 - Ricostruzione morfologica del suolo primitivo di Roma". In his figure 2 he shows an overlay with the current situation. This map has the title "2 - Proiezione della situazione topografica attuale sul piano di fondo dato alla figura precedente" and is signed: "LORENZO QUILICI - STEFANIA QUILICI GIGLI - 1974".

FACCENNA, FUNICIELLO, MARRA (1995) have tried to visualize the morphology of the area of the City of Rome before humans appeared. This 2D visualization has the caption: "Fig. 13. - La morfologia dell'area della città di Roma come doveva apparire

prima che l'uomo, attraversa la propria attività millenaria, modificasse i caratteri del paesaggio naturale" (FACCENNA, FUNICIELLO, MARRA 1995, p. 46).

HASELBERGER (2002, p. 28) mentions in the preface of his book "Mapping Augustan Rome" four "current digital projects". He used for the creation of the visualizations published in his book the software AutoCAD (cf. ROMANO et al. 2002, p. 31) and "surfer", using kriging interpolation (ROMANO et al. 2002, p. 32). Contrary to HASELBERGER who used as "primary basis" for his map "a set of 1 : 10 000 maps" (ROMANO et al. 2002, p. 29) my data basis are the official photogrammetric data of Roma Capitale in the scale 1:500.

The book ROME REBORN accompanied "an exhibition at the Library of Congress, January 6-April 30, 1993" (GRAFTON, p. vi). In this book we find many "analog" models and reconstructions of the City of Rome. Later a project directed by FRISCHER was also called "Rome reborn" (cf. WELLS, FRISCHER, ROSS, KELLER 2010). In this project the authors try to reconstruct the ancient City of Rome at the date "A. D. 320". The basis of this digital model is the large wooden model created by Italo Gismondi ("plastico di Roma in scala 1:250, il più grandioso (m<sup>2</sup> 200) ... iniziato per la Mostra augustea della Romanità nel 1937" TCI 1999, p. 833). There is no solid spatial basis, as noted by the authors themselves: "but since the Rome model was not georeferenced, the model would not export correctly" (p. 375). The authors describe also that they have tried to integrate their models into google earth: "Another problem arose from a conflict between the historic and current terrain of Rome. The terrain in and around the city has changed drastically in places over the past 2,000 years, both from natural causes and human intervention, to the point that a recreation of the terrain in A.D. 320 does not easily sit on the modern landscape. After some debate, Google Earth suggested that the historic terrain, and the 3D model, be suspended 40 meters above the ground." (p. 375). Let me add that in this project an earlier version of a software now called CityEngine was used for the generation of the models.

Another project, called "Virtual Rome", is described in PESCARIN et al. 2010. The authors try to reconstruct historic landscapes of Rome using as "back-end section ... a MySQL database" (PESCARIN et al. 2010, p. 311). They offer models generated for fixed dates.

TESTA, CAMPOLUNGHI, FUNICIELLO, LANZINI (2008) are discussing the problems of the changes caused by humans (cf. "Il problema dei riporti e le modificazioni della forma originaria" pp. 145-168). Their reference is the "map of Quilici 1990", who tried to reconstruct the ancient landscape in 2D (this map dates to 1967, see above and is still regarded as a standard ). On page 160 of TESTA et al. 2008 we will find a digitized map (the scale is ca. 1: 25,000): "Fig. 13 - Dalla digitalizzazione delle curve di livello della carta altimetrica del Quilici si è ricavato il D.E.M. a 5m della città di roma prima della fase antropica".

AMANTI, CARA, PECCI 1995 published a shaded relief map, showing the current surface of the historic center of Rome within the Aurelian City Wall. This model is based on a database of measured points all over the city and was created with a TIN using ESRI ARC/INFO Rel. 6.0 (cf. AMANTI, CARA, PECCI 1995, pp. 317, 321).

According to the authors this is the first scientific digital model of the morphology of the city. This model is still used in scientific publications, for example by FUNICIELLO, HEIKEN, DE RITA, PAROTTO 2006 as "TAVOLA II" (after p. 44).

PANELLA has published a new simulation of the spreading of the great fire in Rome in the year 64 AD ("Simulazione del propagarsi dell'incendio tra il 18 ed il 27 Luglio del 64 d.C." PANELLA 2011, p. 87). In this simulation the progress of the fire by day was drawn in different shades of yellow/red.

In the proceedings of a conference on the "SITAR. Sistema Informativo Territoriale Archeologico di Roma" (SERLORENZI 2011, CARVALE 2011) was described the current state of digital projects for the City of Rome.

Since 1994 I am conducting together with the Classical Archaeologist Chrystina Häuber and further cooperation partners interdisciplinary research on the City of Rome. Based on the object-oriented software FORTVNA, which we developed for the purpose ourselves, we try to model, reconstruct and visualize parts of the City of Rome. The objective of our project AIS ROMA is to draw a diachronic map of the City of Rome within the Aurelian City Wall (cf. HÄUBER, SCHÜTZ 1997, SCHÜTZ, HÄUBER 2001, SCHÜTZ, HÄUBER 2003, SCHÜTZ 2010, SCHÜTZ 2013, [www.rom.geographie.uni-muenchen.de](http://www.rom.geographie.uni-muenchen.de) [last visit: 16-XII-2014]).

To sum up, we can say that already in the past many projects have tried to reconstruct and model the entire City of Rome or parts of the city, others still try this today. For most of these applications commercial or free available software are used. This means that the relevant data have to be "pressed" into relational or other (older) data structures.

The objectives of the above mentioned projects and the methodology applied for them are very different. Many projects are still paper-based ("analog") - which is absolutely sufficient for many research questions. In some of these projects the aim was to model a specific historical phase of the area of the City of Rome, in other projects the development of the layout and/or the landscape of Rome was visualized. Some of these projects have a distinct scientific approach, others clearly not. The objectives of my own research projects can be characterized like this: I want to model continuous spatio-temporal phenomena in 3/4D, based on official (accurate) data ("3D" indicates the spatial dimension, "4D" the temporal dimension). "However, hitherto there is no ready-to-use 3D/4D geodatabase system on the market" (BREUNIG, SCHILBERG, THOMSEN, KUPER, JAHN and BUTWILOWSKI 2010, p. 83).

### **The landscape(t)-model - a digital method for modeling spatio-temporal phenomena**

For the creation of digital models we need digital methods. In Geography these are mainly methods based on GIS-technology (Geographic Information Systems). The first GIS, called CGIS was published by Roger TOMLINSON (1976). Concerning the modeling of urban areas TOBLER published already in 1970 "A Computer Movie Simulating Urban Growth in the Detroit Region" (TOBLER 1970).

Since 1994, when I was a student of Geography, I am developing and using GIS-technology. In August of 1994 Chrystina Häuber told me about her archaeological research in the City of Rome and I told her about my work using GIS-methodology. Her first question was whether it is possible to reconstruct the ancient landscape of the City of Rome with the help of computers. You can read the results of this question in this book.

Since the last 20 years GIS-technology developed very fast and today it is a science in its own right, called Spatial Information Science (cf. GOODCHILD 2010). Concerning digital 3D-Visualizations, especially in urban areas today international standards are established like the OGC (Open Geospatial Consortium, cf. OGC 06-103r4; [www.opengeospatial.org](http://www.opengeospatial.org) [last visit 16-XII-2014]) or the CityGML-Standard (cf. [www.citygml.org](http://www.citygml.org) [last visit 16-XII-2014]). Concerning more technical aspects of reconstructions the London Charter is very important. "The London Charter seeks to establish what is required for 3D visualisation" and "seeks to establish principles for the use of computer-based visualisation methods and outcomes in the research and communication of cultural heritage..." ([www.londoncharter.org](http://www.londoncharter.org), seen 17-X-2012). In the London Charter detailed instructions are given how scientifically valid computer-based visualizations of cultural heritage can be created.

The basis of a Geographic Information System is in most cases a spatial database. So far different data models have been developed, each of which has advantages and disadvantages. In the historical order the important data models are: 1966 the "file system", 1968 the "hierarchical model", 1970 the "relational model", 1980 the "object-relational model" and 1983 the "object-oriented model" (cf. HÄUBER, SCHÜTZ 2004, p. 39). The relational model - the most important until today - was developed and published by CODD 1970. CODD writes in his acknowledgment that C.T. DAVIES convinced him of the fact of the independence of data in future information systems (cf. CODD 1970, p. 387). DATE (1986, pp. 179-202) compares the relational model with the hierarchical model and gives a comprehensive account on relational databases. Since the 1980s scholars discuss an object-oriented approach with an object-oriented database in the background (cf. EGENHOFER, FRANK 1989, ATKINSON, M. et al. 1989, KIM 1990, KJENSTAD 2006).

Despite the research conducted since the 1980s, there are still many problems concerning spatio-temporal modeling in urban spaces. For example GOODCHILD (2001, p. 248) writes: "Three major impediments are identified to further development of the digital city: the lack of a common, integrated data model; the difficulty of modeling continuous phenomena in object-oriented data models; and the variable accuracy of diverse data sources". This is still true today. According to LESER, CONRADIN (2008, p. 21) there are still currently only a few part-models for spatio-temporal modeling of urban spaces: "Ideal wären komplexe rechenbare stadtökologische Modelle für räumlich umfassendere und über längere Zeiträume angelegte Stadtentwicklungen. Bislang lediglich in Teilmodellen ausnahmsweise realisiert". These two statements have been one motivation and starting point for me to develop the "landscape(t)-model".



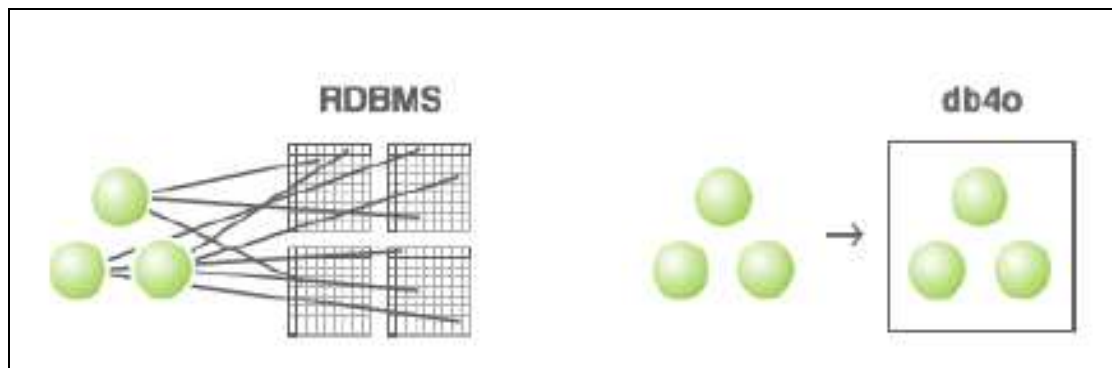


Fig. 3: Comparison of relational/object-relational and object-oriented databases  
(source: GREHAN s.a., p. 5)

Fig. 3 shows the difference between relational database management systems ("RDBMS") and object-oriented databases ("db4o"). The great advantage of an object-oriented database is that you can transfer the data model (the "objects") directly into the database (see Fig. 3 "db4o") instead of "pressing" them into relational structures (see Fig. 3 "RDBMS"). Object-oriented databases have a totally different concept than relational and object-relational databases. For the main differences between relational (tables), object-relational (tables) and object-oriented databases, cf. PATERSON, EDLICH, HÖRNING, HÖRNING (2006, p.4) who quote Esther Dyson: "Using tables to store objects is like driving your car home and then disassembling it to put it in the garage. It can be assembled again in the morning, but one eventually asks whether this is the most efficient way to park a car". KIM (1990, pp. 3-10) argues that complex data including the spatial and temporal dimension can not efficiently be handled with a relational approach. The idea behind the landscape(t)-model is that each point on the surface of the earth can change its attributes in time by natural events (water, natural hazards ...) or by human influence (digging, building work ...).

Fig. 4 shows the main classes/ the concept of the landscape(t)-model. I used "The Unified Modeling Language" (UML, cf. BOOCH et al. 2005) for modeling the classes of my landscape(t)-model. UML is object-oriented, and can be used for a direct implementation in an object-oriented programming language like C++ or Java. The starting point is the Gpoint class with an x(-coordinate), an y(-coordinate), a z(height above sealevel), and a t(ime) attribute. There are also some more attributes, for example accuracy and methods for this Gpoint object like draw(). The next class is "Human". With this class it is possible to model human objects. Humans have attributes like birthday, name and so on. The class "Human" inherits all attributes from the class Gpoint. On principle, each "Human" has at any given time (t) an x,y,z-coordinate, which, thanks to the object-oriented "philosophy" of the landscape(t)-model can now be visualized. We can thus "model" humans on the surface of the earth, also in a dynamic way because all of the just mentioned attributes can change over time. In the future it should be possible to use all objects as input for simulations, for example simulating "processions" or "traffic" in ancient Rome using the objects "Humans" and "Streets".

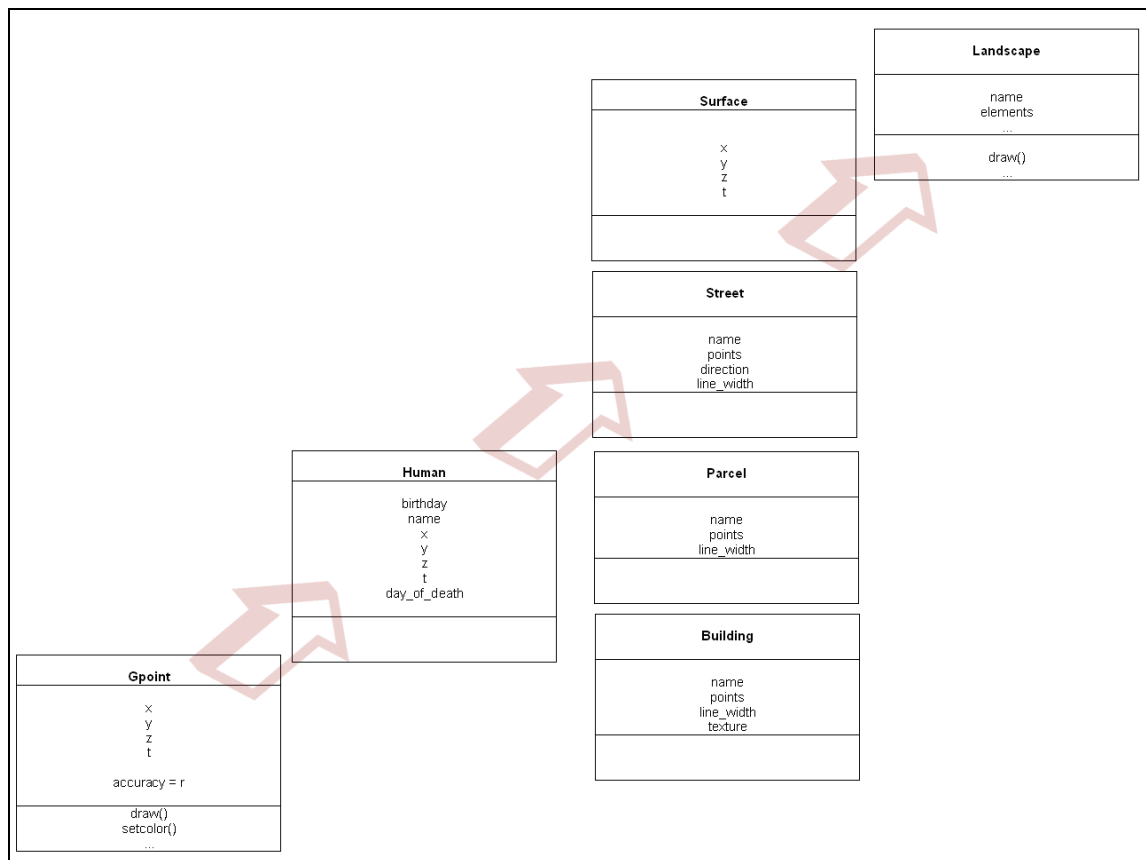


Fig. 4: main classes/concept of the landscape(t)-model

In addition to the already mentioned ones, the landscape(t)-model has among others the following classes: Surface, Street, Building. All these classes inherit attributes from the Gpoint class. This enables us for example to model the changes of the surface of the earth by humans. Another class, called "Landscape", inherits attributes from all other prior classes. Only by considering the classes Humans, Streets, Buildings etc., we can model the landscape at a fixed date (t), for example for the year 8 B.C.; and based on such a model we can then visualize the landscape in question at the defined time "t". Using a dynamic variable for "t", we can additionally model the spatio-temporal *development* of a landscape, the "moving landscape".

In theory (see above, TOBLER 1970!, TOBLER 2000), all this sounds very simple. The application to a "real" example is quite a different matter. The problem here lies of course in the fact that we need for an enterprise like this a huge amount of (continuous) data in the data base. In the following I will show you a preliminary model and visualization using as my example the so-called Auditorium of Maecenas.

### Example: The so-called "Auditorium of Maecenas"

Fig. 5a shows one of the photos taken during the excavation of the so-called "Auditorium of Maecenas" in 1874. In the background we can see a church and some buildings that are still standing. Thanks to the fact that these buildings could be identified, we can be certain where the photographer was standing when he took the photo, and this means that the ancient building visible in the foreground is the so-called Auditorium of Maecenas. This was thoroughly published in 1874 by its excavators, who described in detail its relation to the surrounding landscape and still exists today.

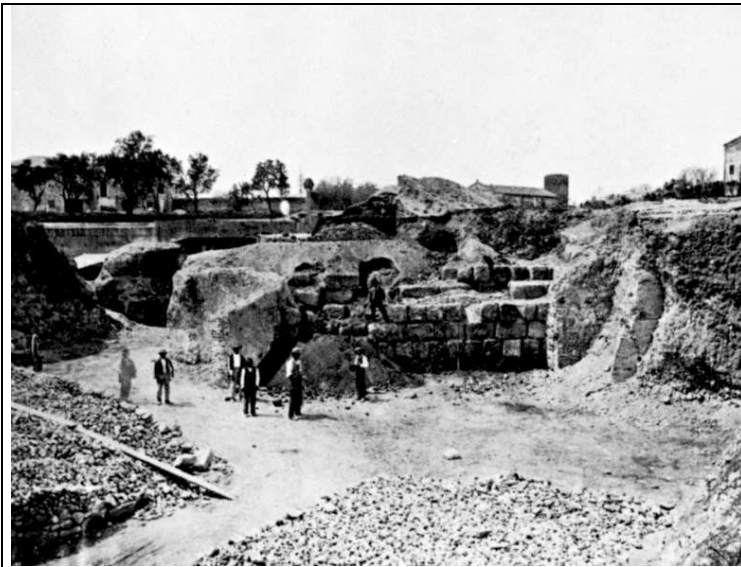


Fig. 5a Photo Parker (source: a: COMUNE DI ROMA 1989, p. 210 (1874))



Fig. 5b (2010)



Fig. 5c (2004)



Fig. 5d (2000)

Fig. 5a-d: The so-called Auditorium of Maecenas

Fig. 5b shows that the "Auditorium" protrudes into the modern road Via Leopardi. The two photos Fig. 5c and 5d show the "Auditorium" as it looks like today with remains of the Servian City Wall, into a gap of which the "Auditorium" was built. Assembling and analysing the relevant spatio-temporal data in the landscape(t)-model we can visualize the "moving landscape" around the "Auditorium".

The landscape(t)-model was implemented by using the object-oriented database db4o and the programming language Java, which is portable and independent from the operating system. This programming language is widely used for implementing GIS-technology (cf. WOOD 2002, GREHAN s.d., HERTER, KOOS 2006, LEONE, CHEN 2007). The prototype is called GIUrbs and is part of the research project AIS ROMA (cf. HÄUBER, SCHÜTZ 2004, p. 61, HÄUBER, SCHÜTZ 2010).

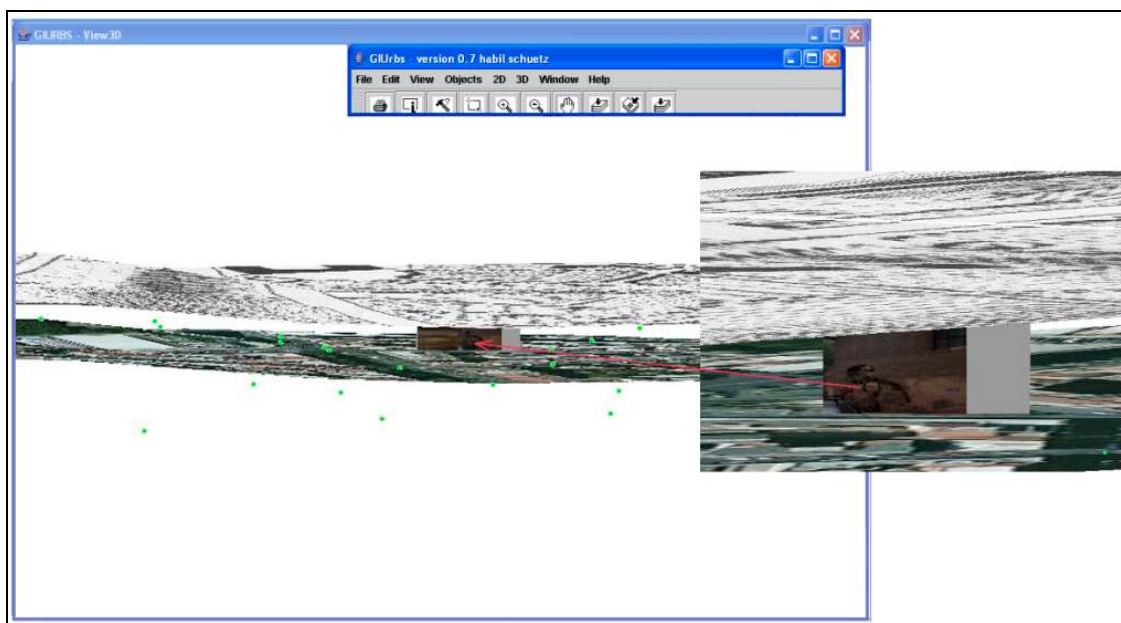


Fig. 6: "Moving landscape" in the area of the "Auditorium of Maecenas". Right: Detail of preliminary Visualization.

In Fig. 6 appears a preliminary visualization of the "moving landscape" around the "Auditorium". The green dots are measured points with x,y,z and t-coordinates. Other components of this picture are the current orthophoto (see Fig. 2a) and a reconstruction of the "Auditorium" with a "photo texture" on that side into which the remains of the Servian City Wall are integrated (see Fig. 5d). Above the "Auditorium" appears the relevant detail of Nolli's map (1748). At that time the "Auditorium" was still covered by a mound of earth (see Fig. 2b). In this visualization the "Auditorium" is the fixed "point" and the landscape is moving around it from 1748 until today. This state of the visualization does not yet comprise the phases between the time of Maecenas (end of the 1. century BC), who built the "Auditorium", and Nolli's map of 1748.





Fig. 7: Changing groundlevels at the Piazza Vittorio Emanuele II

Fig. 7 shows another example for a "moving landscape" at the north corner of the square Piazza Vittorio Emanuele II (see also Fig. 1). We see two ground levels that have been changed in 1876; one with a tree (Fig. 7 right from the back side with the "Porta Magica" cf. HÄUBER, p. 48-67 in this book), which is the remainder of the previous ground level, and the current one (Fig. 7 left from the front side), the difference in height is about 3 m (z-coordinate).

As a result of my research on photos of the collection *Photo Parker* I found two photos with unknown location. We see those photos on Fig. 8.

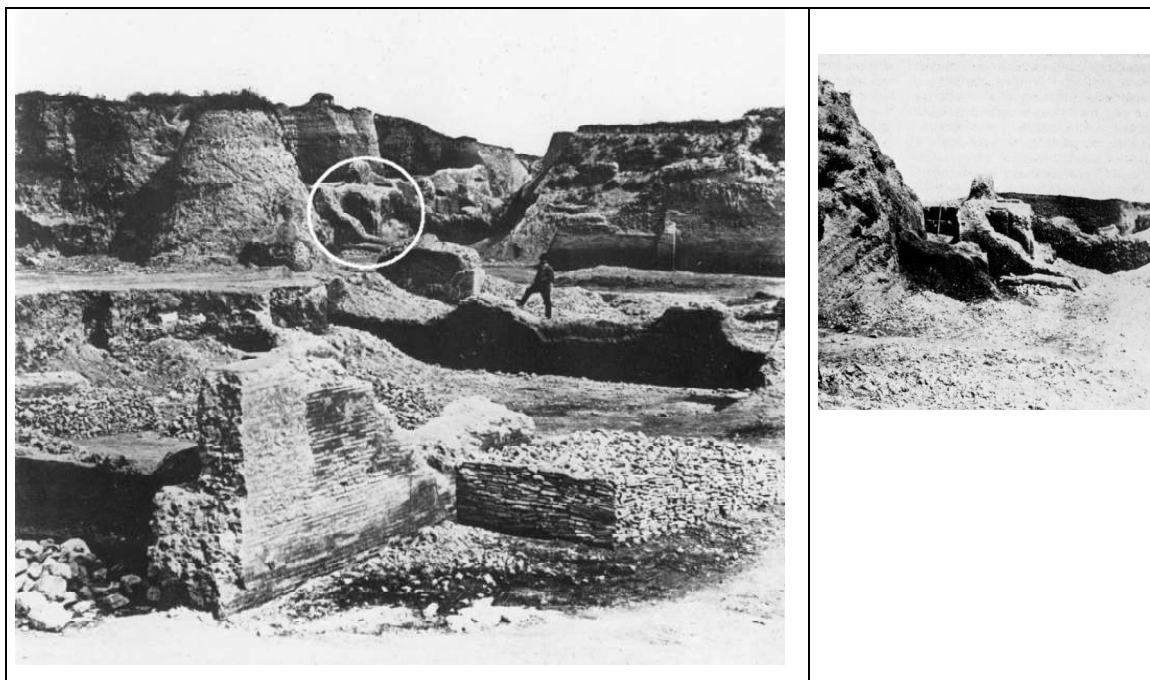


Fig. 8: Excavating the Esquiline (*Photo Parker*, source: left: SARTORIO 1983, p. 103, right: RAMIERI 1983, p. 23)



Comparing these photos that were taken during the building works in the late 19th century on the Esquiline Hill with other images and my preliminary visualizations, I found out that they contain the same structure (Fig. 8, right and structure in white circle on Fig. 8, left). I am convinced that in the end I will be able to locate this structure very precisely in the photogrammetric data (see Fig. 1). Currently most scholars in the fields of archaeology and history believe that this is impossible. I think that it will be possible by using an interdisciplinary, integrative approach and methods from spatial information science. If it were possible to locate all the structures that are visible on those photos precisely this could become another important source on which we could base reconstructions of the "moving landscape" of the Esquiline Hill.

The focus of this paper was so far on the description of an object-oriented data model for 3/4D-modeling and visualization. When applying this model to the visualization of the historical landscape of Rome we saw different "levels" of landscape, derived from diverse sources and we have seen that a huge amount of earth had been moved in the course of time (see Fig. 6). The human impact in changing the surface of the earth is visible since antiquity and reached a new dimension with the beginning of industrialisation. I have discussed the following in SCHÜTZ 2013 in detail. Early works on the subject have been written by MARSH (1864) and SHERLOCK (1922). One of the first works concerning human impact in urban environments is SHERLOCK 1922 with his book "Man as a geological agent - an account of his action on inanimate nature". He analyses the human impact in the City of London and comes to the conclusion that in the City of London there is about 20 to 25 feet of *débris* and earth above the Roman ground level (SHERLOCK Chapter V, "London", p. 157-189). On p. 189 SHERLOCK (1922) wrote that "Exploration of ancient cities in various parts of the earth has shown that on the average they deposit a foot of *débris* per century, and this agrees with what we know of London". It would be a very interesting research topic to investigate and calculate all the documented "movements" of earth and *débris* on the Esquiline Hill in the City of Rome from antiquity until today (see below). Also GOUDIE (1987) is working on questions about the human impact changing the landscape (cf. GOUDIE 1987: "2 Geography and Archaeology: The Growth of a Relationship". He is a geomorphologist and in 2006 was published the 6th edition of his book "The Human Impact on the Natural Environment: past, present, and future".

RATHJENS (1979) wrote the first book in German dealing with the human impact on the landscape which has the title "Die Formung der Erdoberfläche unter dem Einfluß des Menschen: Grundzüge der Anthropogenetischen Geomorphologie". He has pointed out that research in this field needs an interdisciplinary and integrative approach and is also a bridge between physical and human geography: "Zum Verständnis und zur Deutung anthropogener Formen bedürfen wir aber vielfach auch der Hilfe anderer Wissenschaften und Wissenschaftszweigen ... Die Untersuchung der vom Menschen beeinflussten Oberflächenformung wird damit zu einem wichtigen Bestandteil und einer Aufgabe der Geographie, in der sie eine Brücke zwischen Natur- und Kulturgeographie schlagen hilft" RATHJENS (1979, p. 17). DEVOTO (1985) gives some examples for changes of the morphology by human impact, especially in his chapter "Geomorfologia e archeologia" (chapter 6, pp. 151-171). He mentions for example some hills constructed by humans like the "Monte Testaccio" in Rome ("6.11. Geomorfogenesi antropica" ... "L'accumularsi di spessori talora enormi di detriti di

discariche, sia in forma di veri butti ... sotto forma di colline artificiali, quali ad esempio il celeberrimo Monte Testaccio a Roma (da testa: cocci di ceramica) e i già ricordati accumuli di scorie ferrose etrusche del litorale toscano presso Piombino. Anche la costruzione di tombe monumentali può influire direttamente sulla morfologia: ne sono esempi classici i meloni di Cortona, i monterozzi di Tarquinia, i tumuli di Cerveteri." p. 170). LESER, CONRADIN (2008, p. 33) demonstrate with figure "Abb. 3.1.1.2.1-1: Entstehung flächenhafter Vollformen I: Aufhäufung von Kulturschutt" how humans are changing the urban landscapes.

Other unresolved questions are concerning the calculations of the "real" landscape at a certain date/period and site in antiquity. Currently there are very few attempts to explore these questions in urban spaces. We could for example ask: where did the earth come from with which cemeteries on the Esquiline were covered at the time of Maecenas by several meters? What happened to the earth that was moved during the building works beginning in the 1870s on the Esquiline, e.g. the earth which covered the so-called Auditorium of Maecenas? These are very interesting questions, especially for the fields geography (see above) and geomorphometry (cf. HENGL, REUTER 2009). John Bodel (cf. BODEL p. 177-195 in this book) is dealing/interested in similar questions from the perspective of ancient history. But not only reconstructions of ancient structures and urban landscapes which are the result of human impact in the past can support geographic research. Many current themes in Geography, especially in urban geography have a close relationship to history and archaeology.

Another field of research, so far predominantly discussed in urban geography, is "gentrification" (= transformation of buildings "into luxury apartments" PACIONE 2001, p. 202), As the here chosen example shows, it is equally of interest for historians and archaeologists, as the author found out in recent discussions. I show you one example from the Esquiline Hill in Rome. Some years ago we found in Via Mecenate (see also Fig. 2) a garage ("Carrozzeria Riparazioni Auto") with remains of the Servian City Wall (Fig. 9, left).



Fig. 9: One example of "gentrification", Rome, Via Mecenate (left: 2000, right: 2010).

Much building work has recently been conducted in this quarter of the Esquiline. As the comparison of Fig. 9a with 9b demonstrates this section of the city wall has recently been restored. This occurred in conjunction with the building of new "luxury apartments".

Let us now turn to another important research field in geography. Since Habitat II (the UN-conference on human settlements in 1996) the subject sustainability in urban spaces and their hinterlands is an integral part of research in historical, urban and regional geography (cf. FUSCO GIRARD et al. 2003, HALL 2003, ZAMAGNI 2003, MAZZOLA et al. 2010). Currently about 60% of humans live in such spaces, and the number is increasing. Until now computer-based methods, models and simulations for the development of such very complex spaces for both growing and shrinking cities do not exist, as we have seen before. If it were possible to simulate the development of a city like Rome this could efficiently support the creation of sustainable strategies concerning urban planning and urban development. A central question in this kind of research will be: what can we learn from the past for future developments? Such research needs an interdisciplinary, integrative approach (cf. GOUDIE 2006) with special attention to the human impact on cityscapes and the integration of archaeological and historical evidence. As ZAMAGNI (2003, pp. 133) comments: "without overcoming the limitations of scientific research that is too 'sector-oriented' and too little trans-disciplinary, the 'new alliance' between mankind and nature - to use the ichastic expression of I. Prigogine - will never be able to be achieved".

"Urban Mining" (RELLER 2013, p. 218) is currently a growing subject in the research fields resource management and resource strategies. This field is of special interest for urban geography. In topics that explore resources the spatio-temporal dimension is very important ("13.1.3 Die raum-zeitliche Dimension" RELLER 2013, p. 214), especially because of its potential to trace resources for example minerals, stones etc. in space and time (cf. "Traceability" RELLER 2013, p. 217). In my opinion we can use the object-oriented landscape(t)-model as a framework also in research topics that are focused on resources. Because of its object-oriented approach - as I have tried to demonstrate in this contribution (see above) - it is a much better tool than the relational-based tools used so far for this kind of research. We can thus model the spatio-temporal dimension very well and also "trace" the objects (resources) we are interested in.

### **Why work with geographers in reconstructions and visualizations of ancient Rome?**

"As long ago as 1941, Carl Sauer described this process when he wrote 'the historical geographer must ... be a regional specialist for he must not only know the region as it appears today; he must know its lineaments so well that he can find in it traces of the past, and he must know its qualities so well that he can see it as it was under past conditions. One might say he needs the ability to see the land with the eyes of its former inhabitants, from the standpoint of their needs and capacities. This is about the most difficult task in human geography' (Leighly, 1963:362). Few archaeologists or landscape historians, particularly fieldworkers, would disagree with this sentiments." ROBERTS (1987, p. 81) . In my opinion computer based methods, like the landscape(t)-model can help - not only geographers - to reconstruct and visualize past environments, especially in urban environments like that of the City of Rome.

To conclude: considering major research questions in human (cultural) and physical geography, such as sustainability and resource management, it is plain to see that it is essential (not only fruitfull) for geographers to work with archaeologists, historians and scholars from many other disciplines.

## Acknowledgements

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## Reconstructing the Temple of Apollo on the Palatine Hill in Rome

Amanda Claridge

Imperial Rome had hundreds of temples, some more important than others. Arguably the two most important were the Temple of Jupiter Optimus Maximus on the Capitoline hill and the Temple of Apollo on the Palatine. The construction of Jupiter's temple by king Tarquin in the late 6th century BC had witnessed if not actually brought about Rome's transition from a monarchy to a republic, whose political life centred on the Forum Romanum.<sup>1</sup> Apollo's temple, financed and dedicated by Octavian (soon-to-be the emperor Augustus) on 9 October 28 BC, heralded the transition from the republic to a principate and the institution of an imperial system of government based instead in the Palatine palace.<sup>2</sup> Ancient written sources report not only the precise date and the circumstances of the temple's foundation in response to a thunderbolt sent by Apollo himself which struck a house (one of several that Octavian had purchased in 36 BC with a view to opening up more space in front of his own)<sup>3</sup>, but also its eventual destruction by a fire, on the night of 18/19 March AD 363, after which it was not rebuilt.<sup>4</sup>

Jupiter's temple was raised on the edge of its hill, whence it presided over a host of lesser temples, altars and shrines, connected to the Forum by a processional road. So, too, was Apollo's located at the edge of its hilltop (see Fig. 1), to every corner of which the palace spread in the course of the first three centuries AD, dividing as it did so to either side of a long forum-like space (Fig. 1A) which extends from the temple to connect with a courtyard and the palace entrance from the Via Sacra, the principal route up from the Forum to the Palatine since the time of Romulus. It seems only reasonable to expect that Apollo should face the same way, down the length of that space, looking inwards to the heart of the palace and to those approaching from that direction. In fact our surviving ancient written sources, recently re-examined by Peter Wiseman, indicate that is precisely what it did.<sup>5</sup>

Yet, ever since the ruin of the temple podium was discovered in excavations by Pietro Rosa in 1865 (Fig. 2), it has been perceived as facing the other way, out from the hill, with its back to the palace. This perception had a certain logic in 1865, for Rosa did not know it was the temple of Apollo. He thought it was a mid-republican temple of Jupiter Victor (founded 296 BC) attached to an early sanctuary at the far corner of the hill, which he believed had always remained outside the confines of the imperial palace.<sup>6</sup> The position reminded him of republican sanctuaries on hillside sites elsewhere in Latium and he imagined a series of terraces and staircases extending all the way from the level of the circus Maximus right up to the temple door, the uppermost flights of which he reproduced on site for visitors.<sup>7</sup> In 1867-8 Rosa went on to excavate the open ground between the north corner of the temple and the south corner of the Domus Tiberiana, removing a paved street (marked VIA ANTICA on Fig. 2) and finding buried beneath it a small house, containing some extraordinarily well preserved Second Style wall-paintings in the rooms at the NW end.<sup>8</sup> A tunnel at the other end produced a lead water pipe stamped with the name Julia Augusta, which Rosa took as evidence that the house had been

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<sup>1</sup> *LTUR* 3 (1996), 144-8 s.v. Iuppiter Optimus Maximus Capitolinus [G. Tagliamonte]; Stamper 2005:6-18

<sup>2</sup> see Millar 1977 *passim* for how the imperial system worked and 18-24 for an introduction to the character and functions of the Palatine palace. For the temple *LTUR* 1 (1993), 54-7 s.v. Apollo Palatinus [P. Gros] with general bibliography; for a recent study of Apollo in Augustan literature, see Miller 2009.

<sup>3</sup> Hekster/Rich 2006.

<sup>4</sup> Ammianus Marcellinus 23.3.3.

<sup>5</sup> Wiseman 2012.

<sup>6</sup> Rosa 1865: 363

<sup>7</sup> Tomei 1999, fig. 104 (Anderson photo 416). The steps are still partly in place.

<sup>8</sup> G.E. Rizzo, *La Casa di Livia* (Monumenti della pittura antica III, Roma Fasc. III) Rome 1936; *LTUR* II:130-2 s.v. domus Liviae [I.Iacopi].



built for Augustus' widow Livia.<sup>9</sup> In 1885-6 Henri Deglane, architect-pensionnaire of the French Academy in Rome, incorporated both Rosa's 'House of Livia' and the outward facing 'Temple of Jupiter Victor' into a grand reconstruction of the Palace of the Caesars (Fig. 3).<sup>10</sup> Such was Rosa's authority and the success of Deglane's reconstruction that when the true date of the temple and its identity as that of Apollo were eventually established by Giovanni Pinza in 1910,<sup>11</sup> many would not credit it. The objections were primarily topographical - so marginal a position could not be reconciled with all the other monuments that are linked to the temple of Apollo in the written sources, some specifically said to be 'in front' of it, not least the House of Augustus himself and a group of historic monuments associated with the foundation of the city by Romulus.<sup>12</sup> The traditional view at the time (as reflected in Deglane's reconstruction) was that the House of Augustus, known to have been rebuilt on at least two occasions (in AD 3 and AD 64), constituted the centre of the later Flavian palace, with the temple and all the other monuments laid out somewhere beyond it to the north. If the temple was moved to the west of the Flavian palace, then the house and the rest would have to move too. That is what in effect has happened; Pinza himself started the process in 1910 by suggesting that expectations of the size of Augustus' house could be mistaken and that Rosa's 'House of Livia' was actually Octavian's first house on the Palatine, known to have been an older property previously owned by the orator Hortensius, with or without the addition of another house on that same side of the temple (Fig. 3 'House of Germanicus'). By 1913 Pinza realised that it would make more sense, both of the archaeological situation on the ground and of the written sources, if the temple were to be reconstructed to face the other way, and he presented a possible solution, but here he met with no support whatsoever.<sup>13</sup> Instead, after further clearance of the area on the west and south-west side of the temple in the 1930s, a new survey by Giuseppe Lugli in 1950, published in 1953, resulted only in a sketch of the temple plan, differing little from Deglane's.<sup>14</sup> At the same time new excavations started, directed by Gianfilippo Carettoni from 1949 to 1981, in and around the 'House of Livia' and down the west side of the temple, and around its SW end, where they descended 9 metres below ground to expose a large house, dating from the mid first century BC, organised around two courtyards which lie to either side of the temple, whose foundations had incorporated its central wing. After decades of painstaking conservation work this underlying house opened to the public in 2008 as the 'House of Augustus', or rather the 'House of Octavian', though it is becoming increasingly clear that neither identification is possible<sup>15</sup>. The Apollo temple has kept its 'Jupiter' position throughout, and continues to be compared to a republican hillside sanctuary,<sup>16</sup> while all the other monuments to which it should relate are imagined to be suspended in mid-air, where landslides have carried the hillside away. One new

<sup>9</sup> CIL XV.7264.

<sup>10</sup> Deglane 1888; Espouy 1897/1905; Espouy 1932; *Roma Antiqua* 1985, 342- 54, esp. 344 Deglane 1.

<sup>11</sup> Pinza 1910, *passim*. Giovanni Pinza was a prehistorian, whose search for the earliest levels at the SW corner of the hill (published in Pinza 1907) had required him to date all the later structures too, including a very careful analysis of the different types of concrete which distinguished the later republican and imperial phases (mostly it was only the concrete that remained, all stone having been robbed). He was confident that the concrete of the temple of 'Jupiter Victor' was early Augustan, since it was identical in composition to the concrete of the Mausoleum of Augustus, completed in 28 BC, the same year as the temple of Apollo. His comparative studies enabled him to date the underlying house in the mid 1st cent. BC, thus excluding the possibility of an Augustan rebuilding of an earlier temple.

<sup>12</sup> see Wiseman 2012.

<sup>13</sup> Pinza 1913:217-9, with plan, tav.IX.1. After this he abandoned the effort and went back to the study of prehistory.

<sup>14</sup> Lugli 1965: 265 fig.107. Originally published as Lugli 1953, references here are to the 1965 reprint since that is more widely available.

<sup>15</sup> see Wiseman 2009 and Wiseman 2012:383.

<sup>16</sup> Coarelli 1987.

reconstruction replaces Rosa's flights of monumental staircases with a six-storey insula block on top of which the Romulean monuments are imagined to have been (re-) installed.<sup>17</sup>

If nothing else, this latest exercise – which basically pushes the existing evidence to its limits (and beyond) – confirmed to me that something must be wrong. I did hope that the new survey of the ruin that Stephan Zink was permitted to undertake in 2005-8 (apparently the first since Lugli) would not only give us at last a reliable plan and some sections, with normal heights (i.e. levels in metres above sea level), and a proper structural analysis, but also revisit the question of its orientation. Disappointingly, Zink's remit appears to have been strictly limited to the upstanding part of the ruin, and to revisiting Lugli's work, whose results he has been able to modify slightly but not significantly. By his own admission, Zink has no idea how the conflict between the written sources and the archaeological record can be reconciled, he is only adamant that the problem lies not with the orientation of the temple, for it cannot be reconstructed otherwise.<sup>18</sup>

Here I attempt to resolve the impasse. I have not had Zink's privilege of working at first hand; I can only trust that the drawings he published in 2008 and 2012 are as accurate as he claims, and do as much as I can with the rest of the published archaeological record, such as it is. Part I describes the ruin, explaining my own understanding of how it should be read, on the basis of which Part II then takes a different approach to its reconstruction, and will hopefully prove that the temple could indeed have faced the other way. Part III briefly explains some of the possibilities this opens up for the reconstruction and interpretation of the wider setting.

## I. READING THE RUIN

In lieu of anything more recent which shows the temple ruin in an actual state, unrestored and in detail, including the concrete at the SW end (now obscured by roofing), the site plan used here (Fig. 4) is an extract from the relevant area of the 1:2000 map of the archaeological centre of Rome which was produced by Modus srl for free distribution by the Soprintendenza archeologica di Roma and Rome tourist office in 1985. I have added a number of spot heights (in metres above sea level, henceforth 'masl'), which have always been essential to understanding the site but are only just beginning to become available.<sup>19</sup> The longitudinal section (Fig. 5) is very schematic, since it was mostly generated from the plan, integrated with some of the partial data available from other sources.<sup>20</sup>

The darker grey shading on the plan, Fig. 4, indicates the concrete of the temple podium and other concrete foundations that rise to the same ground level that is indicated by a patch of marble paving in the passage between the temple and the flank of the Palace of Domitian (47.70 masl). This Lugli took to be only the Flavian level, and that the Augustan ground level lay about 1.0 m lower, as revealed in a sondage excavated for him by Carettoni in 1951 at the NE end.<sup>21</sup> But Zink's section suggests that the ground level exposed in the trench is more likely to be that of the previous house on the site; the Augustan level and the Flavian level were essentially the same (47.60 masl).<sup>22</sup>

As a preliminary I should also note that the plan of Rosa's 'House of Livia', shaded in paler grey, is included on Fig. 4 for reference only. The proximity of its S corner to the N corner of the

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<sup>17</sup> Carandini/Bruno 2008, *passim*, but esp. 243-57, with bird's eye reconstruction by Studio Ink tav. II

<sup>18</sup> Zink 2012, responding to Wiseman 2012.

<sup>19</sup> Those here are taken from Tomei 2011: 35 tav.I, and Iacopi/Tedone 2005-6 or Iacopi 2008, others deduced from the data given in Pensabene 1997:160-63. It seems that there is no benchmark on the hill. None of Carettoni's plans and sections, meticulous and scaled though they were, is levelled and he specified no levels in his text. Lugli's datum was no more precise than 'present ground level', and Zink's was the highest point of the temple podium, related to sea level only in one drawing (2012: 396 fig. 7).

<sup>20</sup> Zink 2012: fig. 7; Iacopi/Tedone 2008; Pensabene/Gallocchio 2010.

<sup>21</sup> Lugli 1965:288 and figs. 120-121.

<sup>22</sup> Zink 2012: 396 Fig. 7 shows it as 47.65 masl. If, as seems to be the case, the Augustan building continued to stand in its original state while the palace was rebuilt around it, it is likely that the original ground level was also maintained, at the most given new paving.

temple ruin has often been remarked upon (as yet another reason why the temple will not have faced inwards) but in reality there is no evidence that the two buildings ever co-existed in space or time. Carettoni's excavations in and around the house in 1949-53 not only dated its original construction to 100-80 BC but also indicated that its drains went out of operation in the 40s or 30s BC,<sup>23</sup> that is, as the temple was being built. The floor level of the house lies over 6 metres lower in the ground (41 masl) and none of its walls is standing higher than about 46.50 masl, i.e., a metre below the temple level. The walling confusingly visible above ground today (Fig. 6) is all modern, for the safety of pedestrians, or supporting the roofing that protects the paintings in the rooms at the NW end. The excellent state of preservation of the latter is best explained by their interment very soon after they were made.<sup>24</sup> The subterranean passage leading from the direction of the Flavian palace to the SE end of the house only connected with the foot of a stair up to the Augustan level, not with the house as such. We should mentally eliminate the 'House of Livia' from the picture.

### The temple foundations

The most obvious reason to believe that the temple faced outwards from the hill has been the impression given by the ruined podium itself. It consists mainly of two mounds of concrete of very similar dimensions but very different upper profiles (A and B on Figs. 4-5). Mound A measures c. 19.2 x c.20.80 m and stands to a height of 3.50 m. (51.10 masl) with a flat top which looks like the floor of a room - easy to imagine as the temple cella. Mound B is almost square, c. 19.2 x c. 19.0 m, with its highest point at the end near A but a metre lower (50.10 masl) from which it slopes down to the ground, looking rather like a staircase - as Rosa saw it in 1865 (Fig. 2). The gap between A and B (Figs. 4-5 G) must represent the robbed-out foundation of the entrance wall of the cella (from which two joining fragments of a colossal marble door frame, carved in relief with a Delphic tripod and griffins, symbols of Apollo, were found in the gap in 1966<sup>25</sup>). Some of the walling composed of large tufa blocks, remains in situ in the bottom of G, which is over 9 metres deep. At that depth the blocks measure 2.0 m wide, but the gap narrows to 1.75 m at the top, with the SW face slightly inclined to form a buttress (see Fig. 5).<sup>26</sup> All the other foundation walls (stereobates) within which mounds A and B were once enclosed, supported the other three walls of the cella and the temple colonnades. They, too, will have been made of solid stone, as was typical Augustan practice. Another stretch of tufa blocks survives down the eastern flank of A, representing the external stereobate on that side. The preserved width, as recorded by Rosa and by Carettoni in the 1960s was 2.65 m. but is apparently missing the outer edge and the foundation was probably considerably wider. Zink restores it to 3.0 on the evidence of some blocks he plotted at the far S corner of mound B, but that too (if indeed they belong to the temple foundations) may not represent the full width.

<sup>23</sup> Carettoni 1953: 137f and 1957: 118f. The fill of the drains contained pottery and coins, none of which dated later than the Caesarian/very early Augustan period. Carettoni also remarked that pottery of any later imperial date was strikingly rare in the upper levels he excavated within the house.

<sup>24</sup> The dating of the wall paintings has tended to be brought down (see Iacopi, cit. above n. 8:131) into the 20s BC to meet the expectation that the house remained standing as part of the House of Augustus, but their style was already current in the 40s BC if not earlier.

<sup>25</sup> Carettoni 1966-7: 71 and figs 10-11

<sup>26</sup> The SW side is slightly bowed, where the stone robbers made room for manoeuvre, so its profile is not very reliable. Zink's section (2012: Fig. 7) shows the bottom of the stone foundation at 9.30 m. below the level of his datum (51.16 masl), i.e. 41.86 masl, some three metres above the lowest floor level in the underlying house (38.47 masl on Iacopi 2008: 11), but with more concrete beneath it. In fact, the lowest three of the four courses in G appear to be of a different construction from the uppermost, and thus could represent an older foundation. The bedding level of the fourth course (c. 43.15 masl) matches that to which the ramp in the underlying house rises (a height of 4.70 m. see Iacopi/Tedone 2005-6: 356, tav I,1).

At the far end of mound B there is a much larger gap (F) and a third much larger concrete mass (C).<sup>27</sup> Both are usually omitted from modern plans, so as to show the plan of the underlying 'House of Augustus' instead, and are scarcely mentioned in the modern literature but the top of C, albeit much eroded and sloping at the same angle as B, lies just below the temple ground level and was surely part of the original construction. It rises from the house's lowest floor level (38.40 masl),<sup>28</sup> where extra walls and barrel-vaults were inserted to reinforce the pre-existing structure, the rooms packed with solid earthen fill; the fill of a ramp which once connected the lower and upper floors in the house was found intact, providing a date in the 30s BC for the operation.<sup>29</sup> Zink's plans do not include C and it is only partly indicated by Lugli, who evidently thought (as had Rosa and Deglane) that it was the foundation for a staircase. Pinza rightly observed that it is far too massive to have served that purpose alone (if at all) and is more plausibly interpreted as a subterranean buttress, designed to anchor the SW end of the temple in place on the hillside. In that case, the gap (F) can be presumed to have once contained a foundation wall of solid stone blocks. In 1892 John Middleton recognised it as such and estimated its width as 15 feet (4.50 m.), noting within it some courses of blocks of tufa and travertine laid in thin mortar beds.<sup>30</sup> Unfortunately, he seems to be the only published witness to the existence of the latter, and the width he gives seems excessive, but given the scale of the temple it could be the bottom of the wall, which then tapered upwards to about 3.50 m at the top, acting as an additional buttress, similar to G (see Fig. 5).<sup>31</sup>

As just defined, the external stereobates of the temple would have measured c.19.20 x c. 41.60m on the inside<sup>32</sup> and (supposing the upper width of F was shared by all) c. 26.20 x c. 48.60 m on the outside (see Fig. 7). The midpoint of that length (20.80) coincides with the NE side of G - which is therefore either the inside or the outside of the cella door, depending on which half of the ruin one thinks housed the cella, and which the porch. In favour of A as the cella, in addition to its shape, could be its relatively longer length in comparison to B (though the difference is less than 2.0m.) and the presence of a substantial indentation in the concrete around the upper margins. The indent is c.1.80 m. wide and steps down 0.70 m from the top, corresponding to the height of two courses of small tufa blocks, preserved in places along the SE side.<sup>33</sup> The blocks only occupy the inner half of the indent and show signs of some previous use, leading Lugli and Zink to suspect that they were placed there by Rosa, though they both see the indent nevertheless as evidence of a higher-level stone foundation, laid on the inside of the external stereobates in order to carry a decorative inner colonnade lining the side and rear walls of the cella.<sup>34</sup> The situation is complicated by the presence of more foundations, made of a much later type of concrete containing fragments of white and coloured marble, which were

<sup>27</sup> visible in the foreground of 19th-century photographs, e.g. Tomei 1999, fig. 104, cf also fig. 91 (Zink 2012:391 fig. 3).

<sup>28</sup> Iacopi/Tedone 2005-6, tav.I,1 and tav. 5.

<sup>29</sup> Iacopi/Tedone 2005-6: 370.

<sup>30</sup> Middleton 1892: 163.

<sup>31</sup> 4.50 m. is the width of the gap as drawn in the plan of the underlying house in Iacopi/Tedone 2005-6; its upper level appears in section in Zink 2012: fig. 7, as 3.50 m wide.

<sup>32</sup> As scaled off Zink's site plan (2012: Fig. 5), using his restored limit at the ragged NE end. From Rosa's (here Fig. 2) the result is very similar (c.19.40 x 41.10 m.). Lugli (1965:266) gives the width as 19.2 m, which agrees with his plan, but he gives the length as 37 m., having excluded what he saw as the front steps (the 'gradinata').

<sup>33</sup> The indent does not appear on Lugli's plan, but it and the blocks are well documented by Zink, who gives the dimensions of the indent in the text as 1.60 x c. 1.0 m (2012: p.393) but his plan and sectional elevations (394 Fig. 5) do not seem to agree. One single block is also preserved in the indent on the NE side (Zink 2012: p. 397 Fig. 8, key letter c.).

<sup>34</sup> Zink 2012: 391.

inserted at the four corners of the indents to depths of over 4 metres.<sup>35</sup> These bear the remains of corner piers in Late Roman brickwork, likely to date no earlier than the fourth century AD.<sup>36</sup> Near the E corner the late concrete is laid on top of two of the tufa blocks in the indent, proving that at least those two are not restorations by Rosa, and yet in other places it intrudes into the indent, where the stone blocks must therefore have been missing. Occasional patches of the same late concrete appear elsewhere around the edges of the mound. Zink thinks they constitute a complete remodelling of the interior of the temple cella, removing the original internal colonnades (fragments of which ended up as aggregate in the new corner foundations) in order to replace its ceiling with a concrete vault.<sup>37</sup>

The dating and character of this late phase warrants further study. It certainly looks as if a rectangular structure, with brick piers in the corners, as shown on Rosa's plan (Fig. 2)<sup>38</sup> was erected on A in late antiquity, but it was not necessarily a repair or a modification to the temple, *per se*. It could just as likely post-date the temple's destruction in AD 363 and represent the re-use of the podium (perhaps only its NE half) for a different type of building.<sup>39</sup> The immensely deep foundations under the corner piers could as Zink suggests signify a concrete vault, while the particular configuration at the E corner, where the late foundation continues through or over the foundation indent could mean that the NE side of the structure was open. The indents and at least some of the blocks they contain do seem to have formed part of the foundations of the Augustan structure, but they also seem too shallow to have supported a marble colonnade and might be better interpreted as part of the foundations under the temple floor, whether of the cella or that of the pronaos (porch).

Another consideration when trying to determine whether mound A will have supported the floor of the cella or of the pronaos are the three voids with squat barrel vaults (shown in section in Fig. 5 A1-A3), two interconnecting to form a large T, not quite centred on the longer axis, the third located alongside the stereobate at the NE end. Zink would restore above the latter (A3) a base for the temple cult statues (of which there were three - Apollo, his sister Diana and their mother Latona<sup>40</sup>) and proposes that the three spaces somehow constituted a gilded 'crypt' where another of the temple's many treasures, the Sibylline books, were kept, although he admits there is no sign of access.<sup>41</sup> Carettoni's explanation makes better sense: the voids were never meant to be accessible, their function was to save material and strengthen the concrete infill, spreading the load on the lower level foundations, which were re-using the shell of the previous house on the site.<sup>42</sup> One of the stone walls of the latter, 1.20 m thick, forms one side of A1 and the corner with A2, having been left standing within the Augustan concrete to a height

<sup>35</sup> The situation is now much clearer thanks to Zink's survey (2012: 399 and Figs. 5, 8-11). The brick piers and late date of the concrete were noted by Rosa (1865: 364), Pinza (1913:218) and Carettoni (1966-7:71) but Lugli (1965: 267) was not quite sure whether they were ancient or 19th cent. restorations.

<sup>36</sup> Zink (2012: 399 and n. 26) reports that E. Bukowiecki gave him a date of late 3rd/early 4th century AD, and I am happy to trust her expert judgement, though I presume the brickwork could also be later.

<sup>37</sup> Lugli 1965: 267 ; Zink 2012: 393.

<sup>38</sup> Carettoni (1966-7: 71) reported that cleaning of the concrete surface on top of the mound had revealed traces of the bedding level of a marble pavement, large fragments of brick walling and fragments of marble roof tiles.

<sup>39</sup> as already argued by Pinza 1913:218, though he mistakenly attributed the entire upper 0.70 m of concrete on mound A to the later phase.

<sup>40</sup> Propertius 2.31.15-16; Pliny *NH* 36.24,25, 32 respectively.

<sup>41</sup> Zink 2012: 393-9, reviving an old idea, viz. Pinza 1913:223f. Suet *Aug.* 31 says that the books (Rome's most sacred oracular texts (transferred from the Capitoline temple of Jupiter to Apollo by Augustus in or after 12 BC) were stored in the base of the statue of Apollo, in two golden *foruli*. *Forulus* is a rare word of uncertain significance, normally translated as a protective cylinder or tube (since the books will have been written on parchment or papyrus scrolls). Zink thinks it might be applied equally to a (gilded) tunnel, but the case he makes is ill-founded (see Wiseman 2013).

<sup>42</sup> Carettoni 1966-7: 69. He excavated similar barrel vaults under the terrace on the NW side of the temple, spanning the demolished walls of an underlying house (Carettoni 1967: 289-93 fig. 4). The off-centre placement of those in mound A could have been dictated by the older structure underneath.



of 49.60 masl.<sup>43</sup> Other remnants of the older house can be detected elsewhere in the concrete of mound A.<sup>44</sup> The size and disposition of the voids would have been dictated primarily by the structure of the underlying house rather than the needs of the superstructure of the temple, but they must have met those needs too, and it is easier to see them surmounted by the relatively lighter weight of the floor of the porch, than that of the cella and its precious contents.

Mound B in its present condition, as noted above, contrasts strongly with A, lying much lower in the ground with a marked downward slope to the SW. The staircase effect recorded by Rosa in 1865 (Fig. 2) may have been a genuine feature of the site at the time, or the product of incomplete excavation, but either way, as pointed out long ago by Pinza (who in 1913 was in a better position to judge than we can now) the upper profile is common to this part of the hillside as a whole, the product of natural or man-made erosion.<sup>45</sup> In fact, further clearance of the concrete surface since Pinza's day has exposed a variety of staggered levels and a large recess cut out of the eastern side (Fig. 4 L) that evidently relate to the quarrying of the ruin to extract any and every stone block it contained, and/or to the mining of the natural pozzolana building sand from the underlying bedrock.

Originally the top of B must have extended from G to F at the same height as A (see Fig. 5), and may even have had similar indents around the three margins, but the level to which the concrete has been reduced renders it now impossible to tell. For the same reason, it is difficult to know quite what to make of the four deep holes (K) that appear in an intermittent line, set back about 5 m back from F. They do not appear on Rosa's plan but were registered on Deglane's and were surveyed in detail by Lugli, even more carefully by Zink, all trusting in the expectation that they are the robbed-out stone foundations for a six-column (hexastyle) façade.<sup>46</sup> Indeed, Zink's case for the SW orientation relies exclusively on this premise.<sup>47</sup> The holes consist of two squares centred between two longer rectangles - all similar in width (2.0 m) and the same depth (7 m), descending to about the same level as the foundation in G (41.86 masl), with imprints of stone blocks in the bottom.<sup>48</sup> Deglane had no difficulty spacing his columns along this line, for he probably thought the foundation was continuous and was also using a small size of column (which did not belong to the temple).<sup>49</sup> But both Lugli and Zink encountered problems.<sup>50</sup> The column they employed has every chance of belonging to the temple, and is much larger, its likely diameter fitting the width of the holes very tightly. Calculating the distance between the likely centres of the two holes in the middle, and repeating it to either side, each on the two lateral slots, requiring the distance between the outer four columns to be shortened so that they would fit. (It is not unusual for the middle pair of columns of a Roman temple façade to be set wider apart than the outer ones.) However, neither the middle nor lateral distance was found to be suitable for use down the sides of the temple, which required a

<sup>43</sup> Zink 2012: 388 Fig.1, where the wall can be seen to the right of 'b', between that and an archway leading to one of the passages in the core; see also Zink 2012: 394 Fig. 5, plan and 'view from SE' to the left of 'f'.

<sup>44</sup> e.g. mosaic flooring on the SE side of mound A (Lugli 1965: 268 fig. 110) and in tunnel A2 (Carettoni 1966-7: 69). Both are located at a similar level, and date from about 60-50 BC (Lugli).

<sup>45</sup> Pinza 1913:209-10, 220; also Pinza 1910: 28-30, pointing out that the SW corner of the hill is the closest to the Forum Boarium and the river, and was quarried for building materials throughout the middle ages, causing major landslides, which exposed the older stone structures buried deeper in the hill, leading to much further quarrying in the 15th and 17th centuries.

<sup>46</sup> Lugli 1965: 276 Fig.113; Zink 2008: 56 Fig. 10. Deglane indicated the outer two on his actual state plan in 1885-6 (see note 10) but may not have seen the other two, perhaps hidden at the time by Rosa's stairs.

<sup>47</sup> Zink 2012:389 '...it was never questioned over 150 years for a single, good reason: a series of enormous foundation holes indicates the location of the temple's columnar facade'.

<sup>48</sup> Zink 2008: 56 fig.10.

<sup>49</sup> Deglane 1888: 130. The columns had been mounted by Rosa on top of the ruin, and were of tufa, with traces of stucco and red paint, and have since been removed. Middleton 1892: 164 gives their diameter as 3 feet 3 inches (0.99 m).

<sup>50</sup> Lugli 1965: 279f. Zink 2008:61, revised in Zink 2012: 393.

narrower spacing still. This, too, is not unknown, but the spacings that resulted, like those at the front, were not very rational.<sup>51</sup>

We shall return to the question of the size of the column and the spacing of the temple colonnades again below, but to stay with the foundations for the moment, the idea that the walling which once occupied the holes at (K) could support a colonnade is structurally very improbable. Zink refers us for comparanda to the temple of Apollo Sosianus, another Augustan temple in Rome, and what he calls the 'Augustan Pantheon'.<sup>52</sup> The latter was not in origin a foundation but a standing wall of rusticated travertine masonry, subsequently re-used as a foundation when the ground level was raised, with some solid tufa rubble infilling here and there.<sup>53</sup> On the temple of Apollo Sosianus, it is true, some of the (very narrow) spaces between the travertine foundations of the lateral colonnades were evidently filled with concrete,<sup>54</sup> though we cannot tell whether, at a higher level, the travertine foundations were not braced by stone or concrete vaults (as on the Augustan rebuild of the temple of Castor and Pollux on the Forum<sup>55</sup>). The foundation of Apollo Sosianus' hexastyle façade, however, was a continuous wall, of normal Augustan type, composed of two types of stone, the harder travertine placed under the columns and the softer tufa filling the gaps. That the two central columns of the façade of Apollo on the Palatine would each be given an individual foundation, and the others would be set in pairs on similarly isolated footings, all adrift in the sea of concrete infill that is mound B, makes very little sense.

Actually, to my eye, in plan the holes at (K) look more like a monumental entrance wall: the outer rectangles can be read as short side walls, between which the two central holes represent a doorway, formed of two square pillars<sup>56</sup>. The proportions and spacing would suit an atrium or a dining room in a wealthy aristocratic house, of the sort that is known to lie beneath the temple. With the eye of faith one can detect in Zink's drawing the imprints of rustication.<sup>57</sup> We cannot tell how much higher the walling rose within the Augustan concrete, whether it made contact with the level of the temple floor, but it is perhaps no coincidence that the present tops of the holes (c. 49.40 masl) are just slightly lower than the top of the wall we noted earlier embedded in A (see above and Fig. 5 A1/A2). Like that wall, therefore, the walling in K could have been something left in place by the Augustan builders to add reinforcement to their concrete infill under the temple floor and contribute to the stability of the SW end of the site, not supporting any particular part of the temple in elevation. The actual SW limit of the temple coincided instead with the outer edge of the concrete of mound B where gap F provides the more suitable location for a continuous stereobate foundation wall of normal Augustan type. Whether that wall will have supported the facade of the temple or the rear of the cella is a question that can only be answered by reconstructing the superstructure in plan and elevation.

<sup>51</sup> see below, notes 82 and 84.

<sup>52</sup> Zink 2008:49, repeated in Zink 2012: 389. By 'Augustan Pantheon' he means the building whose walls were found in excavations beneath the Trajanic/Hadrianic porch by Luca Beltrami in 1898. cf. *LTUR* 5 (1999), 280-3 s.v. Pantheon [E. La Rocca].

<sup>53</sup> Beltrami 1898: p. 47 fig. xiv. The walling was at least 3 metres thick, and had already been damaged and repaired before. The rubble packing is filling a door, window or recess.

<sup>54</sup> A.M. Colini, 'Il tempio di Apollo' *BullCom* 68, 1940, 16 and 13 fig. 4

<sup>55</sup> Nilson *et al*, 2008, pl.I.1. cf. Vitruvius on column foundations (3.4.1) recommending vaulting.

<sup>56</sup> Zink 2008: 56 Fig. 10. Zink 2012: 369 and section drawings, 394 Fig. 5 and 396 Fig. 7. The length of the side walls is 4.30 m., which is the same length as his estimated axial distance between the two central holes (4.28 m). The three intervals separating the two central elements from each other and from the side walls are narrower but all equal. That is, as a standing wall it has a simple tripartite geometry popular in Roman domestic architecture.

<sup>57</sup> In date and layout the underlying house of 'Augustus' or 'Octavian' is often compared to the Villa at Oplontis, whose central wing has a large atrium and a dining room on axis with one another, see A & M. De Vos, *Pompeii, Ercolano, Stabia* (Guide archeologiche Laterza, Bari 1982): 250-4 nos 5 and 21 on plan (251).

### The architectural order

As the foregoing will have made clear, nothing of the temple's superstructure, which ancient writers tell us was constructed entirely of white Italian (Luna) marble,<sup>58</sup> survives in situ. The fire that marked the end of the temple's life in AD 363 probably signifies that the building was not left to collapse of its own accord, it was dismantled and the site cleared, though some of the marble may have been employed in the building that replaced it (see above) and thus remained in the vicinity. Fragments of white and coloured marble and other stones are scattered in some quantity on and around the archaeological site today, but could have come from anywhere on the Palatine hill; very few can be identified as certainly belonging to the temple. Apart from the two pieces of marble door frame already mentioned, found in the fill of gap G, the principal elements are three: two fragments of colossal Corinthian capitals, very damaged, without a specific findspot, currently displayed on the wall beside the path to the 'House of Livia' (Fig. 8a-b)<sup>59</sup> and a badly damaged colossal fluted column drum first noted by Lugli lying in the bottom of the large recess in the side of mound B (Fig. 4 L),<sup>60</sup> now lifted and mounted upright on the ruin (Fig. 9).

**The capitals.** The style of the capitals, despite their condition, is early Augustan, both belonging to capitals made in two halves (a practice characteristic of the Augustan period), reasonably compatible in size with each other. One is the upper half of the capital of a semi-column, 0.87 m. high, the other the lower half of a different capital, 0.77 m. high, possibly from a three-quarters round column. A detailed study by Heinrich Bauer in 1969 combined the two elements to produce a hypothetical capital in the round c. 1.64 m (5½ Roman feet, henceforth RF) high, matching those on the temple of Apollo Sosianus (1.65 m), similarly made in two halves.<sup>61</sup> On Apollo Sosianus the dimension is part of a column which measures 14.76 m (50 RF) overall (base, shaft, capital), with a lower diameter one tenth of that: 1.47 m (5 RF). The proportions of Bauer's reconstructed capital, however, are very unusual, with the volutes at the top projecting less than the second row of leaves. This raises the question whether the combination of the two different halves is actually a reliable guide to the height of the capital, especially since the lower half of the three-quarter capital has a clamp on the top, having apparently been cut down for some secondary use<sup>62</sup>. That is, we should perhaps take only the upper half of the semi-capital and multiply its height by 2, which would give a height of 1.74 m. (close to 6 Roman feet). The reconstructed widths of the capital might therefore also be revised in proportion.

**The column drum.** Two-thirds of the circumference of the drum (Fig. 9) are lost and the fluting is badly damaged; only three of the fillets between the flutes are preserved for short distances to their full relief height; but the depths of the flute channels survive and show signs of an outward flare (at the top end as presently mounted) which means the drum comes from one end of the column shaft, either the top or the bottom. Both Lugli and Zink opted for the bottom.<sup>63</sup> The diameter was measured by Lugli as 1.45 m, which he rounded up to 1.48 m (5 Roman feet), observing that it matched the lower diameter of the temple of Apollo Sosianus. Zink made a scaled drawing of the drum in plan and elevation, which has increased the diameter to 1.52 m ±2 cms, but he considers that, too, could equate to Apollo Sosianus, whose

<sup>58</sup> Virgil *Aeneid* 6,69: *Tum Phoebe et Triviae solido de marmore templum instituat* 'Then will I found a temple of solid marble to Phoebus and Trivia'; Servius *ad Aen* 8, 720 : '*Caudentis limine Phoebi*' in templo Apollinis in Palatio de solido marmore effecto, quod adlatum fuerat de portu Lunae 'in the temple of Apollo on the Palatine made of solid marble brought from the port of Luna' (i.e. Italian marble from Carrara).

<sup>59</sup> probably found by arch. Ciacchi in the 1920s (cf. Carettoni 1966-7: 287). Photographs were published by E. Wiegand in 1924 and by L. Fagerlind in 1932 (see Bauer 1969: 182 n.2).

<sup>60</sup> Lugli 1965: 276-7 fig.117 F. The hole was probably cleared by Bartoli in 1937 (cf. Carettoni 1966-7:61)

<sup>61</sup> Bauer 1969: 198 Taf. 62; for Apollo Sosianus see Colini 1940:fig.10 (the figure of 1.16 m given by Zink 2008:59 table 1 is presumably a typo).

<sup>62</sup> see plan of upper surface, Bauer 1969:Abb 1.

<sup>63</sup> Lugli 1965: 276; Zink 2008:51.

dimension he gives as 1.50 m.<sup>64</sup> Lugli does not explain how he arrived at his diameter, while Zink says he obtained his by 'adding to the diameter measured at the flute channels the height of the flutes'.<sup>65</sup> He does not supply the actual figures in either case, but he presumably measured the diameter across the top as mounted (which a line across the plan view in his scale drawing seems to indicate), since that will have been the only side of the drum accessible to him, and then measured how far the surviving fillets projected.<sup>66</sup> But the top end of the drum as mounted is where the flutes are beginning to flare, as can be detected in his scale drawing, while he reports that the diameter is at its widest about 80 cms down from the top ( $1.53 \pm 2$  cms). In fact from his scale drawing it appears to be even larger than that at the bottom edge (c. 1.59 m). Interestingly, though perhaps fortuitously, the latter is close to a dimension given by Bauer (1.60 m).<sup>67</sup>

Thinking that the drum must come from the lower end of the shaft, Zink declares that 'today therefore, the drum is set upside down: the current top side with bracket [sic] and overflow channel is the original bottom'. Actually this cannot be right, once one considers the evidence of the dowels which pinned the drum in place. The top surface has only one, rather larger, central dowel, to which Zink's 'overflow channel' (Überflußkanal) runs. This is in fact the feed- or pour-channel for introducing molten lead to fix the lower end of the dowel in place once the join has been closed, as was standard practice in Hellenistic and Roman architecture from the 3rd century BC onwards.<sup>68</sup> Feed channels have no purpose on the underside of drums.

Hence, this drum must come from the top of the shaft – it is correctly mounted – confirmed by the single central dowel hole, which is usual for keying the capital. The lowest drum, set on the base, would have had two (or more) dowels, as would any drums in the middle of the shaft.<sup>69</sup> The profile that Zink so carefully reconstructed, swelling out further towards the bottom of the drum, is exactly what should be expected of the neck of the shaft, and his observation that some of the flutes had never received their final finish<sup>70</sup> may also be noted. In a building of such prestige, it is unlikely that the lower ends of the flutes would be left in such a state, whereas at the neck, 15 metres or more above eye level, some lack of finish might pass unnoticed.

Given that the diameter for the drum (in Zink's estimate c. 1.50-1.54 m) represents only the upper diameter of the column shaft and not its lower diameter, Palatine Apollo's columns cannot have matched those of Apollo Sosianus. Even if their capitals were of the same height (assuming Bauer's combined height is secure), and we leave the overall height at around 50 RF, the shafts and bases must have been considerably thicker (Apollo Sosianus' columns have an upper diameter of only c. 1.28 m). The precise thickness is not easy to arrive at, given the uncertainties concerning the precise diameter of the drum, but was certainly much greater than

<sup>64</sup> Zink 2008: 51 and 53 Fig. 6. The figure of 1.50 m for the lower diameter of Apollo Sosianus given in his Table 1 (ibid p. 59) is said to come from Colini 1940, but Colini (cit. here n. 54) gives 1.47 m.

<sup>65</sup> Zink 2008: 51.

<sup>66</sup> An easier way to determine the diameter of a fluted column at any given point is to measure the width of a flute, and the width of a fillet (taking mean values for both from a number of different ones, as they will vary slightly), add them together, multiply by 24 (the number of flutes and fillets on a normal column) to give the circumference, then divide that by  $\pi$  (3.142). In the case of the Apollo temple drum there are not enough fillets preserved for this method to be any more reliable than Zink's. He does not give any measurements, but scaled off his drawing the ratio between the widths of the flutes and fillets appears to be 10:3, as found on the Temple of Hadrian (Claridge 1983:123).

<sup>67</sup> Bauer 1969: 190, n. 24, apparently taking Lugli's '*verso l'imoscapo*' to mean the flare at the upper shaft, whereas it means the lower (*sommoscapo* would be the Italian for the upper shaft flare).

<sup>68</sup> French term is *canal de coulée*. Martin 1965: 291-6 esp. 296; cf. also *Dictionnaire methodique de l'architecture grecque et romaine*. eds. P. Gros, F. Coarelli and R. Martin (3 vols, Rome 1985-98) vol. I, 114 and pl. 29.3.

<sup>69</sup> set nearer to the margins, as on the (real) underside of the column drum here. The column drums from Mars Ultor in the Forum of Augustus which are lying on the ground provide good examples: see Ganzert 1996, vol. 1, inv. 2062, Taf. 76.1 (top, with feed channels) and 76.3 (underside, without channels). Compare also Taf. 76.5 and 76.6, the under and upper sides of a capital block (inv. 2061) where only the top has feed channels; as does the top of a fragment of column base (Taf. 85.1).

<sup>70</sup> Zink 2008:51.

either Lugli or Zink imagined, and this radically alters the terms on which the plan and elevation of the temple should be reconstructed.

Roman architects generally used the lower diameter of the column shaft (henceforth LD) as a key component of their design system: the overall height of the column and the particular dimensions of its three components (capital, shaft and base), and the distance between one column and the next, were dimensioned and proportioned as multiples of the LD, which often corresponded to a round number or a simple fraction of Roman feet (1 RF = 0.296 m).<sup>71</sup> The system permitted considerable variations from one columnar order to another, and between the individual elements in a given order: the skill of the architect lay in his ability to manipulate arithmetic and geometry to satisfy the requirements of the site, the nature of the particular deity being honoured, the taste and resources of the patron, and the desire that the outcome should be an individual product. We are fortunate to have one Roman architect's view of some of the design procedures involved, explained for elite patrons, in the treatise by Vitruvius, *De Architectura*, which was addressed to the emperor Augustus and written in exactly the period that the temple of Apollo on the Palatine was being built, possibly in the same year that it was dedicated.<sup>72</sup>

Vitruvius' Book Three is concerned with temples, giving specifications for consolidating the ground and building foundations, the different plan-types and architectural orders that can be used, and provides instructions for the proportioning of the columns and their spacing to form colonnades. At 3.3.4 he describes five options for the spacing, in which the LD is multiplied by 1½ (pycnostyle), or 2 (systyle), or 3 (diastyle) or more (araeostyle) or -his own favourite- a combination of 3 for the central pair of columns and 2¼ for the others (eustyle). The space thus defined is the width of the open space between one column and the next (the 'intercolumniation'), rather than the distance between their centres (inter-axial). The width of the space between the columns is a practical consideration if people are to walk between them (hence the eustyle option), but naturally produces very different visual effects.<sup>73</sup> Vitruvius advises in 3.3.11 that in the wider spacings, the columns should be made thicker in proportion to their height, or they will appear too slender, and in 3.3.4, in relation to diastyle spacing, the widest option in stone,<sup>74</sup> naming a certain temple of Apollo and Diana as an example, he adds a word of caution about the architraves (the stone beams which bridge the gap between one column and another to support the upper entablature and the roof):

*diastyli autem haec erit compositio, cum trium columnarum crassitudinem intercolumnio interponere possumus, tamquam est Apollinis et Dianae aedis. Haec dispositio hanc habet difficultatem quod epistylia propter intervallorum magnitudinem franguntur.*

'The diastyle arrangement will be when we can insert the thickness of three columns in the intercolumniation, as in the temple of Apollo and Diana. This scheme involves the danger that the architraves may break on account of the great width of the intervals'.

Until now, this passage has not been thought to refer to the temple on the Palatine. Lugli automatically ruled it out, on the grounds (1) that his reconstruction had proved the temple was not diastyle (!), (2) the reference could be to the temple of Apollo Sosianus, though that is clearly not diastyle either, and (3) Vitruvius says the architraves would break.<sup>75</sup> There is a chance that Sosianus' temple was diastyle in an earlier phase, though why Vitruvius would be

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<sup>71</sup> Choisy 1909; Wilson Jones 2000: passim, esp. chs III, VI and VII.

<sup>72</sup> Gros 1976: 214 (32-28 BC); Wilson Jones 2000: 34 (c.30 BC); see also Wiseman 2013, who kindly provided a copy of his article in advance of publication.

<sup>73</sup> The builders would no doubt have wanted to know the inter-axial spacing as well (the distance between the centre of one column and the next), which they could find that by adding another lower diameter to the sum.

<sup>74</sup> At 3.3.5 Vitruvius explains that in araeostyle temples the trabeation had to be made of wood, not stone or marble for the distances were too great.

<sup>75</sup> Lugli 1965: 277f. n. 26



referring to that and not the contemporary Augustan temple is not so clear. And failing that, it has been supposed that there was a third Apollo temple, not otherwise recorded.<sup>76</sup> As Peter Wiseman has recently clarified, however, there is direct ancient testimony to the contrary, there were only two temples in Rome when Vitruvius was writing, and furthermore there is good reason to believe that Apollo Sosianus honoured the god on his own as '*Medicus*' (the healer); it would never have been referred to as 'Apollo and Diana', whereas the Palatine temple certainly was.<sup>77</sup>

Lugli's last point, about the architraves, is certainly an important consideration, but not proof, as he seems to be implying, that large diastyle temples were never built. On the contrary, they could have been much in demand; it just means that there will have been an upper limit to the scale on which they could be built, their architraves will have required particularly strong and fault-free blocks of marble, and their chances of surviving intact after 2000 years are considerably lower than temples with columns in systyle or pycnostyle spacing. The marble of the Apollo temple, to judge by the surviving elements (and remarks by ancient writers<sup>78</sup>) was the white Italian marble from Luna (modern Carrara), which is renowned today for its compressive and tensile strength.<sup>79</sup> Its quarrying had started under Julius Caesar and supplies were beginning to reach Rome by the 40s BC<sup>80</sup>. It is likely that Octavian, already in the 30s BC, before he achieved outright power, could and would command the best. If any large temple in Rome could be diastyle, it was the temple of Apollo and Diana.

So, there are really no valid grounds on which to discredit Vitruvius' statement, and we cannot simply ignore it. Moreover, with the discovery of the substantially greater thickness of the columns, the burden of proof has shifted. The difference of 26 cms between the upper diameter of Apollo Palatinus and the upper diameter of Apollo Sosianus is far too large to be treated as normal variation, or aberration. Proportionately, it is about the same as the difference that Vitruvius recommends (*De Arch.* 3.3.10) between the thickness of diastyle columns and their overall height (a ratio of 1:8.5) and pycnostyle columns and their overall height (a ratio of 1:10). Apollo Sosianus is spaced in pycnostyle, its LD is 1.47 (5 RF), its overall height (base+shaft+capital) is 14.76 (50 RF) 1:10 exactly as Vitruvius recommends. The proportion between the upper and lower diameters is 7:8, as he recommends (3.3.12) for column shafts between 40 and 50 feet high. A still larger pycnostyle Augustan temple, the temple of Mars Ultor in the Forum of Augustus obeys precisely the same rules. Its overall height is 17.76 m (60 RF), its shaft is 14.76 (50 RF), the LD is 1.77 m (6 RF), 1/10 of the overall height, and the ratio of the lower to the upper diameter is 8:7 (UD 1.53-1.55 m).<sup>81</sup> It will be noted that the upper diameter on Mars Ultor is very close to Zink's diameter for the Apollo column drum: 1.52 m  $\pm$  2cm (1.50-1.54). If the same 7:8 ratio is applied, the LD of Apollo Palatinus' columns would be 1.71-1.76 m. though it is improbable that they would be as tall as Mars Ultor's. If we take an overall column height of 50 RF (14.76) instead, as indicated by the correspondence between the height of Bauer's capital and that of Apollo Sosianus, and divide it by 8.5 to get Vitruvius' diastyle proportion for the LD, the result is 5.88 RF or 1.74 m, which would correspond at 7:8 to

<sup>76</sup> Zink 2012: 402 citing F. Castagnoli and P. Gros in support.

<sup>77</sup> Wiseman 2013 collects and analyses all the relevant literary evidence. I am very grateful to him for allowing me to see his text prior to publication. The key text is Asconius (c. AD 70), commentary on Cicero's speech of 64 BC *In toga candida* (90C): 'Just so you don't go astray because in our times the best known temple of Apollo has been the one on the Palatine, you must be warned that that is not the one Cicero refers to, since it was built many years after Cicero's death by Imperator Caesar, whom we now call Divus Augustus, after his victory at Actium. The one indicated [by Cicero] is the one outside the Porta Carmentalis between the Forum Holitorium and the Circus Flaminius. At that time that was the only temple of Apollo in Rome.' (trans. Wiseman 2013). For references to Palatine Apollo in the names of Apollo and Diana: Virgil *Aen.* 6.69-74; Horace, *Carm. Saec.* 61-76 (see Wiseman 2012:374-5).

<sup>78</sup> see above n. 58.

<sup>79</sup> D. Attanasio, *Ancient White Marbles* (Rome 2003): 165-70.

<sup>80</sup> EAH s.v. Carrara [A. Claridge].

<sup>81</sup> neck scaled off Ganzert 1996, Beilag 3, other dimensions from Wilson Jones 2000: 222-4, tables 1-2.

1.53 m, or the same as Zink's diameter for the neck. We may also note that 1.74 m is a possible alternative height for the capital (see above), which in normal Corinthian should match the LD. Certainly, 6 RF (1.77 m) would seem to be a reasonable value to use as the LD for the purposes of testing the spacing against the actual dimensions of the stereobates.

It is quite telling that none of the column-spacings reconstructed by Lugli and Zink on their foundation in K is a simple multiple of their column diameter or translates into a round number or simple fraction of Roman feet. Lugli found his intercolumniation (2.67 m) 'a bit more than pycnostyle, a bit less than eustyle' and speculated that the temple builders had been using rules carried over from some older tradition in stones other than marble.<sup>82</sup> Zink, while accepting that his usual comparandum, the temple of Apollo Sosianus, is quite evidently Vitruvian,<sup>83</sup> saw his three different spacings as significant proof of the 'selectivity of Vitruvius' approach.<sup>84</sup> Of course, if Lugli and Zink chose the wrong foundation in (K) and also used the wrong end of the column, then it is hardly surprising that their calculations produced some strange results. With a new set of foundations and a new size of column, we shall now see if things might work out very differently.

## II. A 'Vitruvian' reconstruction

To start briefly from scratch, the reconstructed plan of the podium (Fig. 7) will only permit a fairly simple plan type: *in antis*, or prostyle, or pseudoperipteral. *In antis* (the cella side walls project forward as *antae* to form a porch, which has columns only at the front, in the space between the *antae*) can probably be ruled out as a form best suited to lesser shrines and very small temples. Prostyle (the cella side walls do not project forward, the porch is as wide as the outer walls of the cella, and formed of columns) is a possibility, worth bearing in mind. The capital from a semi-column might come from the front wall of a cella with a prostyle porch. However, the three-quarters Corinthian capital (Fig. 8b), if that is what it is, is a strong indication of a pseudoperipteral (a prostyle temple where the porch columns continue as semi-columns along the sides and back of the cella, with three-quarter versions at the outer four corners). The relatively narrow dimension of the central cross wall (G) compared to the outer perimeter may also be an indication of a pseudoperipteral, for the cella walls are usually thinner (corresponding to the other half of the semi-columns), which maximises the space inside the cella.<sup>85</sup> The pseudoperipteral option is perhaps the most likely, and will be pursued here, for it is the most common type attested in Rome, employed for all sizes of temples, large and small, although Vitruvius suggests it was new to him.<sup>86</sup> In most pseudoperipterals, even when much less of the foundations survive, it is quite easy to tell from the plan which end carried the cella because of its greater length. In the case of Apollo, however, although end A has the slight advantage over end B, it is not nearly enough to be sure. Only the reconstruction of the colonnades can provide the answer, for the centre of a column should coincide with the outer corner of the front wall of the cella.

<sup>82</sup> Lugli 1965: 279-80. There are a number of inconsistencies between the figures reported in Lugli's text and his plans, with the result that Gros 1976: 122 and 214 n. 153 reported the spacing as 'légèrement supérieurs à deux diamètres et demi', or 'presque deux diamètres'; his own drawing of the façade made it systyle. Cf also Quenemoen 2006: 234.

<sup>83</sup> Zink 2008: 61 admits it is 'an almost perfect 'Vitruvian' *pycnostylos*' though his tables 1 (on p. 59) and 3 (p. 61) quaintly give the ratio of its column diameter:column height as 1:9.99 (not simply 1:10).

<sup>84</sup> Zink 2008: 61; adjusted in 2012: 393, tabulating the ratio of LD to intercolumniation at centre front as 1:815 centre sides as 1.71 and sides 1.58 (give or take 5 cm in all cases), which he suggests could be 7:13;7:12 and 7:11 respectively.

<sup>85</sup> Vit. 4.9.6 'Others actually remove the temple walls, transferring them to the intercolumniations, and thus, by dispensing with the space needed for a pteroma [exterior colonnade], greatly increase the extent of the cella. So, while leaving all the rest in the same symmetrical proportions, they appear to have produced a new kind of plan with the new name 'pseudoperipteral' (trans. M.H. Morgan 1960).

<sup>86</sup> see preceding note, and Wilson Jones 2000:65.

The main constraints we have to work within are the inner edges of the external stereobate walls, as indicated by the outer margins of their concrete infilling, preserved as mounds A and B, which measure 19.2 x 41.60 m (see Fig. 7). The inside edge of the colonnades ought to stand to the outside of those margins, with a small offset between the top of the tufa foundations (probably capped with travertine) and the marble superstructure proper, and should include the bases of the columns, which are wider than the column shafts. Therefore, before testing the hypothetical LD of 1.77 m (see above) and the proposition that the spacing was diastyle, the inner margins have to be increased first by the offset and then by the extra width required for the projection of the bases. Vitruvius advises (3.4.1) that the stereobates should be 1½ times as wide as the columns that are to stand on them, so that the foundation will be wide enough to support the full width of the column bases as well. With columns of 1.77 m, multiplied by 1.5 the top of the stereobates would be 2.65 m, which is the actual width of the stonework preserved down the eastern flank of mound A. No bases survive, but they will have been of Attic type, circular, on a square plinth of the same width, and their projection according to Vitruvius (3.5.3) should be 3/16 of the LD, or 0.33 m. (that is the case on Mars Ultor, which has the same LD). Taking that as a guide, the offset between the outer edge of the stereobate and the marble plinth would be 0.22 m on either side. As Fig. 7 shows, the stereobates may have been considerably wider than 2.65 m. - 3.0 or possibly 3.5 m. wide - the extra thickness can be allocated to the walls of the podium itself, which will have been clad in marble, with mouldings at top and bottom. Thus estimated, the increased inner margins outside which the colonnades should stand are 20.30 m ( $19.2 + 0.44 + 0.66$ ) across the front and back, and 42.70 m ( $41.6 + 0.44 + 0.66$ ) down the sides. Dividing those distances by the LD we obtain an indication of the number of our column diameters that will fit:  $20.30 \div 1.77 \text{ m} = 11.46$  diameters.  $42.70 \div 1.77 \text{ m} = 24.1$  diameters. Given that this is only a test, and that any one of the factors, including the initial dimensions of the concrete from which the exercise started, could be given a slightly different value, the result is encouraging. A colonnade of four columns in diastyle spacing comprises 13 diameters in total; 11 diameters is the number to the inside faces of the outermost columns (see Fig. 10). A colonnade of seven columns in diastyle facing comprises 25 diameters to the outsides, 23 to the insides. The extra half diameter on the short side (equal to .88 m.) is not enough to allow for the offset and projection of the bases on the inside of the outer columns (1.10 m), but the extra 1.1 diameter (1.95 m) on the long sides would be plenty.

Four by seven columns is a common layout for Roman pseudoperipteral temples and conforms to Vitruvius' recommendation (3.4.3) that the number of intercolumniations at the front should be doubled down the sides, not the number of columns, so that the length will be twice the breadth. The stereobates as currently reconstructed do not quite match that specification, the length is greater than twice the breadth (by some 3.4 metres), which suggests that some adjustment should be made somewhere, though the actual dimensions on the ground need to be verified before deciding where and how. In the meantime, we have a strong indication that the temple could have been tetrastyle rather than hexastyle, its columns spaced in diastyle. The centre point of the side colonnades, i.e. the centre of the fourth column, which should line up with the front of the cella wall, could indeed coincide with the centre point of the present length of the ruin, that is, the NE face of the gap G between mound A and B. Mound B would thus be cella, its interior a perfect square, and mound A the porch, three columns deep. Lastly, we need to consider the length that the architrave blocks would have to span unsupported at this scale. Their overall length would match the inter-axial distance between the columns (4 diameters or 7.08 m. @ 1.77 m. LD). At either end that distance would be reduced by half the width of the load-bearing surface on top of the capital, which we do not know, but would probably correspond to half the width of the base, since the two are usually related. If the bases were 2.43 m, as used in the test, then half that would be 1.22 m, and the unsupported distance would be 4.65 m. That is well within the maximum distance of 5 metres that modern scholars would judge to be possible.<sup>87</sup>

<sup>87</sup> I am grateful to Dr Janet Delaine for her advice.

The final components necessary to complete the reconstruction of the temple in plan and elevation are the height and width of the podium and the front steps. Our ancient sources suggest that the steps, too, were of solid white marble,<sup>88</sup> and indeed there is no visible trace of them. They have been lost, together with all the facing from the podium. Vitruvius is vague on the subject of podiums and their height, saying only that their profiled mouldings should be appropriate to the stylobate of the colonnades they support (3.4.5). A solid indication of the height of the podium is given by the present height of mound A, the level platform on top of which can be presumed to represent the underside of the bedding of the marble floor, which will have probably consisted first of a layer of travertine before the marble itself. The present height of the top of mound A above ground level is 3.50 m; we should add about 0.50 m. for the stone bedding and the marble floor, taking the finished height to c. 4.00 m. (c. 51.50 masl), the outer blocks of which would join up with the stylobates (the marble plinths on which the column bases stood). The thickness of the marble facing and the projection of the mouldings on the outside of the stylobates, given Vitruvius's silence, can only be conjectural. Vitruvius is very specific, however, about temple steps (3.4.4): they should be odd in number, so that the ascent can begin and end on the right foot; and in his view, the rise of each step should be no more than 10 inches (24.6 cms) and no less than 9 inches (22.2 cms); the tread should be not less than 1½ feet (44.4 cms) and not more than 2 feet (59.2 cms). If the podium was 4.00 m. high, a likely number of steps is 17 and the length of the stair would be between 7.54 and 10.06 m. The distance between the front of the podium and the adjacent end of the portico in front of the entrance to the Domitianic palace is about 17.5 m., so 10 metres would be possible, though it might make for a rather tight passage, in the event that the stairs extended to the full width of the temple façade. They could have been narrower than the full width of the façade, of course, leading only to the central columns, like those of the temple of Apollo in Pompeii. On the other hand, a shorter length might be indicated by the kink in the wall of the Domitianic palace (Fig. 4 J), which has always been thought to coincide with some boundary connected with the temple,<sup>89</sup> but whose exact position I have not been able to ascertain from the available plans. A restored plan, front and side elevations, with a notional shorter stair of 17 steps, are illustrated in Fig. 11<sup>90</sup>.

## Conclusions

Although all the above indications are based on hypothesis, and the slight mismatch between the reconstructed colonnades vis à vis their reconstructed stereobates needs to be resolved (probably by a slight adjustment to the dimensions of the length and/or breadth of the concrete, or by slightly increasing the size of the column diameter<sup>91</sup>, or a combination of both), the degree of match is sufficiently close to demonstrate that, in theory at least, and in accordance with Vitruvius (surprising as that may seem), there is an alternative way of reconstructing the temple, to face NE, inwards to hill and the heart of the Palatine palace.

The choice of a tetrastyle façade in diastyle spacing on such a scale (rather than hexastyle in pycnostyle spacing, which would also have worked out, since it is proportionately half diastyle, but would have resulted in an improbable porch five columns deep) could have had many attractions. For the architect and builders, the option it offered of squatter proportions and sturdier columns may have appealed given the exposed nature of the site and its somewhat

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<sup>88</sup> Propertius 2.31.9; Ovid *Trist.* 3.1.59.

<sup>89</sup> Richmond 1914: site plan, pl. xxxv marks its position as 'terminus'.

<sup>90</sup> I am most grateful to Dr Lily Withycombe Taperell and Prof. Martin Goalen for their input into the reconstructions.

<sup>91</sup> An experiment with larger sizes for the LD found that 1.85 m (6¼ RF) would solve the problem without requiring any change to the dimensions of the concrete core, and would position the cella front wall even more securely on the NE side of G, but it would pose difficulties regarding the length of the architrave blocks required - the inter-axial distances would be 7.4 m (not impossible) but the unsupported distance would be 5.55 m, which modern experience suggests is impractical (see above).

precarious location on top of a previous building. For the emperor, his court and the public, the wider spacing also had practical advantages. It would allow people entering the porch to walk in pairs, the spoils displaced in the porch would be more visible, the columns would not obstruct the view of the cella doors (famous for their ivory reliefs<sup>92</sup>). The three cult statues would be clearly visible in their cella when the temple doors were open, and in turn would have a clear view out. It is also possible that a tetrastyle diastyle temple may have been considered more appropriate to the essentially domestic setting of the Palatine and the location adjacent to the emperor's house, not the civic setting of the Forum. In time the house was made public and the public space in front of it grew in size and acquired the character of a forum, but when the temple was first built Octavian and his architect may have chosen a tetrastyle diastyle design for its relatively modest character, relying on the sheer scale and the use of solid white marble and the temple's other embellishments to do suitable honour to Apollo and Diana.

### III. The wider setting

As reconstructed here, the temple would be set between two large open spaces (see Fig. 1), one a rectangular precinct located on an artificial extension to the hillside behind it, the other very long and relatively narrow (Fig. 1A), extending the length of the hill in front at a slightly different angle, with the palace of Domitian on one side and the Domus Tiberiana on the other. The rectangular precinct located further out from the hillside (more or less as reconstructed by Deglane, Fig. 3, but without all the steps) is axially aligned with the temple and was clearly built at the same time.<sup>93</sup> Embracing the temple from the rear but leaving it free at the front, similar to the precinct of the temple of Juno at Gabii<sup>94</sup> or the temple of Apollo and Diana at Peltuinum (perhaps modelled on Palatine Apollo).<sup>95</sup> The precinct had porticoes on three sides and is an obvious candidate for the Porticus of the Danaids, which was built by Octavian at the same time as the temple.<sup>96</sup> It reputedly had colonnades of yellow Numidian marble, between which were displayed 50 statues of the Danaids depicted in the act of killing their husbands on their wedding night, urged to the deed by their father Danaus. He had 50 daughters but one apparently disobeyed, so that there were only 49, which counting Danaus as well, makes 50 (though the story might have been made up in order to explain the number in the porticus). In the spaces flanking the temple could have been located on the one hand the statue of Apollo, in an aedicular shrine, in front of which the Senate sometimes met,<sup>97</sup> and on the other the altar surrounded by the four statues of cattle by Myron.<sup>98</sup> The area to the rear of the temple was presumably the grove, sacred to Diana, which Ovid recommended for amorous walks.<sup>99</sup> The outer dimensions of the open space would have measured 91 x c. 80 m (probably 300 x 270 RF). Ovid compares the porticus with those of Pompey, Octavia and Livia, which is credible in terms of size.<sup>100</sup>

By contrast the long court that extends at a slight angle in front of the temple is more like a forum (in fact it is about the same size as the forum square at Pompeii) and the temple occupies

<sup>92</sup> Propertius 2.31.12-14.

<sup>93</sup> See Pensabene/Gallocchio 2013 for the brickstamp and structural evidence that the ground level on the SW side of the temple was raised in the 30s BC and that the area was laid out as a garden. Wall 'M' (see Figs 4-5 here), previously a part of the underlying house, was re-used as a retaining wall in consolidating the ground beneath the higher level, not as a part of the Augustan porticus.

<sup>94</sup> F. Coarelli, *Dintorni di Roma* (Guide archeologiche Laterza), Milan 1981: 170.

<sup>95</sup> Bianchi 2011-12: figs 1, 4. The temple plan is there interpreted as hexastyle, and compared with that of Apollo Sosianus and Palatine Apollo in its traditional form (302 fig. 15) but it looks to me as if could be tetrastyle.

<sup>96</sup> Vell. Pat., *Hist.* 2.81.3; Propertius 2.31, 1-16.

<sup>97</sup> *tabula Larinas Senatus Consultum* [reign of Tiberius] 'in the porticus which is at the temple of Apollo'.

<sup>98</sup> the '*armenta mironis*' Propertius 2(3) 317-8; Coarelli 2012: 152.

<sup>99</sup> Ovid *Ars Amat.* I, 67. For the grove, see Gros 2003.

<sup>100</sup> The Porticus of Pompey (beside his theatre on the campus Martius) measured 180 x 135 m.; Octavia's (near the theatre of Marcellus) 140 x 100; Livia's (on the Esquiline) c. 120 x 80.



the position one should expect of a forum temple. The space has not been the subject of a detailed survey or architectural study since Deglane. It has the misfortune to be the line along which plans of the two main wings of the Palatine palace tend to divide, so is easily overlooked.

<sup>101</sup> The landscaping of the Palatine as an archaeological park has also contributed to its obscurity, for a line of large umbrella pines is planted on a diagonal down its length. Since the orientation of the longer space was maintained even in the Domitianic rebuilding of the two wings of the palace, it may have had a special significance. The slight difference in angle could presumably have been eradicated if the space were not already in existence, and actually more important than the temple. Deglane's solution to the situation, interestingly enough (see Fig. 3) was to open a small door in the rear of the cella of his outward facing temple (against all the rules), so that the temple could be entered from both directions. He had apparently discovered that the longer axes of the temple and the square intersect at that point. On the inward facing temple as reconstructed here, the point would correspond to the central intercolumniation of the facade.

I wonder if the space could be the 'place where Rome was founded'<sup>102</sup>, perhaps the *auguraculum/auguratorium* itself<sup>103</sup> or at any rate the *vestibulum* of Octavian's house, which contained amongst other things the hut where Romulus spent the night before taking the auspices to found Rome,<sup>104</sup> and the *Roma Quadrata*, where his augural equipment was stored.<sup>105</sup> Since the hut is also said to be in the vicinity of the stairs of Cacus, rather than the narrow alley traditionally identified as such (in front of the temple of Magna Mater) a better candidate could be the very large staircase within the Domus Tiberiana that exits on the side near San Teodoro, that is, towards the Velabrum. Then Otho's route from the temple of Apollo to join the conspirators at the temple of Saturn on the Forum in AD 68, descending via the Domus Tiberiana, which has seemed so illogical with the temple facing out from the hill, could also be explained.<sup>106</sup>

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<sup>101</sup> Coarelli 2012: 487 dismisses it as a 'punto di scarsa rilevanza urbanistica'.

<sup>102</sup> Ovid *Trist.* 3.1.31-34; Josephus *AntJ* 19.223; see Wiseman 2012: 378-9.

<sup>103</sup> Dion. Hal. 1.86.2; 2.5, see Coarelli 2012: 159-61, and 151-5. It was restored by Hadrian in AD 136: *CIL* 6. 976 ...AUGURATO[rium] DILAPS(um)/A SOLO PE[c(unia) sua restitu]it. (he repaired with his own money the ruined *Auguratorium* from the ground up).

<sup>104</sup> Tzetzes on Lycoph. *Alex.* 1232; Zonar. 7.3. This hut was not to be confused with Romulus' own hut (*casa Romuli*), which was also somewhere in the vicinity, see Wiseman 2012: 380-2 and Coarelli 2012: 119f, 156-8.

<sup>105</sup> Festus p.310L '*Roma quadrata* is a place on the Palatine in front of the temple of Apollo where are deposited all the things used for the sake of good omen in the founding a city'. This is the 'reduced' version of *Roma Quadrata*; the term is also found used in a wider sense of the Palatine as a whole. For sources and lengthy discussion of both and the likelihood that the 'reduced' form was the creation of Augustus, see Coarelli 2012: 145-61. Also Wiseman 2012:379-83 and 2014 (forthcoming). The Secular Games of AD 204 (*CIL* 6. 32327) name a *tribunal quod est ad Romam quadratam* located in *area Apollinis*. Festus (p.310L) confirms this: *Quadrata Roma <locus> in Palatio ante templum Apollinis dicitur ubi reposita sunt quae solent boni ominis gratia in urbe condenda adhiberi, quia saxo munitus est initio (inito?) in speciem quadratam* (*Roma Quadrata* on the Palatine in front of the temple of Apollo is said to be where is preserved all that which is used for good omens (augury) in the foundation of the city, and it is called this because constructed of stones in a squared shape).

<sup>106</sup> cf. Coarelli 2012: 452-3 for the problems and differing solutions that have been proposed

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# Figures

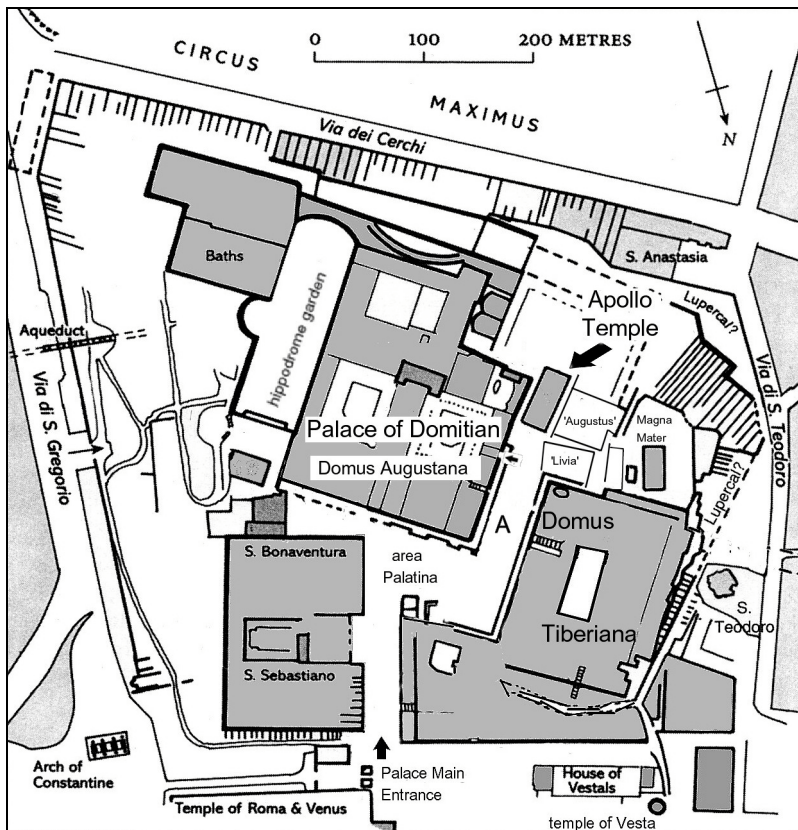


Fig. 1 Map of the Palatine Palace 2010 (A. Claridge)

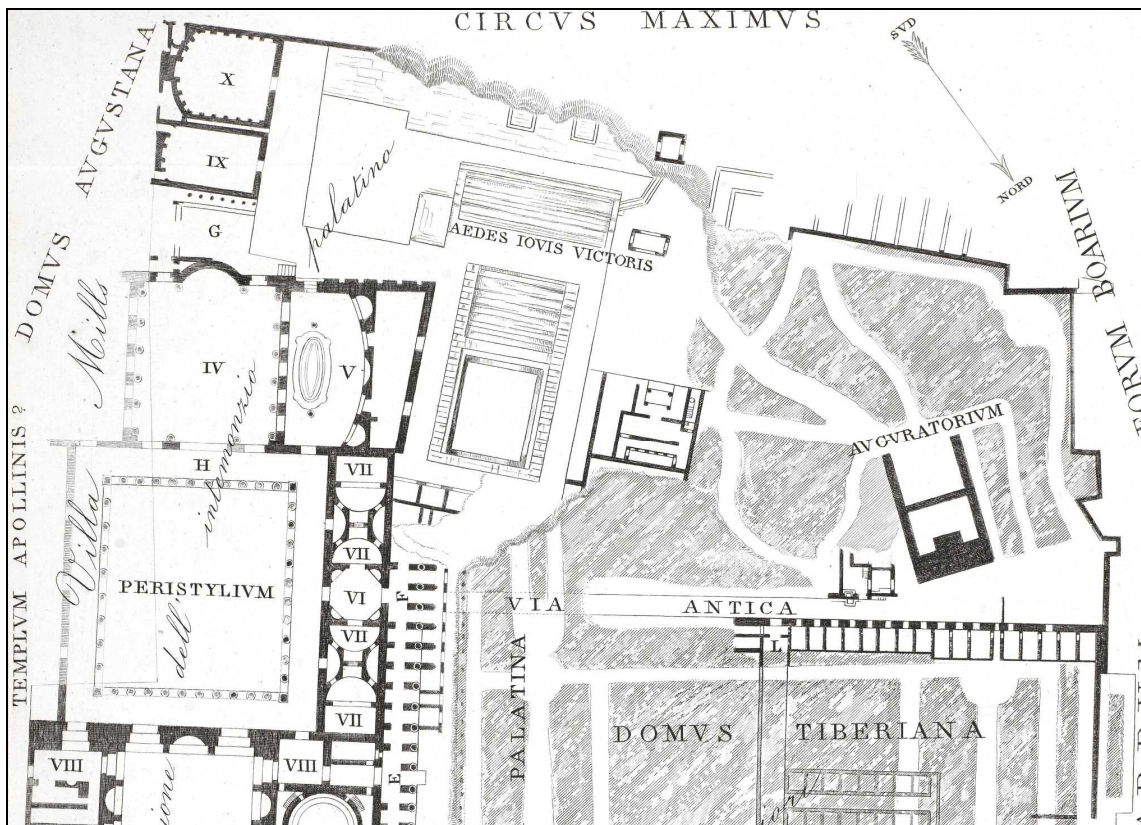


Fig. 2 Detail of Rosa's map of the Palatine showing the 'Temple of Jupiter Victor' (aedes Iovis Victoris) as excavated in 1865 (from *Monumenti dell'Instituto* 1865, tav. XXIII.1, photo: British Library, with permission)



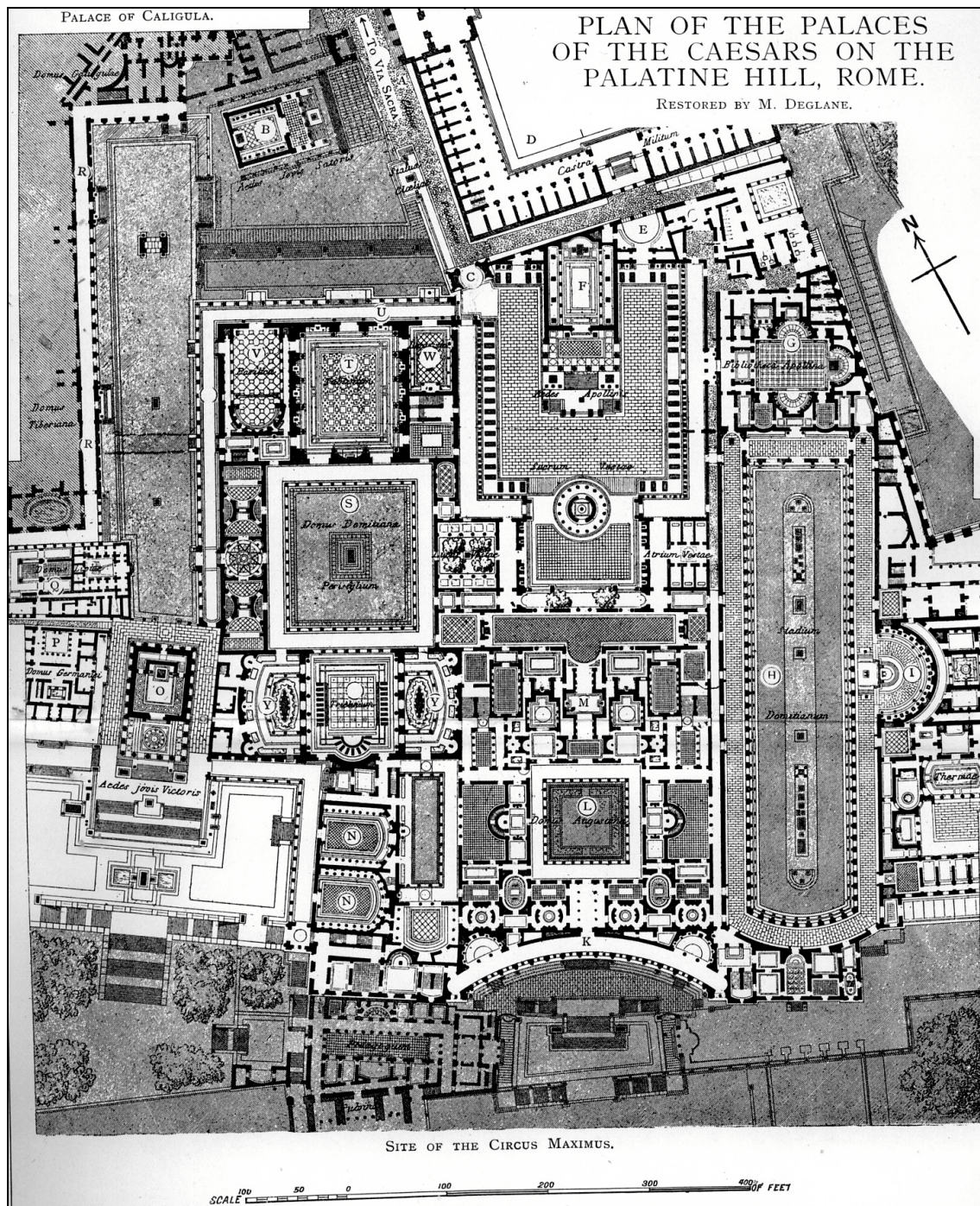


Fig. 3 Reconstruction plan of the 'Palace of the Caesars' by H. Deglane 1886 (from Anderson & Spiers 1907, 288, ill. 233). The temple of Apollo is at bottom left, labelled 'Aedes Jovis Victoris'



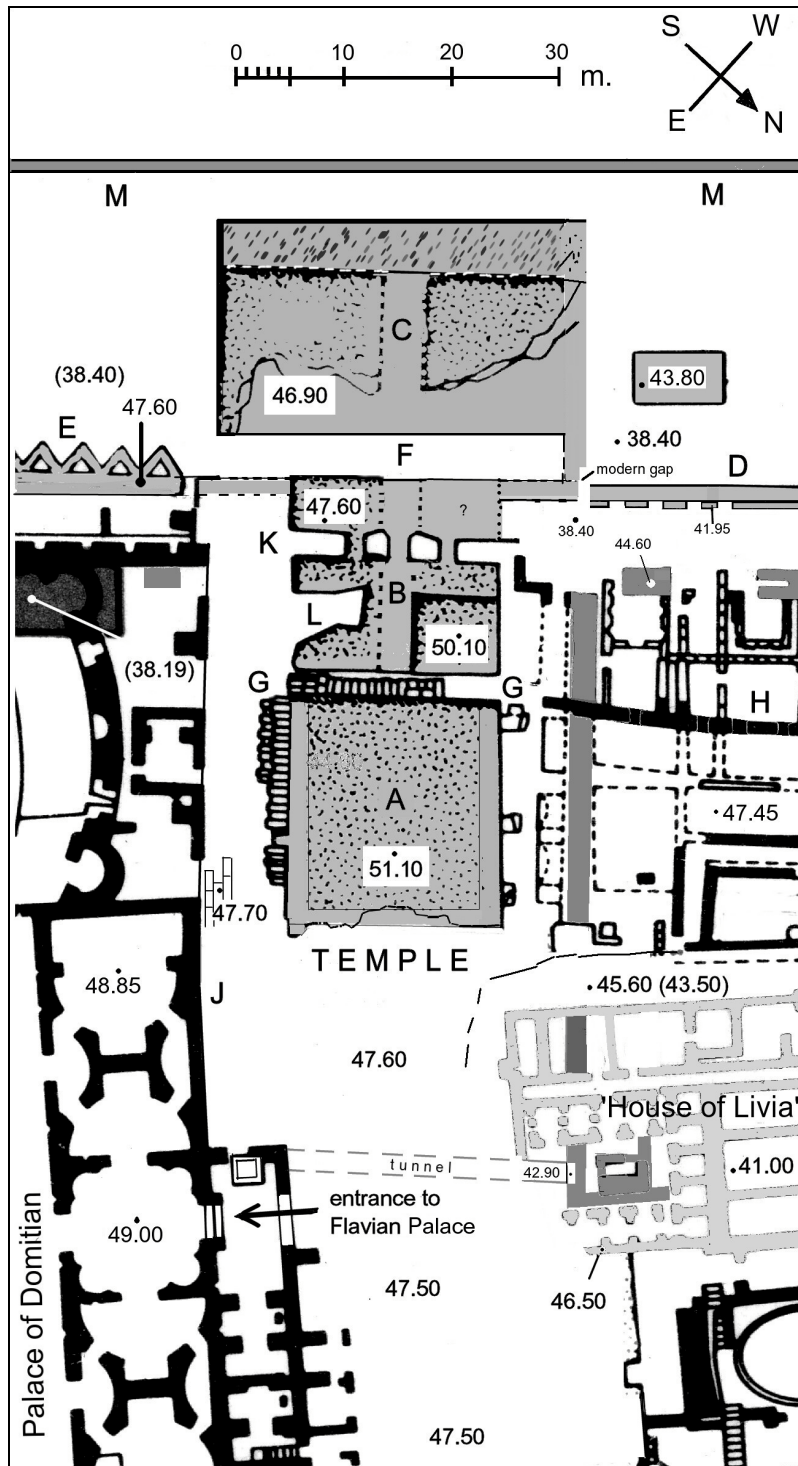


Fig. 4 Plan of the remains of the Temple of Apollo Palatinus and its immediate surroundings, with spot levels (A. Claridge)

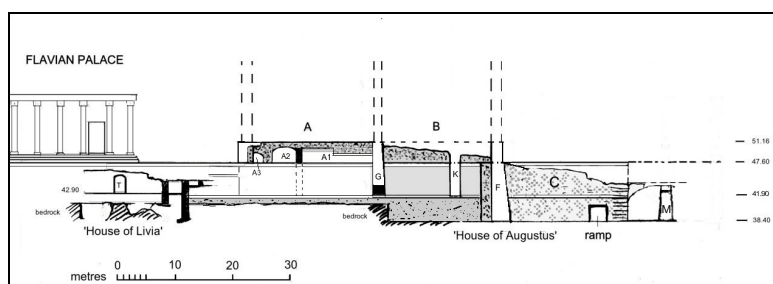


Fig. 5 Section NE-SW through site of Temple of Apollo (A. Claridge)



Fig. 6 View of site from S corner of Domus Tiberiana, showing House of Livia in the foreground, right, the podium of the Temple of Apollo in the background, right, and the Palace of Domitian in the centre and left (A. Claridge 2003)

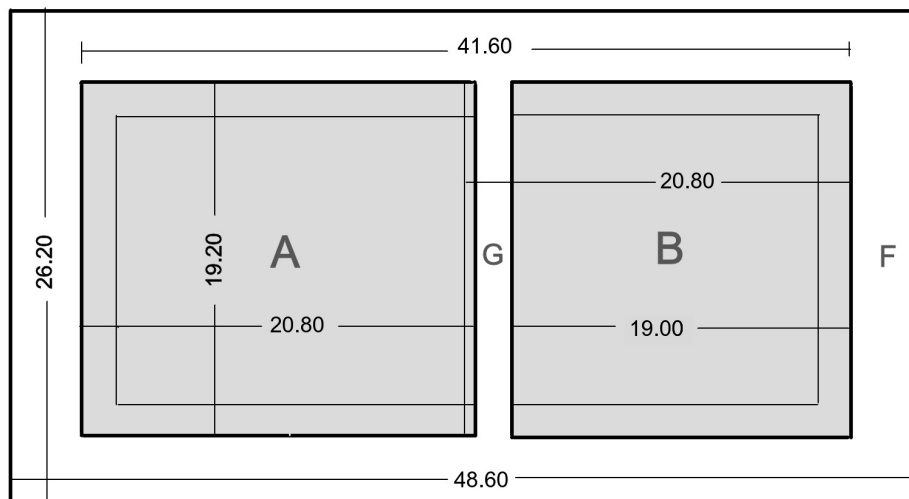


Fig. 7 Reconstruction of the plan of the Temple of Apollo at stereobate level, with dimensions (A. Claridge)



Fig. 8a-b Fragments of two Corinthian capitals, upper and lower halves, attributed to the Temple of Apollo (L. Withycombe Taperell)



Fig. 9 Column drum from the Temple of Apollo, found in hole L (L. Withycombe Taperell)

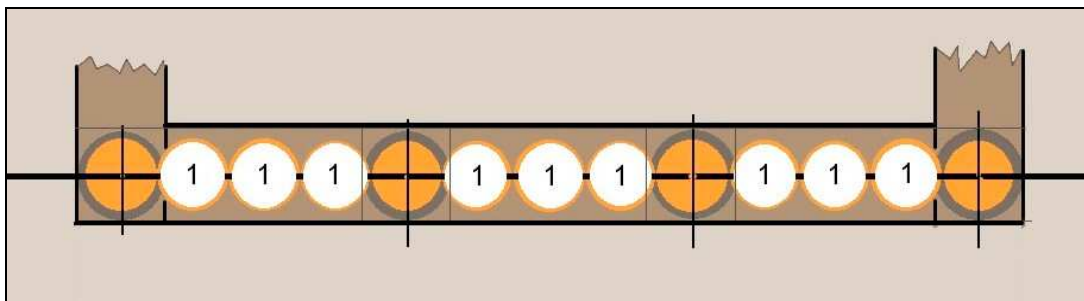


Fig. 10 Diagram to show how the 13 diameters of a tetrastyle, diastyle façade are disposed in relation to the concrete infill and the stereobate of the temple podium (A. Claridge)

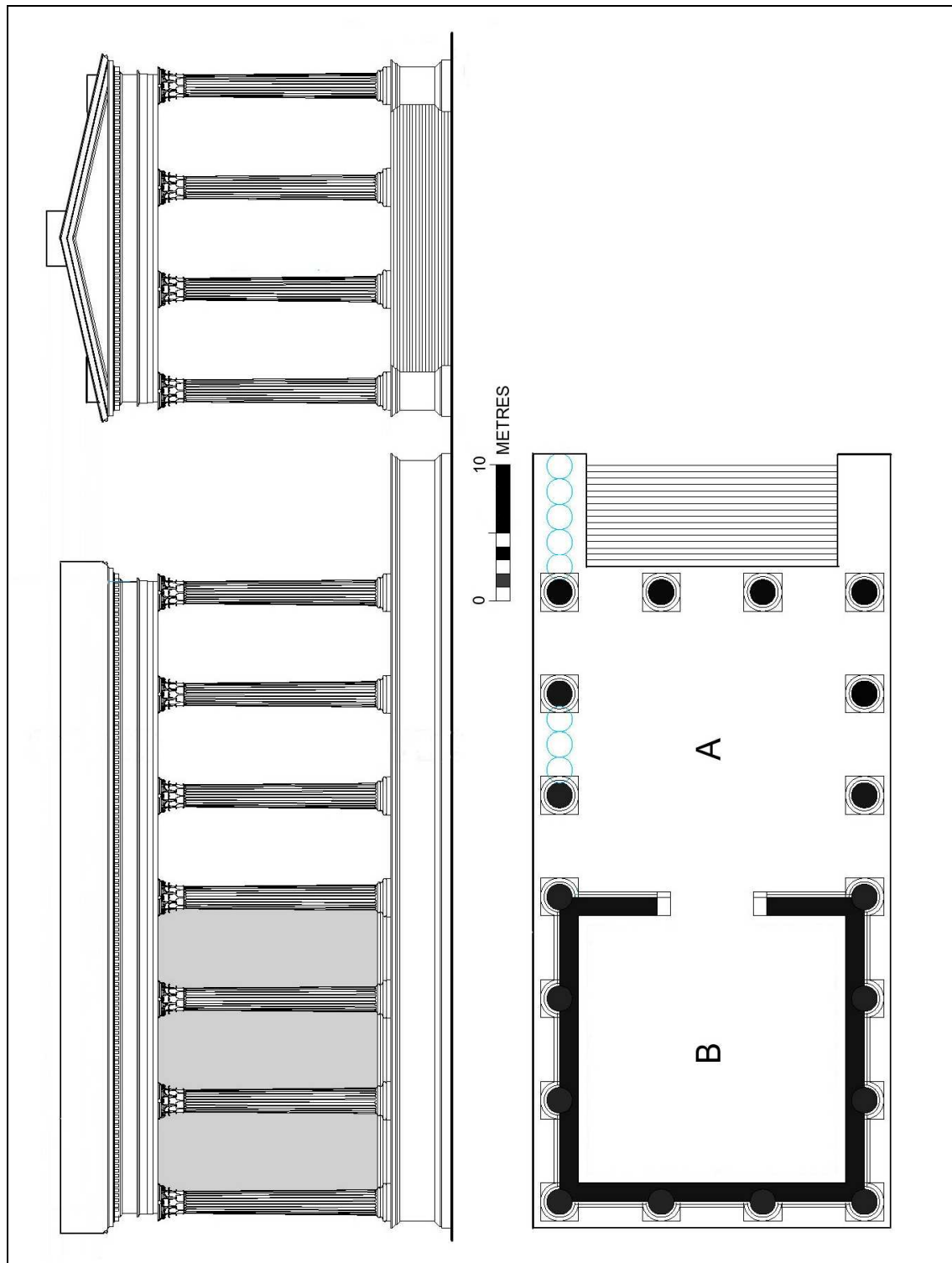


Fig. 11 Reconstructed plan, front and side elevation of the Temple of Apollo in diastyle (A. Claridge and M. Goalen)

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## The stucco-work ceiling of the *oecus tetrastylus* in the so-called House of Augustus on the Palatine in Rome: A preliminary report

Johannes Lipps<sup>1</sup>

**Abstract:** In the winter of 2008-2009, we were invited by the *Soprintendenza di Roma* to document the stucco-work fragments of a vaulted ceiling found by Gianfilippo Carettoni in 1973 in the *oecus* of the western peristyle in the so-called House of Augustus. On the basis of this documentation, which was previously not thought possible, we could identify various compositions and then reconstruct parts of the ceiling on computer. The aim of this paper is to present first results of this reconstruction work and to determine their historical context in ancient architecture.

In ancient architectural decoration ceilings are the objects for which we have the least information. While the ground floors and the painted or panelled walls are frequently preserved, the ceilings from the temples, porticos and private architectures are nearly always lost. This is true also for the most parts of the best preserved ancient ceilings, which were found in the ancient cities destroyed by Vesuvius. The absence of the ceilings prevents us from having a complete idea of ancient architecture, which is regrettable, particularly for the superior architecture of the Hellenistic period<sup>2</sup>.

Seen in this context, the find of many stucco-work fragments of the ceilings of different rooms around a peristyle in the so-called House of Augustus<sup>3</sup>, is of the highest importance. These fragments are very well preserved because the rooms have only been used for a very short time. Afterwards, probably in 36 B.C. or a little later, the rooms were intentionally filled in order to create a new building above it<sup>4</sup>. The stucco-work fragments are very small and for that reason most of them haven't been studied until today. Only the ceilings of the so called *studiolo* and of the so-called ramp, which are very well preserved, have been reconstructed at the end of the last century<sup>5</sup>. A great number of ceiling fragments from the other rooms have also survived, though these are for the most part unpublished. On the basis of all this it would be possible for us to reconstruct an entire ensemble of separate decorated rooms located around a peristyle dating to the late Republican period.

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<sup>1</sup> For the help with the translation I have to thank: Chrystina Häuber. A similar version of this report will be published in Italian: "Il soffitto in stucco dell'oecus tetrastilus della cosiddetta Casa di Augusto. Uno studio preliminare", in: Papers of the XVIII International Congress of Classical Archaeology, May 2013 Merida.

<sup>2</sup> So Lauter 1986, 252. There are very few ceilings from the Republican period that have survived in Italy. A systematic collection does not exist as yet. For stucco-work decoration: cf. Ling 1972; Mielsch 1975; for mosaics: Sear 1977; for paintings: Barbet 1985, 77–90; Ling 1991, 42–47.

<sup>3</sup> As pointed out by La Rocca 2008, the house should perhaps be called "the house of Octavian".

<sup>4</sup> This is not the place to enter into the very lively debate that has been developed in consequence of the work of Iacopi – Tedone 2005/2006 on the complex. Controversial are the identification and the chronology but especially the reconstruction of the complex; cf. Carandini – Bruno 2008; Wiseman 2012; Coarelli 2012; Tomei 2013; Pensabene – Gallochio 2013; Carafa – Bruno 2013.

<sup>5</sup> Musatti 2009, 43–52. 63–68.



In the winter of 2008-2009 we were invited by the *Soprintendenza di Roma* to document the stucco-work fragments found in the *oecus* of the western *peristyle*<sup>6</sup>. The so-called *oecus tetrastilus* stands out amongst the ensemble of its adjoining rooms not only due to its location in the middle of the western *peristyle* but also due to its size and accessibility. It had various functions, amongst others to stage elaborate dinner parties<sup>7</sup>. The room is divided into two parts, an anteroom (*anticamera*) and the proper *oecus* with four pedestals for columns or piers. Due to gaps in the walls it is possible to reconstruct the position of the architraves. The roof is a false vault<sup>8</sup>. The *oecus* is very similar to another one that was found in a rich house called *Casa delle Nozze d'argento* at Pompeii, a comparison which can give us an idea of the original appearance of the room (**fig. 1**)<sup>9</sup>.

During the excavation of the *oecus* of the so-called House of Augustus, directed by Gianfilippo Carettoni in 1973 several thousand stucco-work fragments were found under the *oecus* (but not under the anteroom), that must have belonged to its ceiling<sup>10</sup>. In 1986, the stucco-work fragments were brought to the *Palazzo Altemps* in Rome together with remains of mural paintings from the *oecus* and adjacent rooms, regrettably without precise documentation of the location of these finds<sup>11</sup>. Most of the fresco fragments but also stucco-work remains of the so-called *studiolo* were assembled there, restored and then brought back to the Palatine, where a part of these finds is on display in the so-called House of Augustus. Several thousand stucco-work fragments from the ceiling of the *oecus* were restored by Gianna Musatti, partly pieced together, arranged according to ornament types, and documented in an unpublished document, which she was so kind as to provide us with. In January and February 2009, after an overview, we decided to draw and photograph the most indicative specimens of these fragments. Carettoni believed a reconstruction of the ceiling was impossible because of the bad condition of the individual pieces<sup>12</sup>. Contrary to previous suppositions we could, based on this documentation, identify various compositions and reconstruct parts of the ceiling on computer.

Although the research on this subject is not yet completed, the following two examples will be presented to give an idea of the material and the decoration. The first example deals with various fragments of a Doric frieze, which can be connected to a Doric entablature (**fig. 2**). Thanks to the conservation of a fragment of a triglyph that marks an angle, it is possible to locate the original position of the Doric frieze in the room. It is only conceivable that this piece was originally positioned at the corner between the anteroom and the *oecus*. The second example concerns a motive from a coffered ceiling, which we were able to reconstruct thanks to the fact that a large number of fragments

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<sup>6</sup> For the permit to study the material presented here in a preliminary way I would like to thank many people, especially Gianna Musatti, Cinzia Conti, Roberto Egidi, Fedora Filippi, Henner von Hesberg and Maria Antonietta Tomei. For help in the documentation I thank Francesca Renda and Daniela Gauss and for the reconstruction on computer, Tobias Bitterer.

<sup>7</sup> For *oeci* in general: Dickmann 1999, 213–215; Boldrighini 2003, 27–38. 53–55.

<sup>8</sup> Vit. VII 3. Giuliani 2006, 94–97 fig. 18.

<sup>9</sup> Ehrhardt 2004, 114–123. 233–249 fig. 459–468.

<sup>10</sup> Carettoni 1983a, 53. 60; Musatti 2009, 26; Borrello 2009, 14.

<sup>11</sup> Musatti 2009, 24.

<sup>12</sup> Carettoni 1983b, 393–399; Musatti 2009, 26 f.

with similar decoration found in the *oecus* were made by using the same moulds. In the centre of the ceiling features a star motive (**fig. 3**). Such compositions are well known from the I. century B.C., as shown by a ceiling in Nîmes or by fragments of another coffered ceiling in the so-called *Villa of Cicero* at Formia<sup>13</sup>. Due to its large size this composition can be located only in the central part of the ceiling.

We know from ancient literary sources the importance of ceilings in the rooms of aristocratic houses<sup>14</sup>. From the IV. century B.C. various sources inform us about the great dinners, where the guests were looking not only at the floors and other objects of art but also at the increasingly richly decorated ceilings<sup>15</sup>. In the early Imperial period, Pliny the Elder, in complaining about private luxury, describes that, at his time, the ceilings of the houses were even gilded, a usage that at first had been reserved for temples. The first temple ceiling in Rome to be gilded was, according to Pliny, the Capitoline temple of *Iuppiter Optimus Maximus* which is dated to 142 B.C. the year when Lucius Mummius was censor<sup>16</sup>. However, already in the time of Augustus gold and even ivory were used to decorate the ceilings of rich houses, as indicated by a passage of Horace<sup>17</sup>.

In our case, gold was not found on the stucco-work fragments from the *oecus*, and in the case of the so-called *studiolo* there are only a few remains of an originally gilded *kymation*<sup>18</sup>. Heinrich Piening, who belongs to our research group, has analysed the surfaces of the stucco-work fragments and, surprisingly, has found a very white colour with a layer of shiny casein. This shiny layer appears to have been used only for parts of the high relief, and in such a way, that the contrast with the lower parts of the stucco-work reliefs seemed even to acquire more depth. All this resulted in an intentional play of light and shadow. We can therefore envisage that a fine sheen had been applied to the central star of the coffered ceiling so that it could reflect the flickering glow of the torches that lit the room. Especially in the evenings, with the bright light of the torches or lamps, the ceiling must have had a great effect on the guests reclining on their dinner couches. Our scenario is corroborated by the expectations documented in a large number of literary sources: these kinds of ceilings were meant to shine and glimmer. Seneca, for example, claims that the radiance of the ceilings should correspond to that of the floors<sup>19</sup>. Perhaps we are here confronting a situation in the late Republic, when to build rich houses was so common, that owners of such houses, like the one under scrutiny here, pushed the limits and acceptance of private luxury. At a time when the gilding of ceilings was not yet common, they came up with other ways to create similar atmospheric effects.

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<sup>13</sup> For Nîmes: Naumann 1937, 2–29 tav. 20a. 35a. For Formia: Sear 1977, 45–47. See another example at Cuma: Nuzzo 2010, 384 f. fig. 11.

<sup>14</sup> Leach 2004; Hölkeskamp 2010, 123–127.

<sup>15</sup> Walter-Karydi 1994, 44.

<sup>16</sup> *Naturalis historia* 33,57.

<sup>17</sup> Horace, *od.* II 18.1.

<sup>18</sup> Carettoni 1983b, 412 fig. 14–16 tav. 108. Colour plate Tav. 15.

<sup>19</sup> Seneca, *Epist.* 114,9.

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Fig. 1: *Oecus* of the *Casa delle Nozze d'argento* at Pompeii, which is very similar to the example from the Palatine. For the permission to publish this picture I thank Volker Michael Strocka.



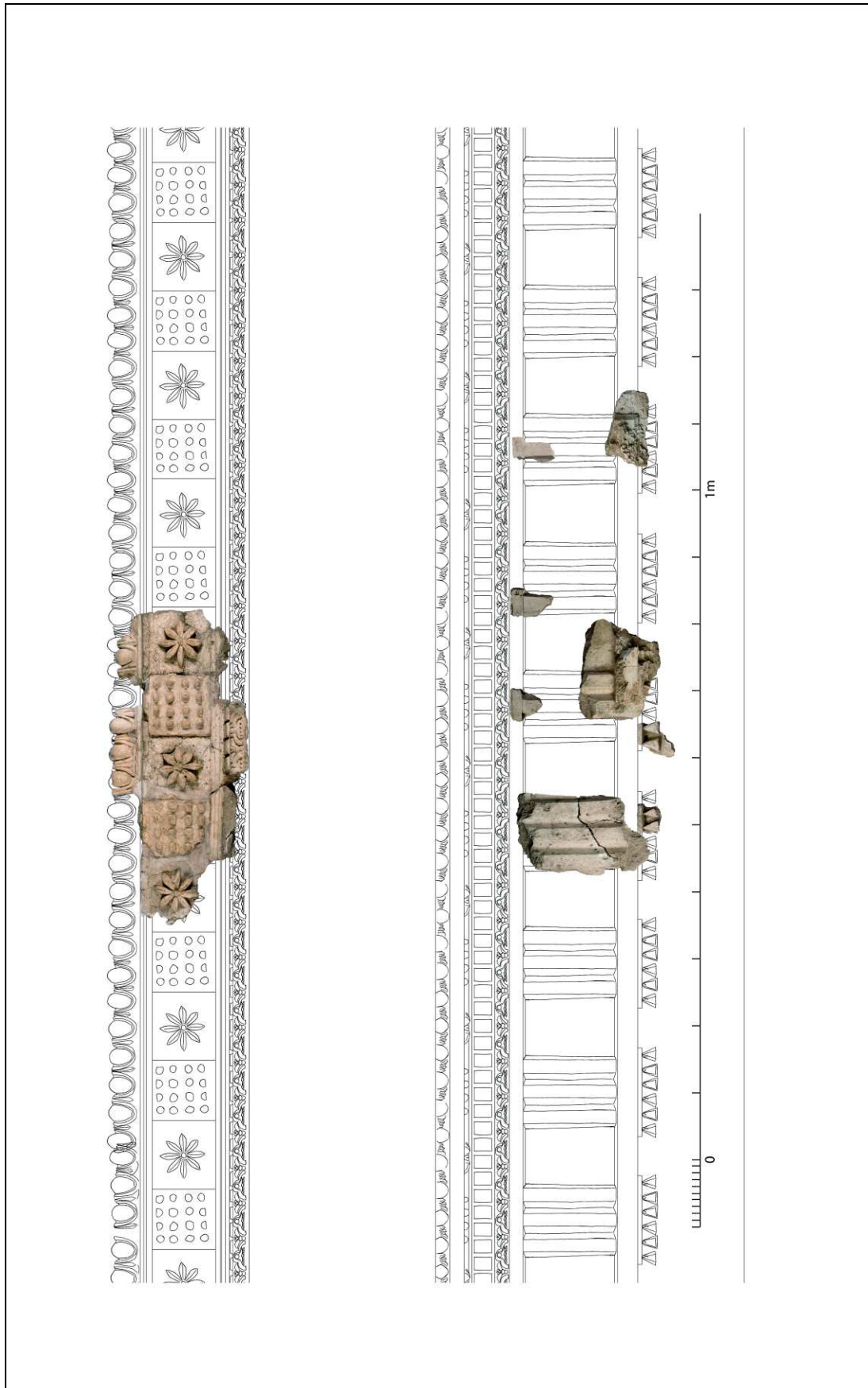


Fig. 2: The Doric stucco-work frieze from the *oecus tetrastylus* of the so-called House of Augustus on the Palatine.



Fig. 3: Motive with central star from the coffered ceiling of the *oecus tetrastilus* of the so-called House of Augustus on the Palatine.

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## Cities in Roman Art: The city as a stage for human activities

Stefan Ritter

When we talk about the reconstruction and visualization of historic cities, it might be interesting to immerse ourselves in history and take a look at how these cities were visualized at the time when people used to live in them. In Imperial Roman art, the city featured prominently in various different genres, especially in relief sculpture and wall painting.

The vast majority of these representations show human figures either inside or outside the city. This fact has usually been neglected in studies on cities in Roman art because interest has almost exclusively concentrated on the representation of architecture and space. That's why I will try to assess whether the presence of human beings influences the representation of the city itself. The answer will be decidedly positive.

### General rules in representing cities in Roman art

In any period, the methods of visualizing are determined by specific interests, by generally accepted standards of representation and, behind all this, by specific habits of visual perception and imagination. Before I take a look at the role of human figures, I will briefly demonstrate in which respects Roman representations of cities differ from modern ones in general.

The differences become apparent if we take, for example, a watercolour by Jean-Claude Golvin showing a view of Ancient Pompeii from a bird's eye perspective as an example of a modern reconstruction of a Roman city<sup>1</sup>, and compare it with two, quite detailed Roman representations: first, the representation of a city and its countryside in a fragmentary marble relief belonging to the so-called 'Torlonia reliefs' found in the Fucino lake (fig. 1)<sup>2</sup>, and secondly, the representation of a city in the background of Scene 33 on Trajan's column in Rome (fig. 1)<sup>3</sup>.

All these cities have some features in common. Each of them is enclosed by city walls, and the buildings inside stand very close to each other and are arranged in linear order. In the 'Torlonia relief', the internal structure is characterized by rectangular blocks of houses separated from each other by long straight streets, whereas on Trajan's column there is only one row of several small but relatively high buildings. The Roman representations, however, differ from the modern one in some respects:

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I am very grateful to Henry Heitmann-Gordon for proofreading my text.

<sup>1</sup> J.-Cl. Golvin, *Metropolen der Antike* (Stuttgart 2006) p. 96–97.

<sup>2</sup> Celano, Mus. Naz.: E. La Rocca, "L'affresco con veduto di città dal colle Oppio", in E. Fentress (ed.), *Romanization and the city. Creation, Transformations, and Failures* (Portsmouth 2000) 64–65, fig. 10; D. Faccenna, "I rilievi", in A. Campanelli (ed.), *Il Tesoro del Lago. L'archeologia del Fucino e la Collezione Torlonia* (Pescara 2001) 34–40 no. 2, fig. 2 (with bibliography).

<sup>3</sup> Rome, Trajan's Forum: F. Coarelli, *The Column of Trajan* (Rome 2000) 76, pl. 32; E. Wolfram Thill, "Civilization Under Construction: Depictions of Architecture on the Column of Trajan", *American Journal of Archaeology* 114 (2010) 29, 36, fig. 2 (with further literature).

1) In both reliefs, the city is shown from a closer distance so that more details are visible. This allows us to see, for example, that the city walls consist of ashlar masonry, and that the houses have up to two (Trajan's column) or three storeys (Torlonia relief).

2) The number of houses (Trajan's column) or blocks (Torlonia relief) is quite small. Each city is reduced to a small number of significant features: the city walls, and a few houses or blocks of them. In each case, the intention of the sculptor, obviously, was to show that this is a large and rich city, protected by impressive city walls, and equipped with well-built and multi-storey houses. In the 'Torlonia relief', these are even neatly organized within the rectilinear grid typical of the internal structure of many Roman cities.

3) The city as a *whole* is seen from a bird's eye perspective but both the buildings themselves and the front of the city walls are depicted in frontal view, and in the 'Torlonia relief' the houses in the distance have the same size as those in the foreground. This multiplicity of perspectives is one of the reasons why the sculptor was able to represent so many details.

The most striking feature of Roman representations is the fact that the geometrically unified, one-point perspective, universally accepted since the Renaissance, did not exist as a comprehensive formal principle in Antiquity. Instead, sculptors and painters used different types of perspective that could be combined within the same picture; this is especially evident in the architectural drawings in Roman Second Style wall painting<sup>4</sup>. The underlying principle that all representations have in common is that there was no concept of a consistent, all-encompassing image space. The individual elements (buildings, landscape motifs etc.) are more important than their arrangement. Each element can be regarded from its own point of view because it has its own, largely autonomous value. These characteristics are based on specific ways of seeing and perceiving, testified in written sources on ancient theories of vision<sup>5</sup>.

## Open questions

However, a look beyond these general rules at the great variety of representations of cities and urban environments in Roman art soon shows that some questions are as of yet unanswered.

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<sup>4</sup> On this topic recently: P. Stinson, "Perspective Systems in Roman Second Style Wall Painting", *American Journal of Archaeology* 115 (2011) 403–426. – One of the most complex examples is a mural in Room 14 of the Villa of Oplontis, dating to about 60/50 BC. As Stinson (op. cit., 411–415, fig. 7; 420, fig. 15) has pointed out, there are two different main types of architectural perspective that were used in different zones of the painting. In the lower part of the picture where the usual socle with pedestals appears and which is closer and more tangible to the viewer, the painter used parallel perspective for small details throughout. In the upper part of the mural, however, where the very elaborate architecture opens into greater distance the details are all organized in convergence perspectives. There are three different convergence systems at work at the same time.

<sup>5</sup> The most thorough recent study on this topic is B. Hub, *Die Perspektive der Antike. Archäologie einer symbolischen Form* (Frankfurt 2008) (esp. 302–321 on the dominance of the visual ray theory in Antiquity).



Representations of cities in Roman art have attracted special interest in recent years. Most of these studies are focused almost exclusively on assessing the realism of such representations. So, in a book entitled “Imaging Ancient Rome. Documentation – Visualization – Imagination” (a title somewhat similar to the title of our symposium), some contributions are summarized by the programmatic heading “Re-creating urban realities from paintings, coins, and water-supply” and here the article by Umberto Pappalardo, dealing with representations of cities in Roman wall-painting, is fully focused on whether the paintings are fantastic visions or architectural realities<sup>6</sup>. In the same vein, Eugenio La Rocca, by adopting ancient terminology in order to classify the images, makes a distinction between representations of real places (“*chorographia*”/“*topographia*”) and imaginary ones (“*topothesia*”)<sup>7</sup>.

However, these oppositional categories are not well suited to aid our understanding of the images because the intention of an artist to represent a certain ‘real’ city is not necessarily reflected in iconography. Cities that are situated in a mythical past can be equipped with Roman podium temples<sup>8</sup> or amphitheatres<sup>9</sup> so that they do not differ from contemporary cities, such as in the ‘Torlonia relief’ or on Trajan’s column. A prominent wall-painting from the Casa del Sacerdos Amandus in Pompeii shows the story of Daedalus and Icarus before a detailed depiction of a city<sup>10</sup>, and this city, probably Cnossus, is enclosed by towered and gated city walls consisting of ashlar masonry which are very similar to the city walls in the ‘Torlonia relief’.

As Annette Haug has convincingly argued in a recent article, the large majority of city representations refer to specific realities (architecture, topography) only on a very general level because they mainly consist of typified (“*topisch*”) visual elements whereas specific elements are quite rare<sup>11</sup>. That’s why, instead of classifying a

<sup>6</sup> U. Pappalardo – A. Capuano, “Immagini della città nella pittura romana: visioni fantastiche o realtà architettoniche?”, in L. Haselberger – J. Humphrey (eds.), *Imaging Ancient Rome. Documentation – Visualization – Imagination* (Portsmouth 2006) 75–90.

<sup>7</sup> E. La Rocca, *Lo spazio negato. La pittura di paesaggio nella cultura artistica greca e romana* (Milano 2008) esp. 16–27 (“*La chorographia*”), 28–61 (“*La topothesia*”).

<sup>8</sup> As, for example, in the representation of Troy in the ‘*Tabulae Iliacae*’, see below (with n. 12).

<sup>9</sup> See n. 10 below.

<sup>10</sup> Pompeii, Casa del Sacerdos Amandus (I 7,7), room (b), *in situ*: E. W. Leach, *The Rhetoric of Space. Literary and Artistic Representations of Landscape in Republican and Augustan Rome* (Princeton 1988) 346–347, fig. 32; Faccenna, op. cit. (n. 2) 39, fig. 14; Pappalardo, op. cit. (n. 6) 83–84, fig. 10; La Rocca, op. cit. (n. 7) 51, fig. 42. – Pappalardo, op. cit. 84 argues that the generic character of this representation is clear from the fact that Cnossus, as far as we know, had no city walls. However, we cannot expect topographical realism in this case, or in other mythological scenes. The reason why Cnossus has city walls in the painting is simply that the painter used the topos of a fortified city, which was the usual way to represent a city in the background of mythological paintings. For other examples see J. Hodske, *Mythologische Bildthemen in den Häusern Pompejis* (Ruhpolding 2007) 205 cat. 740, pl. 99.1 (Achill and Polyxena: Troy); 207 cat. 823, pl. 101.4 (Daedalus and Icarus: Cnossus, with an amphitheatre inside); 207 cat. 758, pl. 102.1 (Daedalus and Icarus: Cnossus).

<sup>11</sup> A. Haug, „Spätantike Stadtbilder. Ein Diskurs zwischen Topik und Spezifik“, in F. Hölscher – T. Hölscher (eds.), *Römische Bilderwelten. Von der Wirklichkeit zum Bild und zurück* (Heidelberg 2007) 217–249. The only point that has to be questioned is Haug’s distinction between “Allgemeinbildern von Stadt” (220), which do not refer to any specific topographical



representation as a whole as ‘real’ or ‘imaginary’, it is much more in accordance with the character of the representations as visual constructions to look within the single representation for typified, unspecific elements and specific ones. This can, however, only be the first step of analysis.

The crucial, underlying question is to what extent and, above all, for what reasons painters or sculptors deviated from physical realities; a question that has to be evaluated on a case-by-case basis.

### **The integration of human figures**

The cities in the ‘Torlonia relief’ and in Scene 33 of Trajan’s column contain no human figures. In many cases, however, the arrangement of the image space *cannot* be understood by considering phenomena such as architecture or landscape separately, because the most common characteristic of the vast majority of compositions is their focus on human activity. As soon as the scenery is animated with mythological, divine, or mortal figures, the surroundings become increasingly more varied.

A quite prominent example is a miniature marble relief now in the Capitoline Museum in Rome, which is the best preserved example of a series of similar tablets from early Imperial Roman times which are known as the ‘Tabulae Iliacae’ because they show episodes from the myth of Troy (fig. 1)<sup>12</sup>.

The central section shows what happened after the capture of Troy. The city is characterized by impressive city walls with a gate on the front side and several towers, giving it an appearance similar to the city of the ‘Torlonia relief’. But the whole interior of the city is structured in a completely different way than in the ‘Torlonia relief’ or in Scene 33 of Trajan’s column.

The city area is dominated by two large, trapezoid squares each of them defined by a three-sided portico. The upper square has a temple in the centre and is flanked on each side by small clusters of houses behind the lateral porticoes. On the square itself, we find, among other scenes, the wooden horse and the rape of Cassandra. The lower square is smaller and has an altar in the centre where the murder of Priam is depicted. Behind the lateral porticos, there is a temple on each side. Unlike the two reliefs

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situation, and “singulären Bildern von spezifischen Städten” (222), because it is difficult to separate these categories from each other on the basis of iconographical criteria, as the author herself rightly remarks: “Häufig genug ist eine Stadtdarstellung durch eine Beischrift zwar als singuläre Darstellung ausgewiesen, im Bild werden aber allein unspezifische Topoi eingesetzt” (222). This applies, for example, to the ‘Torlonia relief’ and to the ‘Forum scenes’ from the Praedia of Iulia Felix in Pompeii (below, with n. 28).

<sup>12</sup> Rome, Musei Capitolini, Inv. 316 (height 25 cm, width 30 cm): Leach, op. cit. (n. 10) 81–84, fig. 11; N. Valenzuela Montenegro, *Die Tabulae Iliacae: Mythos und Geschichte im Spiegel einer Gruppe frühkaiserzeitlicher Miniaturreliefs* (Berlin 2004) 116–133, pls. 1, 3, 5, 8.1, 10; La Rocca, op. cit. (n. 7) 20, fig. 5; M. Squire, *The Iliad in a Nutshell. Visualizing Epic on the Tabulae Iliacae* (Oxford 2011) 148–176 esp. 158–165, pl. I; 387–390 (with list of figures and bibliography).

mentioned above, this city has large squares as well as temples – all of them temples of the Roman podium type – but, on the other hand, the domestic areas are reduced to a minimum.

Scholars have tried to identify the two main building complexes by referring to information provided by written sources: The upper square has been identified as the sanctuary of Athena where the rape of Cassandra is said to have taken place, and the lower square where Priam's murder is shown has been regarded as the palace of the king<sup>13</sup>.

These identifications, however, raise difficulties. Not only are several episodes combined with each other on the upper square as well as in the other sections of the city, but the central building complexes are also so similar to each other that their iconography makes it quite difficult to see a distinction between a "sanctuary" and a "palace". This city is a highly artificial construction: Its whole interior is structured according to a strictly symmetrical principle. The composition of the buildings and squares has no topographical plausibility whatsoever, and the small size of the domestic areas in relation to the squares is far from any reality. Each built-up area has its own, independent value.

The autonomy of the architectural motifs has its correspondence in the fact that some of the protagonists can appear more than once. Aeneas, who, as the future founder of Rome, is the most prominent figure, can be seen in three different places: On the lower square, he receives the *Penates*; a second Aeneas, with rest of his family, emerges from the city gate to move towards the shore; and in the foreground of the composition, a third Aeneas boards one of the ships.

The fact that this city has such large squares can only be explained by the sculptor's need to provide sufficient space for the numerous figures he wanted to show.

The same practical necessity is apparent in the famous wall-painting from Pompeii showing the riot in the city's amphitheatre in 59 AD (fig. 1)<sup>14</sup>. The topographical realities in the south-east corner of Pompeii are significantly modified in order to create enough space for the numerous figures; this is particularly evident in the insertion of a huge open area between the amphitheatre and the city wall that doesn't exist in reality.

As soon as human figures appear, the city can fundamentally change its face. The cities in the 'Torlonia relief' as well as in Scene 33 of Trajan's column do not provide much space for human activities because there are no people who would need it.

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<sup>13</sup> Leach, op. cit. (n. 10) 81; Valenzuela Montenegro, op. cit. (n. 12) 117, 121. – Only one of the temples is identified by an inscription; the sanctuary outside of the lower square to the right, where Menelaos captures Helen, is named "*hieron Aphrodites*".

<sup>14</sup> Naples, Mus. Naz., Inv. 112222 (found in Pompeii, Casa I 3,23, Peristyle n): Th. Fröhlich, *Lararien- und Fassadenbilder in den Vesuvstädten* (Mainz 1991) 241–247, pl. 23,2; J. R. Clarke, *Art in the Lives of Ordinary Romans: Visual Representation and Non-elite Viewers in Italy, 100 B.C.–A.D. 315* (Berkeley 2003) 152–158, fig. 89; Pappalardo, op. cit. (n. 6) 84, fig. 11; La Rocca, op. cit. (n. 7) 20–21, fig. 7.

## The city as unspecific urban scenery

Studies on the visualization of cities in Roman visual art are focused almost exclusively on those examples where cities or parts of them are clearly defined by means of distinctive urban features such as city walls or specific urban buildings. This applies, for example, to the 'Tabula Iliaca' and the painting of the riot in the amphitheatre of Pompeii. In both cases, the city is shown from a greater distance, animated by a large number of small figures inside.

There are, however, several mythical as well as non-mythical depictions where the human figures are shown from less far away and are accordingly larger. In some of these images, the fact that the scene is localized in an urban context becomes evident mainly from the character of the activities.

This applies, for example, to a marble relief from the middle of the 1st century AD, now in Florence (fig. 1), that was found together with another, very similar relief in Rome and probably once decorated the façade of a tomb<sup>15</sup>.

It shows the vending of cloth. The most important figures are two seated clients, both of whom are male and wearing the toga, accompanied by a standing attendant in a tunic, who might be a slave. They are looking at a large piece of cloth that is held out for inspection by two tunicate men, and in the centre, another male figure, probably the shop owner, is seen supervising the sale. What makes this scene special is the strongly elaborated social distinction between the figures, as is indicated by their positions, gestures, and garments: There is not only a strict status distinction between buyers and sellers but also within each of these groups.

The scene takes place before a quite elaborate architectural façade. It consists of four carefully fluted pilasters with richly decorated bases and Corinthian capitals, two of which flank the scene whereas the two central ones occupy the background. The epistyle carries a wall made of ashlar masonry with four rectangular windows with open shutters. The whole construction is covered by a roof of carefully laid tiles.

This architecture has usually been interpreted as the exterior of a shop<sup>16</sup> but it is quite a strange structure: The upper part with the row of windows indicates the upper floor of a domestic setting, whereas the lower part seems a little too prestigious for that. The carefully rendered pilasters carrying an epistyle rather remind us of representations of

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<sup>15</sup> Florence, Galleria degli Uffizi, Inv. 315 (found in Rome, Vigna Strozzi; height 48 cm, width 78 cm): G. Zimmer, *Römische Berufsdarstellungen* (Berlin 1982) 28, 125–126 cat. 39, with fig.; M. George, "Social Identity and the Dignity of Work in Freedmen's Reliefs", in E. D'Ambra – G. P. R. Métraux (eds.), *The Art of Citizens, Soldiers and Freedmen in the Roman World* (Oxford 2006) 24–26. – The second relief (Florence, Galleria degli Uffizi, Inv. 313: Zimmer, op. cit. 28, 124–125 cat. 38, with fig.; George op. cit. 24–26, fig. 4) has a less elaborated architectural façade, without an upper floor.

<sup>16</sup> George, op. cit. (n. 15) 24 ("The monumental structural frame of the shop exterior... has an internal portico which is suggested by two additional columns in the background").

public architecture, as can be seen, for example, in the so-called ‘Anaglypha Traiani’, which show the south façade of the Forum Romanum, including the Basilica Iulia<sup>17</sup>.

Furthermore, it is difficult to understand how the protagonists are related to the architecture. The position of the figures *before* the pilasters might suggest that the activities take place *in front* of the building. But it can hardly have been intended to show that the sale of such precious cloths to sitting clients takes place in a street instead of inside a shop, which would be much more suitable for this kind of business.

The mixture of architectural elements in the façade obviously has to do with the character of the *activities* going on. The sculptor seems to have intended to set an appropriate stage for these figures in order to signal the prestige of the cloth merchant: by emphasizing the noble wares, the upper-class-clients, and the grand architectural setting.

The fact that the scene takes place in an urban context is made evident here not primarily by the architectural background but primarily by the character of the activities.

### **Mythological pictures: Cities identified by human interactions**

The phenomenon that the scenery does not lend itself to identification with any particular location is especially common in mythological representations.

This is – to return to the myth of Troy – the case with one of the three central pictures in the *ala* of the Casa del Menandro in Pompeii, all of which show episodes of the capture of Troy: on the south wall we have the death of Laocoon, on the east wall the dragging of the wooden horse, and on the north wall the fate of Helen and Cassandra, which we will now have a closer look at (fig. 1)<sup>18</sup>.

On the left side, Menelaos, in full armour, grabs Helen, seizing his adulterous wife by the hair before an audience of Greeks and Trojans. In the middle Priam is helplessly watching what happens to the right: Ajax’ attempt to drag Cassandra away from the statue of Athena. In the background, there are two walls obviously positioned at right angles to each other. Light falls through a gap between these walls and illuminates the figure of Cassandra.

The question is where exactly these scenes take place<sup>19</sup>. The presence of a statue of Athena might indicate a sanctuary but there is neither a temple nor an altar. Above all,

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<sup>17</sup> Rome, Curia Iulia: T. Hölscher, „Bilder der Macht und Herrschaft“, in A. Nünnerich-Asmus (ed.), Traian. Ein Kaiser der Superlative am Beginn einer Umbruchzeit? (Mainz 2002) 141–142, figs. 128, 129.

<sup>18</sup> Pompeii, Casa del Menandro (I 10,4), Ala (4), *in situ*: R. Ling – L. Ling, The Insula of Menander at Pompeii II: The Decorations (Oxford 2005) 74–75, pl. 67; 192–194, col. pl. 7.

<sup>19</sup> Ling – Ling, op. cit. (n. 18) 192: “Both episodes take place within an interior, illuminated by light that comes through a lofty central doorway and round a corner at the left”. Other authors do not go into detail, so K. Lorenz, Bilder machen Räume. Mythenbilder in pompeianischen Häusern (Berlin 2008) 291–294, fig. 137 b (292: “Stadtsszenerie”).

the position of the walls, both of them apparently leading into the background, makes it difficult to identify the interior of a building or building complex. The height and width of the walls might suggest city walls but there are essential features missing: The walls lack the battlements we would have to expect in this case, given that they appear in the central picture of the east wall of the same room where we can see the wooden horse being brought into the city through a breach in city walls crowned by battlements<sup>20</sup>.

Furthermore and even more strangely, what seems to be a doorway is not covered by any kind of lintel but is completely open at the top. It thus seems that this is neither a proper city wall nor a proper city gate. It is *not* shown how, if at all, the two walls are related to each other, let alone what kind of building they might belong to.

Nevertheless, the viewer could very easily see that the city depicted is Troy. What enabled him to identify the location was not the very unspecific background architecture but the scenes themselves which are represented in well-known figural compositions, established by a long iconographic tradition<sup>21</sup>.

Instead of specifying the location, the painter has given the scene a certain atmosphere by inserting single elements into the picture. The statue of Athena might point to a sanctuary that, however, is not shown, and only alludes to the fact that Ajax, by trying to rape Cassandra in a sanctuary, commits sacrilege against the gods. On the same, very general level the two high and massive walls, separated from each other simply by an open space and probably pointing to city walls without going into detail might have been intended to indicate that these episodes happen after a city has been seized: a city whose massive walls have now lost their former protective function.

### **A touch of urban atmosphere: The mixture of urban and other elements**

The last phenomenon I would like to mention applies to representations in which single elements established in city depictions are combined with motifs from *other* sources so that the scenery intentionally remains inconclusive, gaining only a touch of urban atmosphere.

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<sup>20</sup> Ling – Ling, op. cit. (n. 18) 74, pl. 66; 194–195, col. pl. 10.

<sup>21</sup> There are several other, similar cases in Pompeian wall-painting. A painting in the Casa di M. Lucretius Fronto (Pompeii, Casa V 4,a, room [5], *in situ*: Lorenz, op. cit. [n. 19] 85–86, fig. 11) shows Theseus taking his weapons and Ariadne handing him the ball of wool. The figures stand before some architecture consisting of two adjoining walls whose corner is accentuated by a pillar. In the foreground, at the right edge of the painting, stands an isolated column on a base. The location is so unspecific that the viewer does not get any hint to the fact that the story took place in Cnossus. – Similar examples can easily be found in publications on mythological paintings from Pompeii, such as Hodske, op. cit. (n. 10) or Lorenz, op. cit. (n. 19).



An interesting case are the so-called 'Icarios reliefs', a series of marble reliefs that show Dionysus visiting a banqueter before a rich architectural background, a scenery that appears fully developed for the first time in an Augustan relief now in Naples (fig. 1)<sup>22</sup>.

In the left half of the relief, a young man, clad only in a mantle around his waist, reclines on a couch accompanied by a woman stretched out behind him. In front of the couch is a table which carries drinking vessels and food. The man turns round to Dionysus and raises his hand in a greeting to the god; between the figures is a second couch, obviously prepared for the god. The bearded Dionysus, wrapped in a large mantle and ivy-crowned, is supported by a little satyr and obviously drunk. A second satyr bends down to remove his master's shoes, as was the custom with guests before sitting down to a banquet. The god is accompanied by his usual followers, satyrs and maenads.

In the background are two buildings, a large and a small one, both with gable roofs carefully covered with tiles. The large building has double windows in its front and side, whereas the small one has a broad rectangular opening in its front, bordered by a profiled frame. The small building is continued to the right by a wall followed by another, lower wall behind the followers of Dionysus. The connection between these walls is concealed by a pillar supporting a votive tablet, and on the left side is a column on a square plinth which in turn supports a large water basin, behind which appears a Doric column with a figure on top.

Finally, there is a large curtain attached to the front of the small building and to the pillar. The curtain, which serves here as the immediate background for the couple on the couch and Dionysus, is a well-known standard motif in Roman visual art, the function of which was to indicate that the scene in the foreground takes place indoors. This is further emphasized by the furniture, which is typical of a triclinium. What the sculptor obviously wanted to show here is that Dionysus enters a room coming from outside.

It is, however, difficult to understand why the curtain covers the opening – probably a door – of the building behind, and, what's more, why the curtain, though clearly indicating an indoor setting, is attached to the *outer* wall of a house. This is the same contrast between indoor-activities and outside-architecture as in the vending relief in Florence<sup>23</sup>.

The question is how all these elements fit together. The pillar with the votive tablet points to a sanctuary; the column with the water basin rather suggests a garden; the furniture indicates a domestic banquet room, and the two houses standing close together might suggest an urban context rather than a villa somewhere in the countryside.

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<sup>22</sup> Naples, Mus. Naz., Inv. 6713: E. Pochmarski, *Dionysische Gruppen. Eine typologische Untersuchung zur Geschichte des Stützmotivs* (Wien 1990) 105–106, 299 cat. R 14, pl. 33,1. – For the 'Icarios reliefs' in general: Pochmarski, op. cit. 105–108, 297–301 cat. R 1–32, pls. 30–34.

<sup>23</sup> see above (with n. 15 and fig. 1).

The sculptor did not specify the location but, quite the contrary, created an entirely fictitious environment where all borders are crossed: the borders between inside and outside as well as the borders between different locations, and the same applies to the figural scene itself where the border between the human and the divine sphere is crossed.

The activities are set in an entirely inconclusive environment, intended to inspire the viewer's imagination by offering him *diverging* visual incentives. The banquet scene indicates an urban lifestyle and that's why the two houses in the background, despite having no real function here at all, might have been intended to emphasize this aspect by adding a certain urban touch to the scene.

### **Human activities as a crucial factor in identifying cities**

Studies on Roman representations of cities are traditionally based on the premise that the iconography of the city itself is the only and crucial factor in its identification. This assumption has to be questioned.

1) There are, of course, many representations where distinctive architectures, building arrangements or topographical settings give a direct hint towards identifying the city. Examples are the 'Anaglypha Traiani' from the Forum Romanum<sup>24</sup>, the Pompeian wall-painting showing the riot in the local amphitheatre<sup>25</sup>, or the famous 'Earthquake relief', a frieze slab from a Pompeian household shrine depicting the Capitolium and several monuments in the forum of Pompeii shaken by the earthquake in 62 AD<sup>26</sup>.

In other representations, however, the artist obviously intended to show a certain city but did not make this clear in the iconography. The city in the fragmentary 'Torlonia relief'<sup>27</sup>, for example, is only part of a greater composition and embedded into a spacious landscape that has probably to be identified with the region of the Fucino lake. The city itself, however, is depicted in a quite unspecific manner. It is not the iconography of the city itself that may have enabled the viewer to give it a name but only its individual surroundings.

Iconographical distinction can help to identify a city, but is only one among several factors (see fig. 2).

2) Another factor that should be taken into account is the location of the painting or relief. Whether or not the representation was situated in this same city or nearby, must certainly have played a role in identifying a depicted city, and modern analysis of city

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<sup>24</sup> see above (with n. 17).

<sup>25</sup> see above (with n. 14 and fig. 1).

<sup>26</sup> Pompeii, Casa di L. Caecilius Iucundus (V 1,23.26), atrium (b), lararium: I. Colpo, *Ruinae... et putres robore trunci*. Paesaggi di rovine e rovine nel paesaggio nella pittura romana (I secolo a.C. - I secolo d.C.) (Rome 2010) 165–167, fig. 119.

<sup>27</sup> see above (with n. 2 and fig. 1). – The identification of this city has been controversially debated: La Rocca, op. cit. (n. 2) 64 (Alba Fucens); C. F. Giuliani, "Note sulla composizione dei rilievi Torlonia", in A. Campanelli, op. cit. (n. 2) 40–41 (Marruvium).

representations in Roman art would accordingly do well to pay more attention to this factor.

The famous 'Forum scenes' on the frieze from the Praedia of Iulia Felix in Pompeii show the local forum filled by a lot of figures involved in commercial and other public activities<sup>28</sup>. The place is characterized only by a colonnade running behind all scenes and by several equestrian statues on bases. This setting is reminiscent of the forum of Pompeii but is so unspecific that the same representation could have decorated, without modification, a house in any other city and have represented the local forum there. The viewer was enabled to recognize the forum of Pompeii only because this painting was situated in Pompeii. In other cases, too, the location of a representation in the same city must at least have facilitated the identification, as in the above-mentioned representations from Rome or Pompeii where the location is characterized by means of a distinctive iconography.

3) In those cases, however, where the representation was situated at a place far from the city shown in the picture, the identification can hardly have been possible without some sort of additional help, irrespective of whether or not the city or/and its surroundings appear to be depicted in an individual manner that might refer to a specific topography. This applies, for example, to the cities on Trajan's column<sup>29</sup> or the cities in the great panels from the arch of Septimius Severus in the Forum Romanum whose identification has caused very controversial discussions<sup>30</sup>. If identification was really intended, the viewer who saw these representations in Rome could hardly identify such a city, situated far from Rome, without the help of an inscription giving a name.

4) In mythological scenes that are set in distant cities and in the past, this help was given by the figural scenes themselves. The cities of Troy (as in the painting in the Casa del Menandro showing Helen and Cassandra<sup>31</sup>) or Cnossus (as in the painting in the Casa di M. Lucretius Fronto showing Theseus and Ariadne<sup>32</sup>) cannot possibly have been distinguished by their iconography, which varied from picture to picture. Those cities could, however, be easily identified by everyone who recognized the myth and knew where the story had taken place. In these cases, the identification is made possible solely by the distinctive human activities visualized in well-known iconographical schemes.

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<sup>28</sup> Naples, Mus. Naz., Inv. 9057–9070. From Pompeii, Praedia di Iulia Felix (II 4,3), atrium (24): S. C. Nappo, "Fregio dipinto dal 'praedium' di Giulia Felice con rappresentazione del foro di Pompei", *Rivista di Studi Pompeiani* 3 (1989) 79–96, with figs.; Clarke, op. cit. (n. 14) 96–98, fig. 50.

<sup>29</sup> see above (with n. 3 and fig. 1).

<sup>30</sup> Rome, Forum Romanum: S. Lusnia, "Battle Imagery and Politics on the Severan Arch in the Roman Forum", in Sh. Dillon – K. E. Welch (eds.), *Representations of War in Ancient Rome* (Cambridge 2006) 275–283, with figs. (and bibliography).

<sup>31</sup> see above (with n. 18 and fig. 1).

<sup>32</sup> see above (with n. 21).

The character of the human activities also plays an important role in several non-mythological representations. In the vending relief in Florence<sup>33</sup>, the fact that the scene is situated in an urban context is indicated by a combination of urban architecture and urban activities, and in the 'Icaros relief'<sup>34</sup> the scenery gets its urban flair from the combination of the two houses in the background and the banquet scene.

Roman city depictions have traditionally been analyzed without taking into account whether or not there are people in the town. This aspect is, however, absolutely crucial if one wants to understand the representations against the background of the intentions of their producers. The iconography of the city itself and its surroundings is, of course, most important, but the character of the activities going on is an equally crucial factor because the figural scenes determine the appearance of the city to a very high degree.

Representations of cities in Roman art are much too diverse to be classified in simple oppositional categories, such as 'real' vs. 'imaginary' cities. These cities are characterized by *different* factors which can be combined in very different ways (fig. 2).

## Conclusion

I therefore suggest that one should look at representations of cities in Roman art from a broader perspective by comparing explicitly identified cities with other urban arrangements of image space, which can only be explained by recourse to the artist's intention to give the figural actions an adequate setting.

In many cases the question "Is this a city or not?" cannot be answered because the sculptor or painter has intentionally left it open by *not* specifying the location. In Roman visual art, "*the city*" is *not* a coherent, distinctive and exclusive entity that is clearly separated from other locations but is rather a starting point from which it was possible to move, step by step, into a completely fictitious world (fig. 1). How far one could move away from physical realities becomes particularly evident in those cases where the distinction between inside and outside, which is usually clearly marked by a city wall in representations of whole cities, is intentionally abandoned by combining in- and outside settings, side by side, within the same picture. When talking about "cities" as a topic in Roman art, we should *not only* think of cities in the sense of physical entities but also, and more generally, of the visualization of urban atmosphere.

When we talk about visualizing Roman cities, we should keep in mind that what we see in Roman cities is not what the Romans saw in them. The enormous variety in Roman visual art is based on the fact that the construction of spatial contexts is not intended to show what an *outside* viewer could see from his single observation point but to match the needs of the protagonists acting *within* the picture.

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<sup>33</sup> see above (with n. 15 and fig. 1).

<sup>34</sup> see above (with n. 22 and fig. 1).

**Fictitious worlds**

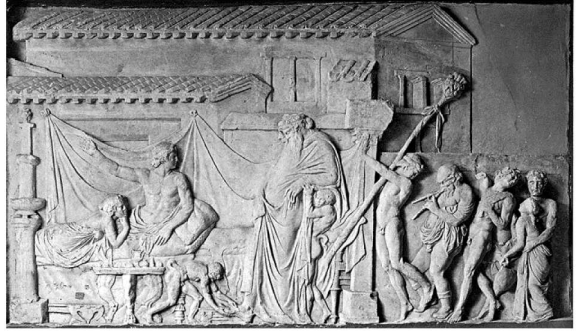
↑

IV.  
**Urban atmosphere,**  
mixture of urban and  
other elements:

III.  
**Indefinite urban  
scenery**  
indicated by  
distinctive urban  
activities or  
'urban' myths:

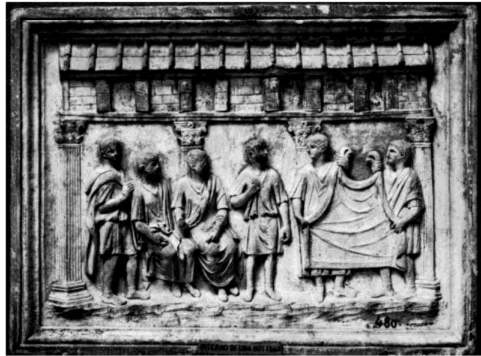

II.  
The city, seen from above,  
**as a stage** for human  
activities:

I.  
The city **without  
people** inside:



,Icarios relief' (in Naples)


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Vending relief (in Florence)

Helen and Cassandra: **Troy**

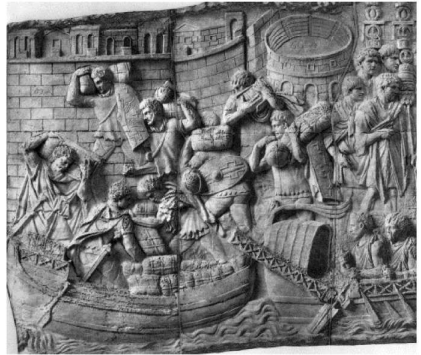
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,Tabula Iliaca Capitolina': **Troy**

Riot in the amphitheatre: **Pompeii**

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,Torlonia relief'

Trajan's column, Scene 33

**Roman cities**

Fig. 1. Different ways of visualizing cities in Roman art.



Fig. 1: by Stefan Ritter. – Photograph credits: 'Icarios relief' (Naples): Museum für Abgüsse Klassischer Bildwerke München, Fotothek. – Vending relief (Florence): ullstein bild / Alinari Archives. – Wall-painting with Helen and Cassandra, from Pompeii: © Photo SCALA, Florence. – 'Tabula Iliaca Capitolina' (Rome): ullstein bild / Alinari Archives. – Wall-painting with riot in the amphitheatre, from Pompeii: ullstein bild / Alinari Archives. – 'Torlonia relief', from the Fucino lake: Museum für Abgüsse Klassischer Bildwerke München, Fotothek. – Trajan's column in Rome, Scene 33: C. Cichorius, Die Reliefs der Traianssäule (Berlin 1896) pl. XXV.

Fig. 2: by Stefan Ritter.

Representation and its (former) location:	Relation between the location of the representation and the represented city:	Iconography of the city:	Figures inside the city:	Identifying factors:
	<b>representation situated in the same city or nearby:</b>	<b>distinctive building ensembles:</b>		<b>- the location of the representation and...</b>
Wall-painting 'Riot in the amphitheatre', Pompeii (n. 14 and fig. 1)	Pompeii, area around the amphitheatre	"	many small figures, involved in a historical event	+ distinctive building ensemble
'Anaglypha Traiani', Rome (n. 17)	Rome, Forum Romanum	"	several large figures, involved in official ceremonies	+ distinctive building ensemble
'Earthquake relief', Pompeii (n. 26)	Pompeii, Forum area	"	one figure (sacrificial activity)	+ distinctive building ensemble
		<b>no distinctive architecture:</b>		
'Torlonia relief', from the Fucino lake (n. 2 and fig. 1)	probably a city somewhere in the area of the Fucino lake	"	-- (only small figures <i>outside</i> the city)	+ distinctive landscape
'Forum frieze', Pompeii (n. 28)	Pompeii, Forum	"	many large figures, involved in commercial and other public activities	-- (only by the location of the frieze)
	<b>represented city far away:</b>			
Trajan's column, Scene 33, Rome (n. 3 and fig. 1)	anonymous city	" (city in greater distance)	-- (figures only <i>outside</i> the city)	--
			<b>mythological scenes:</b>	<b>- distinctive activities and...</b>
'Tabulae Iliacae' (n. 12 and fig. 1)	Troy	"	many small figures	+ inscriptions
Wall-painting with Daedalus and Icarus, Pompeii (n. 10)	Cnossus	" (city in greater distance)	-- (figures only <i>outside</i> the city)	-- (only by the activities (in the foreground))
		<b>scenery not specified:</b>		
Wall-painting with Helen and Cassandra, Pompeii (n. 18 and fig. 1)	Troy	"	large figures	-- (only by the activities)
Wall-painting with Theseus and Ariadne, Pompeii (n. 21)	Cnossus	"	two large figures	-- (only by the activities)
	<b>Indefinite scenery:</b>			
Vending relief, from Rome (n. 15 and fig. 1)	" , unspecific urban scenery	"	several large figures, involved in <i>commercial</i> activities	+ urban architecture
'Icarios reliefs' (n. 22 and fig. 1)	" , mixture of urban and other elements	"	large figures	+ two urban buildings

Fig. 2. Human activities and other factors in identifying cities in Roman art.

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## The life and death of ancient Roman cemeteries: Living with the dead in imperial Rome

John Bodel

"Show me the manner in which a nation or  
community cares for its dead, and I will measure  
with mathematical exactness the tender mercies of its  
people, their respect for the laws of the land, and  
their loyalty to high ideals."

(Attributed to William Gladstone, Prime Minister of Britain)

### ABSTRACT

This essay explores the implications for our understanding of ancient Roman burial and commemorative practices of the obliteration of three large suburban cemeteries during the first three centuries of the imperial period, at intervals of approximately 150 to 200 years. Specifically, it investigates the closing down of the Esquiline burial ground to the east of the city by Maecenas around 35 BCE, of the Via Salaria necropolis north of the city by Trajan around 110 CE, and of sections of the Vatican cemeteries along the Via Cornelia to the west of the city by Constantine in the 320s CE. Consideration of the circumstances of these closings suggests 1) that the average "lifespan" of a suburban Roman necropolis, if one restricts the view to the period of its most active use, is likewise about 150 to 200 years; 2) that the coincidence of these two periods is not accidental but 3) is instead due to the influence of purposeful imperial interventions into the landscape. Subsequent developments in suburban burial at Rome during the later fourth, fifth and sixth centuries, though ostensibly marking a break with the past, seem merely to have reoriented the dynamics of the relationship between the living and the dead.

KEYWORDS: necropolis, cemeteries, Rome, tombs, commemoration.

### Introduction

Imperial Rome was hemmed around by her dead. Already by the middle of the first century BCE the traditional Roman practices of extramural burial and regular familial commemoration of the dead at gravesites had ringed the urban periphery with a network of cemeteries and tombs. As the urban zone expanded outward over the following centuries, the *cordon sanitaire* that in principle separated the city of the living from the necropolis beyond it grew with it, but the barrier between the two regions became increasingly porous with time, as competition for real estate in the immediate urban periphery intensified. As some areas occupied by burials were reclaimed for the living, others were given up to the dead, so that the boundaries, both physical and conceptual, that separated the two worlds were constantly being redrawn. Death brought pollution and the dead demanded respect, but the spatial demands and

constraints imposed by a limited territory and a burgeoning population impinged ever more sharply on those twin cultural imperatives. The fundamental dilemma of reconciling the needs of the living with those of the dead presented special challenges in the environs of Rome. Easing negotiation between the two realms was a traditional Roman association of villa and tomb, which enabled a conceptual linking of the two that operated differently at different periods but which provided continuity in a cultural mode of expression over a period that witnessed radical transformations in the political, social, and religious ideologies it underpinned.<sup>1</sup>

My aim in this essay is to note briefly three occasions during the first three centuries of the Roman Empire when active cemeteries were decisively shut down in order to allow reuse of the land, and to draw some tentative conclusions about the implications of this practice for Roman attitudes toward the commemoration of the dead. I will further suggest that subsequent developments during the later fourth, fifth, and sixth centuries, though ostensibly marking a break with the past, did not fundamentally alter the poles of the relationship but merely reoriented the dynamics of their association. The exercise is a methodological experiment in "ground-truthing" Roman attitudes and commemorative practices by exploring the palimpsestic character of the peripheral suburban cemeteries of ancient Rome over the medium *longue durée*, through these three specific "soundings" spanning a roughly three hundred and fifty year period between the founding of the Principate and the founding of Constantinople (ca. 25 BCE – 325 CE).

### Three cases.

1. At the very beginning of the imperial age, or rather slightly before it, the first major urban cemetery reclamation project attempted at Rome was launched during the forties BCE by the man who would later become the emperor Augustus's chief minister of culture. Maecenas cultivated leisure in all its forms, and by the middle of the first century BCE that meant owning a luxury estate, *horti*, in the near suburbs of Rome. Much of the best real estate around the city had already been occupied by estimable peers—Lucullus to the north, on the Pincian hill overlooking the Campus Martius; Caesar to the West, across the Tiber; and to the South, the *proastion*, as Nicholas Purcell has aptly described it, along the Via Appia was dominated by the great families of the second century BCE—the Marcelli, the Servilii, the Caecilii Metelli, and, above all, the Cornelii Scipiones, whose suburban estate at the first milestone outside the Porta Capena boasted one of the earliest monumental tombs to grace a villa property.<sup>2</sup>

That left the eastern side of the city, where the Servian rampart overlooked a pestilential field outside the Esquiline Gate where criminals were executed and the corpses of the indigent were dumped along with animal carcasses and rubbish in tufa-lined vaults. To the north of the Esquiline Gate a section of these mass disposal pits had been covered over at some point early in the first century BCE, probably in conjunction with the posting of a praetorian edict on three travertine *cippi* disposed at approximately equal intervals some two hundred meters outside the *agger* between the Esquiline and Viminal Gates forbidding the dumping of refuse and the building of pyres any closer to the city.<sup>3</sup> A new potter's field was evidently opened then in the area to the south of the gate, and it was here that Maecenas laid out his *horti* a few decades later (Figure 1). Since Roman graves, according to Roman pontifical law, were *loca*



*religiosa*, the land they occupied could not be converted to other uses.<sup>4</sup> The pits where the bodies of the indigent were disposed of, on the other hand, were not classified as graves but were considered public places (*loca publica*) and were therefore liable to be repurposed.<sup>5</sup> Consequently it might have been civic, as well as religious, scruple that prevented Maecenas from occupying the public land, burying the potter's field (and a number of freestanding tombs in the vicinity) beneath three meters of earth and building a luxurious villa estate on top of it. Evidently, neither did.<sup>6</sup>

In order to obviate the charge of usurping public land, Maecenas opened a section of his estate to the people and thus won popularity for abating a public nuisance. Horace celebrated the salubrious benefits of the project in the eighth satire of his first book of poems, and T. P. Wiseman has filled out the picture of a mixed and lively public use during the early empire of the long broad *agger* that stretched north some twelve hundred meters to the Colline Gate.<sup>7</sup> Perhaps because (as far as we know) the human remains buried beneath Maecenas's estate were left in place, religious concerns were satisfied, but the obliteration of monumental tombs, as seems also to have occurred, would have precluded further active commemoration at the gravesite and thus might be expected to have impinged more directly on popular attitudes and perceptions.<sup>8</sup> Maecenas himself professed no interest in commemoration, but when he died in 8 BCE, he was reportedly buried in a tomb he had constructed at the edge of his property (probably the so-called "Casa Tonda" identified in Figure 1) next to that of his client Horace, thus perpetuating the funerary use of the area through a classic Roman combination of villa property and tomb monument.<sup>9</sup> In installing his tomb in his own newly reconstructed landscape, Maecenas followed an old tradition: the mass-grave disposal pits north of the Esquiline Gate covered over sometime in the early first century BCE had themselves been laid down on top of an area used for aristocratic burials during the sixth through fourth centuries BCE.<sup>10</sup> A verse of Maecenas's own composition admired by the Younger Seneca seems to allude to this cycle of funerary re-use of the land in the zone, which underwent at least four distinct stages over more than four centuries of continuous use, with periods of aristocratic burials alternating with eras when more humble graves characterized the zone: "I do not care about a tomb; nature buries those who are abandoned."<sup>11</sup>

2. Almost a century and a half after Maecenas's works, the emperor Trajan set about completing a project planned by Domitian to build a new forum north of the Forum of Augustus. Construction was essentially finished six years later, and in 113 CE the senate and people of Rome dedicated a monumental column one hundred feet tall on the site, as the dedicatory text records, "in order to declare how high was the hill and area excavated for such great works" (*ad declarandum quantae altitudinis mons et locus tant[is oper]ibus sit egestus*).<sup>12</sup> Three years later the emperor was reportedly buried at the base of the pedestal, in direct contravention of a long-standing (though not absolute) Roman prohibition against intramural burial.<sup>13</sup> Excavations by G. Boni in 1906 that uncovered traces of a paved road abutting the northwest side of the column base and datable to the second half of the first century CE do nothing to disprove the existence of the *mons* named in the inscription and confirmed by Cassius Dio's report, nor do they undermine the essential validity of the claim that Trajan cleared the area.<sup>14</sup>

What happened to the excavated hill? When Lanciani first considered the question in the early 1880s, he estimated that the digging had removed around one million cubic feet (about nine hundred tons) of earth. A more recent estimate of the volume extracted, based on geological soundings, arrives at a similar figure of 316,000 cubic meters of material, which is calculated as having required some 52,600 days of work involving some 800-1,200 workers on site every day (Figure 2).<sup>15</sup>

At the time Lanciani made his estimate, systematic investigation of the Roman Campagna within a radius of three or four miles from the walls had failed to disclose where the dirt had been deposited. Less than a decade later ongoing development of the "Nuovi Quartiere" north of the Porta Salaria uncovered—and immediately reburied beneath new suburban streets—dozens of acres of the ancient city, but (apparently) not before providing the answer: between the ancient Via Pinicana and the Via Salaria a large tract of land that once formed part of a vast early imperial necropolis had been covered over in antiquity with a layer of dirt twenty-five feet deep.<sup>16</sup>

A recent and thorough re-examination of the entire zone between the modern Via Salaria and Via Pinciana distinguishes six distinct stages of use of the Via Salaria necropolis (Figure 3).

- 1) From as early as the ninth through the sixth century BCE a few archaic and orientalizing tombs were built in the southern part of the region next to a paved road near the monastery of S. Teresa, and inhumation graves interspersed with cremations in *dolia* begin to appear during the eighth and seventh centuries.
- 2) From the fifth through the third centuries, the number of tombs increases: parallel rows flank the road angling across the area; during the fourth and third centuries some brick hypogaea are installed near S. Teresa, and individual freestanding tombs begin to dot the area between Via Salaria and Via Pinciana.
- 3) The late Republic (second and first centuries BCE) marks the period of the first formal organization of funerary activity in the zone, with six distinct cemeteries on various axes operating simultaneously or in quick and overlapping succession. New sites in the area are divided approximately equally between villas and tombs, and the tombs—a mixture of collective *columbaria* and freestanding individual monuments—become thickly spread throughout the southern section, with new concentrations on either side of Via Po.
- 4) During the first century CE, the unity of the entire area as a necropolis crystalizes and solidifies. The number of cemeteries grows markedly, and few new villas are built; those established during the late Republic are not abandoned until the third and fourth centuries, but the Salaria cemetery in the south is now regularized, with *columbaria* and individual tombs built on plan off connecting *diverticula*. The typology of the tombs does not change, but their number increases, and new social groups, notably slaves and freedmen of the imperial family, emerge as the predominant presence.
- 5) During the second and third centuries, the republican and early imperial tombs are razed and buried to serve as foundations for later tombs; new depositions in the Salaria cemetery are rare, and the most conspicuous monument in the region, a mausoleum of L. Paetus and his sister, half buried, is tunneled into and *loculi* are installed in its inner corridor. The grandest new structures now are the catacombs strung out along the Via Salaria — those of the Gordians, of Pamphilus on Via G. Paisiello, of Thrasus in front of Via Taro, and of Priscilla opening off the homonymous piazza.

6) Finally, during the fourth through sixth centuries, new hypogea are dug into the older catacombs, and a ring of tombs built up around the monument of the Paeti during the second and third centuries is re-used for new inhumations, repeating the cycle of funerary use and re-use of the land that had characterized the zone for more than half a millennium.<sup>17</sup>

The point of greatest interest here is the rupture that marks the transition between periods four and five, when a large section of a flourishing early imperial cemetery was buried. Among the monuments entombed were several belonging to the late Flavian period that were still in active use in the time of Trajan. Not surprisingly, perhaps, almost immediately after these were buried, the site began to be occupied by new freestanding tombs, and some of the older monuments, buried or semi-interred, began to be re-used. The transition did not effect any change in general use of the area, but for those whose monuments were summarily eliminated, the loss of a primary site for familial commemoration would have been difficult to bear. That many (though by no means all) of those most likely to be affected were members of the imperial household does not mitigate the severity of the challenge to Roman cultural values posed by the emperor's effrontery in depriving free Roman citizens of the possibility of recognizing and commemorating social and familial ties in death.<sup>18</sup>

Unlike Maecenas's project, which had the pretext of abating a public nuisance, Trajan's excavations exposed only his own ambition: to rise (metaphorically), and, in this case, to sink (literally) to the level of the first Princeps. If in Maecenas's day one amenity cultivated by wealthy landowners in Rome was a commanding height with expansive views—as at the villa of Lucullus overhanging the northern Campus Martius, or the Palatine house occupied and expanded by Octavian, or, perhaps most conspicuously, at the famous tower of Maecenas—by the early second century all the available peaks had been taken. Trajan therefore maintained the affectation of verticality but inverted its orientation by emphasizing the depth, rather than the height, of the landscape he had constructed. The irony of the conceit—and the measure of Trajan's *hubris*—may not have been lost on the senatorial authors of the posthumous dedicatory inscription of the column, which occupies the place of a regular epitaph. By calling attention to the height of the pile of earth that once lay over the spot where Trajan's ashes now lay entombed, the senate acknowledged the emperor's wish to be buried in his column by coyly evoking the customary epitaphic benediction that might more appropriately have been invoked for the unfortunate denizens of the Via Salaria necropolis, whose tombs he had obliterated in order to construct his own monument: *sit tibi terra levis*.<sup>19</sup>

3. Finally, across the Tiber from the Campus Martius (and therefore outside the early imperial *pomerium*), a busy necropolis had grown up during the later first and second century between the Via Triumphalis and the Via Cornelia where they met at the Pons Neronianus and on either side of the Via Cornelia that skirted the Vatican hill and bypassed the Circus of Gaius and Nero, where according to tradition St. Peter had been martyred. Five distinct cemeteries have thus far been identified, each conventionally named after its modern location (St. Peter's beside the Via Cornelia and Galea, Annona, Autoparco, and Santa Rosa along the Via Triumphalis), but all clearly belonged to the same vast burial ground.<sup>20</sup> The two best documented sections (Autoparco and Santa

Rosa), which are contiguous, have recently been re-united into a single museo-archeological park that preserves more vividly than anywhere else in Rome the topographical complexity of a crowded suburban necropolis.<sup>21</sup>

Three distinct stages of development of the Via Triumphalis cemeteries can be discerned, each separated from the next by a cataclysmic event. The earliest phase, or proto-phase, before a cemetery became formalized around the middle of the first century CE, is marked by sporadic individual burials dug into the natural slope of the Vatican hill in the areas under Santa Rosa and the Galea fountain toward the end of the first century BCE or near the start of the first century CE. Around 80 CE a landslide that partially buried some of the earlier tombs led to a more systematic development of the zone, with new *columbaria* of moderate size built with their front facades aligned in regular rows; this phase lasted until the middle of the second century. Shortly before the middle of the second century, another, more destructive, landslide in the Santa Rosa section almost completely obliterated the earlier tombs and created a new foundation for the construction, now at a level several meters higher than the previous natural ground-level, of larger tombs and even more highly regimented rows and alleys. In the sections known as Galea and Autoparco abandonment and disuse of the cemetery begin around the middle of the third century, with the only new graves in the zone being isolated individual inhumations or very occasionally cremations. In the flat areas below Santa Rosa and Annona, a new tomb is installed toward the middle of the third century, and at least some tombs continued in active use through to the end of the century.<sup>22</sup> The earliest graves in the area belong to persons of middling and lower economic means, and the most elevated users of the cemetery during the first two centuries CE were slaves and freedmen of the emperor's household. At the beginning of the third century, however, more elaborate and expensive monuments begin to appear (one tomb of the first two decades of the century held at least eight sculpted marble sarcophagi), and the associated epitaphs for the first time attest persons of the equestrian order.

It was at this time, around the year 200, that the first monumental tombs begin to be built in the center of the Circus area beside the Via Cornelia, including a large (30 meters in diameter) monument later used as a side entranceway into St. Peter's basilica, and an unassuming monument wedged into an awkward spot amidst more lavish tombs further up the slope of the Vatican, came to be regarded as the site of Peter's grave.<sup>23</sup> That, at any rate, was what was believed when (probably) Constantine in the 320s laid out around the presumed martyr's shrine the largest of the monumental funerary basilicas he imposed on the Roman landscape, leveling off for its foundation an area the size of a football field (119 x 64 meters) in a thriving part of the necropolis (Figure 4).<sup>24</sup> In the process he truncated more than a dozen mid-sized brick monuments dating from the middle of the second century, part of a uniform group of tombs populated for the most part by freedmen and their families, many still in use at the time of the destruction. According to the authors of the first full account of the excavations in English, "Constantine's builders took care to respect the dead themselves, carefully stacking in sarcophagi bones from those burials which they could not avoid disturbing"; they go on to suggest that the emperor's role as Pontifex Maximus may have allowed him to circumvent the laws prohibiting the violation of tombs. But Roman pontifical law provides no precedent for the sort of collective

secondary burial the excavations uncovered, and the stacking of human bones promiscuously in convenient receptacles suggests little more than a minimal concern for piety.<sup>25</sup>

This section of the cemetery was mostly constructed between 125 CE and the end of the second century, but it remained in use throughout the third and into the fourth century.<sup>26</sup> A curious cylindrical monument left standing adjacent to the nave of the Constantinian basilica at the time of its construction illustrates well the history of the zone. A mortared rubble foundation capped with travertine blocks and forming a platform, originally, it seems, for substructures of the Circus of Gaius and Nero, was built over some time in the second century, when the surrounding cemetery was first being developed, with a rectangular tomb chamber that was found to contain two inhumation burials. Not long after, in the early years of the third century, around the time that the supposed site of Peter's grave was first memorialized, the massive foundations for the large cylindrical monument were laid down on top of both of these, demolishing the upper parts of the tomb chamber and burying the travertine platform, now lying nearly four meters below the new ground level.<sup>27</sup> The purpose of the cylindrical monument—probably funerary or commemorative, possibly imperial and associated with the divinity of the imperial house—is uncertain, but it was left undisturbed by the builders of the Constantinian basilica and was only finally demolished in 1777.<sup>28</sup>

Whether or not he knew it, in other words, Constantine had a precedent in the vicinity for the destruction of a tomb in use (possibly, again, by an emperor) for the construction of a new monument. Half a century later, Damasus, the bishop of Rome, added a baptistery to the basilica, and around the year 400 the emperor Honorius built a mausoleum for himself and his family off the south transept parallel to the cylindrical monument, thus perpetuating the funerary use of the zone Figure 5.<sup>29</sup>

### Three observations

To sum up: three large suburban necropoleis, distributed geographically around the ancient city of Rome to the east (Esquiline), north (Via Salaria), and west (Vatican), and reflecting at the times of their closure (or partial closure) the different worlds of the Triumviral (ca. 35 BCE), high imperial (ca. 115 CE), and early Christian (ca. 320 CE) eras, share two features that are perhaps related and which together point toward one (tentative) conclusion about the life and death of ancient Roman cemeteries.

1. Although their periods of use as burial grounds varied considerably, each of the three necropoleis seems to have enjoyed a *floruit* of about one hundred and fifty to two hundred years before being obliterated in whole or in part by an imperial power. The *Campus Esquilinus* holds some of the oldest burials in Rome (from the end of ninth century BCE), but large-scale exploitation of the region as a burial ground seems to have begun only after the Second Punic War and free-standing tombs proliferated primarily during the second century BCE, before the *puticuli* came into use sometime (probably) toward the end of the century.<sup>30</sup> Archaic tombs are likewise found in the Via



Salaria burial ground, but the first development of the zone as a necropolis comes only during the first century BCE. The earliest burials on the Vatican in the area of the Via Triumphalis belong to the early first century BCE, but formal cemeteries first appear around the middle of the first century CE, and by the second half of the third century funerary use of the area begins to decline.<sup>31</sup>

2. Located at the northern edge of the presumed extent of the *Horti Sallustiani*, the Via Salaria necropolis first came into heavy use at about the same time that Maecenas buried the pauper's graveyard on the Esquiline beneath his own *horti*. These two estates—the *Horti Sallustiani*, founded (or at least greatly expanded) by C. Sallustius Crispus, the Augustan minister who was second to Maecenas, and the *Horti Maecenatis*—stood at opposite ends of the *agger*, outside of the Colline and Esquiline Gates respectively. As T.P. Wiseman has shown, these two landmarks were linked through the Rustic Vinalia festival and the cults of Venus Lubentina and Venus Erycina to the related associations of pleasure, particularly sexual pleasure, and death.<sup>32</sup> *Horti*, too, as we have seen, share the coupling of pleasure and death, in the form of tomb monuments situated on luxury landscapes, and are closely associated with imperial power.<sup>33</sup> It is therefore perhaps worth noting that when the Via Salaria necropolis was first developed during the early first century CE, it was populated predominantly by imperial slaves and freedmen. So too, the sections of the Vatican necropolis along the Via Triumphalis grew up in close proximity to *horti* of the imperial family, beginning with the elder Agrippina, and imperial slaves and freedmen of Nero appear prominently in the epitaphs when the cemetery is first formally developed during the second half of the first century.<sup>34</sup> The influence of imperial *horti* may have been as significant in the development of the peri-urban necropoleis as imperial intervention was in their destruction.

3. Perhaps the natural lifespan of a Roman graveyard amounted to about a *saeculum* and a half, one hundred and fifty years, in Roman reckoning, four or five average lifetimes. Those who first began remembering the dead in a cemetery late in its life would not see even the short-term fulfillment of their commemorative goals, but by then the earliest tombs would perhaps already have grown cold, as families died off or became dissipated, and with the dispersal of a majority of the commemorators, the fog of pollution that enshrouded the dead, as well as the protection of active regular use, may also have dissipated.<sup>35</sup> Comparative evidence from more modern societies reliant solely upon oral tradition for the transmission of cultural memory (as, of course, Roman society was not) suggests that one hundred and fifty years may represent a normative maximum duration for a tradition passed down by word of mouth.<sup>36</sup> For all the tales of legendary genealogies and family trees reaching back over dozens of generations vaunted (often implausibly) by Roman aristocrats, the personal recollection of ancestors by ordinary Romans of the classical period may more normally have been limited to the living memory of a father or mother: of modern Rwala Bedouins, it has been observed that "every Bedouin knows his great-grandfather, whereas of his great- great-grandfather he is likely to be completely ignorant."<sup>37</sup> The same may have been true of most ancient Romans. To any contemporary witnesses of any of the dramatic cemetery closures of the first three

centuries of the imperial period, the wholesale obliteration of large numbers of Roman tombs would in any case have had a chilling effect on any personal hopes for enduring commemoration after death.

### **Late antique developments**

By the time Honorius affixed his mausoleum to the side of Constantine's church, the rules of the game were changing, and powerful forces, both demographic and theological, were reshaping the social landscape of funerary commemoration. By then the cult of the martyrs was in full swing around Rome, and the great catacomb complexes beside the consular roads accommodated scores of hundreds of the Christian dead eager to be laid to rest near their saints, *ad sanctos*.<sup>38</sup> The open communal aspect of these collective cemeteries underground was very different from that of the freestanding group monuments of the first and early second centuries, the dovecote-like *columbaria*, which advertised exclusivity. Above ground the faithful congregated in vast halls reminiscent in design of the public meeting places of pagan Rome. The architectural form is significant, since it signals one of the fundamental ways that Christianity changed the nature of the interaction among the living and the dead in the *suburbium*, by making grave-site visits communal and public, rather than familial and private.<sup>39</sup>

The most striking new developments in the centuries following Constantine, however, were the gradual penetration into the city of intramural graves during the fifth and sixth centuries and, in the Roman countryside, the integration of tombs into the fabric of villa buildings no longer serving their original functions but now repopulated by agglomerated groups of families living together in the subdivided structures.<sup>40</sup> The tombs installed into these small communities were normally built onto the walls of the buildings themselves, so that they are physically as well as conceptually linked to the houses of the living.<sup>41</sup> It has been plausibly suggested that the practice grew out of the contemporary fashion for burial *ad sanctos* in its exploitation of architecture to mediate contact between the living and the dead—Honorius's mausoleum represents an élite example of the phenomenon.<sup>42</sup> Tombs attached to imperial villas, however, are found already in the third century, before Christian burial near the martyrs became popular.<sup>43</sup> Two other factors, I suggest, may together have played a more important role in shaping the new form.

The first is cultural: the development of catacombs, a secular practice coopted by the Christian community for its own socio-religious ends. As is now becoming increasingly clear, this new style of collective burial originated with private patrons (many of them women) donating space underground, beneath their suburban villa properties, for the burial there in open communal cemeteries of groups who congregated together in life.<sup>44</sup>

The second is architectural, or material: it has been observed that during the fifth and sixth centuries, the only new monumental buildings being constructed with bricks and mortar in the Italian countryside were churches. Dilapidated villa buildings stood out in this newly eco-friendly landscape as structures of a certain durability, if not permanence, and thus naturally became centers of human habitation—thus villa grew into village.<sup>45</sup> Since long before Horace (remembering, perhaps, his friend Maecenas's

obliteration of the Esquiline cemetery) built his monument more lasting than bronze in verse, longevity had been the gold standard of funerary commemoration. To residents of the Roman *campagna* during the fifth and sixth centuries, physically attaching tombs to villa buildings would have seemed a logical solution to the ephemerality of other man-made impositions on the rural landscape. Bringing the dead into the community of the living, where they could be more closely tended, would perhaps also have been a natural response to the psychological effects of a collective memory of the wholesale destruction of suburban cemeteries in the past.

## Conclusion

It is unclear how British Prime Minister William Gladstone, to whom the quotation in the epigraph of this essay is attributed, would have judged the "tender mercies" and "loyalty to high ideals" of the Romans living in Rome during the imperial period based on the growth and death of their peri-urban cemeteries, but it is clear that the intervention of emperors could override both, and that the commemorative behaviors of Rome's urban residents were subject not only to the inevitable consequences of demographic growth and territorial expansion but to the inexorable cycle of human generations and the ambitions and fancies of men in power.

## Notes

<sup>1</sup> I have tried to describe the nature of this connection in "Monumental villas and villa monuments," *Journal of Roman Archaeology* 10 (1997) 5–35 at 18–26. See also M. Verzár-Bass, "A proposito dei mausolei negli horti e nelle ville," in M. Cima and E. La Rocca (eds.), *Horti Romani* (Rome 1998) 401–24. I am grateful to the other participants in the conference, especially Filippo Coarelli and Peter Wiseman, for stimulating discussion and helpful bibliography, and above all to Chrystina Häuber and Franz Xaver Schütz, for whom my warmest thanks are reserved, not only for their invitation to participate in the conference but also for their impeccable hospitality from start to finish and their friendship over many years.

<sup>2</sup> For Caesar's estate across the Tiber, which bordered Marc Antony's, see E. Papi, "Horti Caesaris (trans Tiberim)," in E. M. Steinby, ed., *Lexicon Topographicum Urbis Romae. Volume Terzo. H-O* (Rome 1996) 55–56 and J. H. D'Arms, "'Between public and private'. The *epulum publicum* and Caesar's *horti trans Tiberim*," in *Horti Romani* above, n. 1, 33–43. For Lucullus on the Pincian, see H. Broise and V. Jolivet, "Il giardino e l'acqua: l'esempio degli horti Luculliani," in *Horti Romani*, 189–202. For the area outside the Porta Capena as a *proastion*, see Cic. *Tusc.* 1.7.13 and N. Purcell, "Tomb and Suburb," in H. Hesberg and P. Zanker (eds.), *Römische Graberstraßen: Selbstdarstellung—Status—Standard* (Berlin 1987) 25–41; J. R. Patterson, "On the margins of the city of Rome," in V. M. Hope and E. Marshall (eds.), *Death and Disease in the Ancient City* (London 2000) 85–103 at 97–100; and, for the family tombs and villa property of the Scipiones beside the Via Appia, F. Zevi, "Sepulcrum (Corneliorum) Scipionum," in E. M. Steinby, ed., *Lexicon Topographicum Urbis Romae. Volume Quarto. P-S* (Rome 1999) 281–85, and D. Nonnis, "Corneliorum sepulcrum (256)," in V. Fiocchi Nicolai, M. G. Granino Cecere, and Z. Mari, eds., *Lexicon Topographicum Urbis Romae. Suburbium. Volume Secondo. C-F* (Rome 2004) 163–64, both with further bibliography.

<sup>3</sup> See *CIL* 1<sup>2</sup> 838, 839, 2981, with J. Bodel, *Graveyards and Groves. A Study of the Lex Lucerina* (Cambridge, Mass. 1994) 42–54.

<sup>4</sup> For the basic principle, see M. Ducos "Le tombeau, *locus religiosus*," in F. Hinard (ed.), *La mort au quotidien dans le monde romain* (Paris 1995) 135-44 and F. De Visscher, *Le droit des tombeaux romains* (Milan 1963) 43-63.

<sup>5</sup> See Bodel (above, n. 3) 38-40. Despite their legal status as *loca publica*, popular opinion nonetheless regarded these mass burial pits as graves: as one land surveyor of (probably) the second century observed of the potter's fields known as *cula* or *culinae* on the outskirts of Roman towns, "since these places are outside of towns, private persons tend to encroach upon them and to annex them to their own estates, without any respect for religion." (*ex his locis, cum sint suburbana, sine ulla religionis reverentia solent privati aliquid usurpare et hortis suis adplicare*: Agennius Urbicus in *Corpus Agrimensorum* p. 47 Th. = pp. 42-45 Campbell).

<sup>6</sup> Nor do any of our literary sources express qualms about violation of the dead, despite the not infrequent references in late Republican authors to occasions when the pontiffs' permission was explicitly sought and obtained prior to the exhumation of a body for removal to another location or for any other disturbance of a grave: see O. Estiez "La translatio cadaveris, le transport des corps," in F. Hinard (ed.), *La mort au quotidien dans le monde romain* (Paris 1995) 101-108. For the villa property, see C. Häuber, *The Eastern Part of the Mons Oppius in Rome: the Sanctuary of Isis et Serapis in Regio III, the Temples of Minerva Medica, Fortuna Virgo and Dea Syria, and the Horti of Maecenas* (Roma 2014), Map 11, pp. 307-332, 341, 342, 345, 376, 424, 877.

<sup>7</sup> Hor. *Sat.* 1.8.8-16. Further Häuber (above n. 6) 310-11, 315-16. For the various entertainments and diversions to be found along the *agger*, see T. P. Wiseman, "A Stroll on the Rampart," in *Horti Romani* (above, n. 1) 13-22.

<sup>8</sup> E. J. Graham, *The Burial of the Urban Poor in Italy in the Late Roman Republic and Early Empire* (London 2006) 81-84, suggests that "the authorities" responsible for Maecenas's reclamation project (she does not say who they might be) may have exhumed the graves to be covered by the new estate and reburied the remains collectively in the tufa-lined pits known as *puticuli*. But none of the known pontifical interventions required for formal exhumations seems compatible with this idea (see Estiez, above, n. 6), and the procedure imagined (transfer of individual exhumations to promiscuous mass graves) runs counter to Roman cultural principles and practice.

<sup>9</sup> Suetonius's report (*Vita Hor.* 20) that Maecenas's tomb was situated next to Horace's "at the edge of the Esquiline" (*extremis Esquiliis*) fixes the location of both. For the "Casa Tonda", see Häuber (above, n. 6) 330-31. For the Roman association of villa and tomb, see above, n. 1.

<sup>10</sup> See M. Albertoni, "La necropoli Esquilina arcaica e repubblicana," in *L'archeologia in Roma capitale tra sterro e scavo* 1983 (Rome 1983) 140-55 and below in the text. In an earlier study I questioned the pseudo-Acro scholion on Horace's satire that seems to associate the *horti Maecenatiani* with the area later occupied by the Baths of Trajan, since Horace's description of a wasteland "strewn with bones" seemed incompatible with an area inside the city walls (*Graveyards and Groves*, above, nt. 2, 51-52). Häuber (above n. 6, 315-20) has recently called attention to one of Lanciani's "Notes from Rome" that describes burials uncovered during excavations inside the Servian Wall that presented the aspect Horace describes; she points out (315) that Horace's description need not refer to a graveyard active in his day but could apply to skeletons exposed during excavation works in the area of tombs, as surely attended the construction of Maecenas's estate. I now accept this possible explanation and the likely extension of Maecenas' estate to inside the wall; the boundaries of the Esquiline burial ground are unknown (see Häuber above, n. 6, 315-34, esp. 321-23).

<sup>11</sup> Sen. *Epist.* 92.35, *diserte Maecenas ait: "nec tumulum curo; sepelit natura relictos"* (= FPL<sup>2</sup> "C. Maecenas" 102 no. 8 Morel).

<sup>12</sup> For the complete text, see CIL 6.960 = ILS 294: *Senatus populusque Romanus / Imp(eratori) Caesari divi Nervae filio) Nervae / Traiano Aug(usto) Germ(anico) Dacico, pontif(ici) / maximo, trib(unicia) pot(estate) XVII, imp(eratori) VI, co(n)s(uli) VI, p(atri) p(atriciae), / ad declarandum quantae altitudinis / mons et locus tant[is oper]ibus sit egestus*. The grammatical case of *tantis operibus*—dative or ablative—and thus the meaning of the phrase (if [*oper*]ibus is the correct supplement) is uncertain and thus ambivalent: both the excavation and the construction were "great works". For an alternate supplement, *tantis viribus*, which does not materially affect the interpretation advanced here, see S. Stucchi, "*Tantis viribus*. L'area della Colonna nella concezione generale del Foro di Traiano," *Archeologia Classica* 41 (1989) 237-92 at 237-51.

<sup>13</sup> For Trajan's deposition, see Cassius Dio 69.2.3. Eutropius 8.5.2 adds the detail that Trajan's bones lay in a golden urn beneath the column and notes (incorrectly) that he was the only emperor buried within the city. An original funerary function of the monument, and particularly the use of the pedestal chamber for the deposition of the cinerary urns of Trajan and Plotina, has been questioned, notably by A. Claridge, "Hadrian's Column of Trajan," *Journal of Roman Archaeology* 6 (1993) 5-22, at 9-11 and ead. "Hadrian's lost Temple of Trajan," *Journal of Roman Archaeology* 20 (2007) 54-94 at 87-88, who argues that the column was a triumphal monument and that Trajan's remains were interred in a tomb located at its base only as an afterthought. Whether primary or secondary, the funerary function of the completed monument is undeniable: see Mark J. Johnson, *The Roman Imperial Mausoleum in Late Antiquity* (Cambridge 2009) 27-29 and G. L. Grassigli, "'...sed triumphare, quia viceris,' (Plin. *Pan.* 17.4). Il 'nuovo' foro di Traiano," *Ostraka* 12 (2003) 159-76 at 167. The honorific burial of leading men inside the *pomerium* (especially in the Campus Martius) had enjoyed a long history during the Republican period: see F. Coarelli, *Il Campo Marzio. Dalle origini alla fine della repubblica* (Rome 1997) 591-602.

<sup>14</sup> See Cass. Dio 68.16.3, "And he set up in his Forum a huge column, to serve as both a monument (*taphe*, a tomb) for himself and as a memorial of his work on the Forum. For since that entire area was hilly, he cut it down to the same distance as the column reached up and thereby made the forum level." (καὶ ἔστησεν ἐν τῇ ἀγορᾷ καὶ κίονα μέγιστον, ἅμα μὲν ἐς ταφήν ἑαυτῷ, ἅμα δὲ ἐς ἐπίδειξιν τοῦ κατὰ τὴν ἀγορὰν ἔργου· παντὸς γὰρ τοῦ χωρίου ἐκείνου ὄρεινοῦ ὄντος κατέσκαψε τοσοῦτον ὅσον ὁ κίων ἀνίσχει, καὶ τὴν ἀγορὰν ἐκ τούτου πεδινὴν κατεσκεύασε). A. Claridge (above, n. 13, 1993) 9 nt. 9 points out that, since Boni's excavations further showed that the immediate area of the column had been a valley, the excavated hill had to be located elsewhere on the site; this was later discovered to be in the region of the Markets of Trajan, which abutted a man-made cutting in the rock face of the Quirinal at about the right height. The column, comprising both plinth and capital, is in fact 29.74-76 meters tall, or nearly a Roman foot higher than the prescribed one hundred: see S. Maffei, "Forum Traiani: Columna," in E. M. Steinby, ed., *Lexicon Topographicum Urbis Romae. Volume Secondo. D-G* [Rome 1995] 356-59 at 357.

<sup>15</sup> See S. Rizzo, "Indagini nei fori imperiali. Oroidrografia, foro di Cesare, foro di Augusto, templum Pacis," *Mitteilungen des Deutschen Archäologischen Instituts. Römische Abteilung*. 108 (2001) 215-44, for the geology of the zone, and E. Bianchi, E. and R. Meneghini, "Il cantiere costruttivo del foro di Traiano," *Mitteilungen des Deutschen Archäologischen Instituts. Römische Abteilung*. 109 (2002) 395-417 at 399-400 for the volume and manpower estimates.

<sup>16</sup> See R. Lanciani, *Ancient Rome in the Light of Recent Excavations* (London 1888) 87; id. *Pagan and Christian Rome* (London 1892) 284-86; and C. Cupitò, *Il territorio tra la Via Salaria, L'Aniene, Il Tevere e la Via "Salaria Vetus"* (Rome 2007) 182.



<sup>17</sup> For the history of the phases of the necropolis, see Cupitò (above, n. 16) 179-83. For the monument and epitaph of M. Lucilius Paetus and his sister, see P. Montanari in Cupitò (above, n. 16) 107-109 (UC 10.370); *CIL* 6.32932: *V(ivit). M. Lucilius M. f. Sca(ptia) Paetus, / trib(unus) milit(um), praef(ectus) fabr(um), praef(ectus) equit(um). / Lucilia M. f. Polla soror.*

<sup>18</sup> L. Homo's insistence that the land remained *locus religiosus* (*Rome imperiale et l'urbanisme dans l'antiquité*, 2<sup>nd</sup> ed. [Paris 1971] 42-43), though possibly correct, misses the point.

<sup>19</sup> For the fashion among late Republican and early imperial grandes of prizing heights and vistas for their suburban estates, see Häuber (above, n. 6) 439-440; cf. pp. 366, 386.

<sup>20</sup> For the Vatican cemeteries, see E. M. Steinby, *La necropoli della Via Triumphalis. Il tratto sotto l'Autoparco Vaticano* (Rome 2003) 13-19; P. Liverani and G. Spinola, *The Vatican Necropolies. Rome's City of the Dead* translated by S. Stevens and V. Noel-Johnson (Turnhout 2010) 41-39 (St. Peter's) 141-286 (Via Triumphalis cemeteries); E. M. Steinby, "Necropoli vaticane – revisioni e novità," *Journal of Roman Archaeology* 26 (2013) 543-52; and the next note.

<sup>21</sup> The nature of the landscape and some of the spectacular finds emerging from the newest excavations are well described by F. Buranelli below, pp. 209-228, in this volume.

<sup>22</sup> See Liverani and Spinola (above, n. 20) 142-43; and Steinby (above, n. 20, 2013) 549-50, questioning the early dating by Liverani and Spinola of several of the supposedly earliest monuments and rightly emphasizing that the zone only came into use as a formal cemetery around the middle of the first century; Buranelli, below, p. 226, in this volume. Only in the second century did monumental tombs begin to be built up the slopes of the Vatican hill north of the Via Cornelia and the Circus. For the evolving socio-economic profile of the necropolis, see Steinby (above, n. 20, 2013) 550-51.

<sup>23</sup> For the supposed site of Peter's grave, see M. Guarducci, *Le reliquie di Pietro in Vaticano* (Rome 1995); R. R. Holloway, *Constantine and Rome* (New Haven 2004) 120-55; and Liverani and Spinola (above, n. 20) 47-55; for the large monument in the Circus area, see below, n. 28.

<sup>24</sup> The definitive publication of the individual monuments is by H. Mielsch and H. von Hesberg, *Die heidnische Nekropole unter St. Peter in Rom* (Rome 1986-1995). For the basilica, see R. Krautheimer, S. Corbett, A.K. Frazer, *Corpus Basilicarum Christianarum Romae* vol. V (Vatican City 1977) 165-285. The basilica was laid out with the chord of the apse aligned with the aedicula marking the supposed burial place of Peter, over a cemetery that was itself aligned with the Via Cornelia running east-west and passing to the south, of which some seventy meters were uncovered. Whether the basilica was built by Constantine or by his successor Constans (emperor from 337), as argued by G. Bowersock, "Peter and Constantine," in J.-M. Carrié and R. Lizzi Testa (eds.) *Humana sapit. Étude d'antiquité tardive offertes à Lellia Cracco Ruggini* (Turnhout 2002) 209-17 [reprinted in W. Tronzo, ed., *Saint Peter's in the Vatican* (Cambridge 2005) 5-15], makes little difference for my argument; see R. Gem, "From Constantine to Constans: the chronology of the construction of Saint Peter's basilica," in R. McKitterick, J. Osborne, C. M. Richardson, and J. Story (eds.), *Old Saint Peter's, Rome* (Cambridge 2013) 35-64, esp. 44-50.

<sup>25</sup> See J.M.C. Toynbee and J. Ward Perkins, *The Shrine of St. Peter and the Vatican Excavations* (London and New York 1956) 12-13, followed by many, e.g., Liverani and Spinola (above, n. 20) 55. For the laws against *violatio sepulchri*, see De Visscher (above, n. 4) 150-58, who more aptly notes (158), "Si l'on considère...la continuité de la politique romaine en cette matière, il serait en vérité surprenant que Constantin y eût dérogé à l'occasion de la construction de la Basilique St. Pierre."

<sup>26</sup> See Toynbee and Ward Perkins (above, n. 25) 28-33.

<sup>27</sup> See F. Castagnoli, "Il circo di Nerone in Vaticano," *Atti della Pontificia Accademia Romana di Archeologia. Rendiconti* 32 (1959-60) 97-121 and the next note.

<sup>28</sup> See R. Gem, "The Vatican Rotunda: a Severan monument and its early history, c. 200-500," *Journal of the British Archaeological Association* 158 (2005) 1-45, especially 31-35. A leading candidate to have built the monument is the emperor Elagabalus, who, albeit according to a hostile source, "is said to have driven a chariot drawn by four elephants in the Vatican, after the tombs that were standing in the way had been destroyed." (*Fertur . . . elephantorum quattuor quadrigas in Vaticano agitasse dirutis sepulchris quae obsistebant*; SHA, *Elagabalus* 23.1).

<sup>29</sup> For the mausoleum of Honorius, see H. Koethe, "Zum Mausoleum der weströmischen Dynastie bei Alt-Sankt-Peter," *Mitteilungen des Deutschen Archäologischen Instituts. Römische Abteilung*. 46 (1931) 9-26; Johnson (above, n. 13) 167-74; and M. McEvoy, "The mausoleum of Honorius. Late Roman imperial Christianity and the city of Rome in the fifth century," in McKitterick, Osborne, Richardson, and Story (above, n. 24) 119-36.

<sup>30</sup> See Albertoni (above, n. 10) 141-48.

<sup>31</sup> For the dates, see Cupitò (above, n. 16) 181 (Via Salaria); and, for the Via Triumphalis cemeteries, Steinby (above, n. 20, 2003) 22 (Vatican Autoparc); ead. (above, n. 20, 2013) 549-50 (Santa Rosa); Liverani and Spinola (above, n. 20) 197 (Annona).

<sup>32</sup> See Wiseman (above n. 7) 15-16; cf. Artemidorus, *Oneirocritica* 1.78 on the association of brothels and potter's fields.

<sup>33</sup> For the close relationship between *horti* and the imperial family, see M. Beard, "Imaginary *horti*: or up the garden path," in *Horti Romani* (above, n. 1), 25-28.

<sup>34</sup> See Steinby (above, n. 20, 2013) 544.

<sup>35</sup> In the large *columbarium* set aside for the household of the empress Livia, which provided nearly 1100 burial spaces for her slaves and freedmen, individual *ollae* were apparently being reused already during the Julio-Claudian period, within a few of decades of the original depositions: see M.L. Caldelli and C. Ricci, *Monumentum familiae Statiliorum: un riesame* (Rome 1999) 60-61.

<sup>36</sup> So, for example, in modern Rwanda and among the Alaskan Inuit: see D. Henige, "Impossible to disprove yet impossible to believe: the unforgiving epistemology of deep-time oral tradition," *History in Africa* 36 (2009) 127-234 (at 232), whose mission is to debunk the more extravagant claims made for the oral transmission of cultural memory. My thanks to T. P. Wiseman for drawing my attention to this wide-ranging essay.

<sup>37</sup> See A. Musil, *The Manners and Customs of the Rwala Bedouins* (New York 1928) 48, quoted by Henige (above n. 36) 232. For Roman family trees, see M. Bettini, *Anthropology and Roman Culture. Kinship, Time, Images of the Soul* (Baltimore 1991) 167-83.

<sup>38</sup> The classic study is by P. Brown, *The Cult of the Saints: Its Rise and Function in Latin Christianity* (Chicago 1981).

<sup>39</sup> I try to establish these points in "From *Columbaria* to Catacombs: Communities of the Dead in Pagan and Christian Rome," in L. Brink and D. Greene (eds.), *Roman Burial and Commemorative Practices and Earliest Christianity* (Berlin 2008) 177-242, esp. 233-35. If anything, respect for the dead as reflected in the treatment of grave-sites increased rather than diminished with the advent of Christianity, despite the fulminations of Church fathers against the tenacity of the pagan practice of making offerings at the tomb: see E. Rebillard, *The Care of the Dead in Late Antiquity* (Ithaca 2009) 140-57.

<sup>40</sup> See F. Di Gennaro and E. J. Griesbach, "Le sepolture all'interno delle ville con particolare riferimento al territorio di Roma," in P. Pergola, R. Santangelli Valenziani, and R. Volpe (eds.) *Suburbium. Il suburbio di Roma dalla crisi del sistema delle ville a Gregorio Magno* (CollEFR 311) (Rome 2003) 123-66, esp. 143-45; T. Lewit, "Vanishing villas: what happened to the élite rural habitation in the West in the 5th-6th c.?", *Journal of Roman Archaeology* 16 (2003) 260-71; K. Bowes and A. Gutteridge, "Rethinking the later Roman landscape," *Journal of Roman Archaeology* 18 (2005) 405-13, at 409-11 (agglomeration villages); and the response of Lewit, "Footprints in the later Roman countryside: a response," *Journal of Roman Studies* 19 (2006) 370.

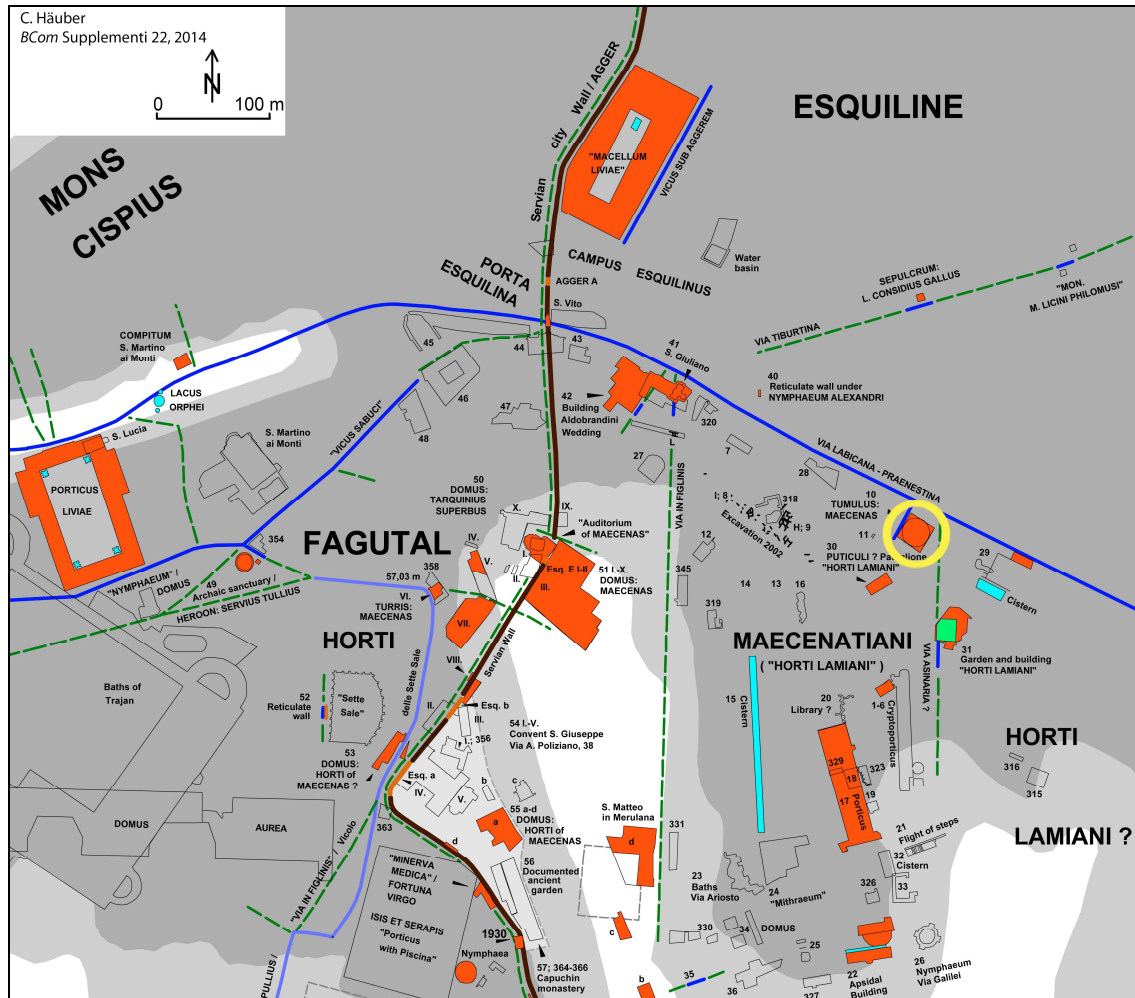
<sup>41</sup> See Lewit (above, n. 40, 2003) 262-63.

<sup>42</sup> By Di Gennaro and Griesbach (above, n. 40) 144-45. For the clustering of private tombs around and within the funerary basilicas surrounding Rome, and the frequent re-use of earlier tombs during the sixth century, see A. M. Nieddu, "L'utilizzazione funeraria del suburbia nei secoli V e VI," in *Suburbium* (above, n. 40), 545-606, esp. 591-96.

<sup>43</sup> The tomb of Romulus at the Villa of Maxentius and Diocletian's mausoleum at his palace in Split, for example, fit comfortably into the classical tradition of imperial tombs at suburban villas. See Johnson, (above, n. 13) 59-70 (Diocletian), 86-92 (Maxentius); further 93-103 (Tor de' Schiavi, Rome).

<sup>44</sup> See C. Osiek, "Roman and Christian burial practices and the patronage of women," in Brink and Greene (above, n. 39) 243-70. For the origins and early development of the catacombs, see Bodel (above n. 39) 181-89 (secular) and the collection of papers in V. Fiocchi Nicolai and J. Guyon (eds.), *Origini delle catacombe Romane. Atti della giornata tematica dei Seminari di Archeologia Cristiana (Roma 21 marzo 2005)* (Vatican City 2006), for the most part defending the traditional view (Christian).

<sup>45</sup> See Bowes and Gutteridge (above, n. 40) 410-11; cf. P. Leveau, "Les incertitudes du terme *villa* et la question du *vicus* en Gaule Narbonnaise," *Revue Archéologique de Narbonnaise* 35 (2002) 5-26, for early examples of the phenomenon.



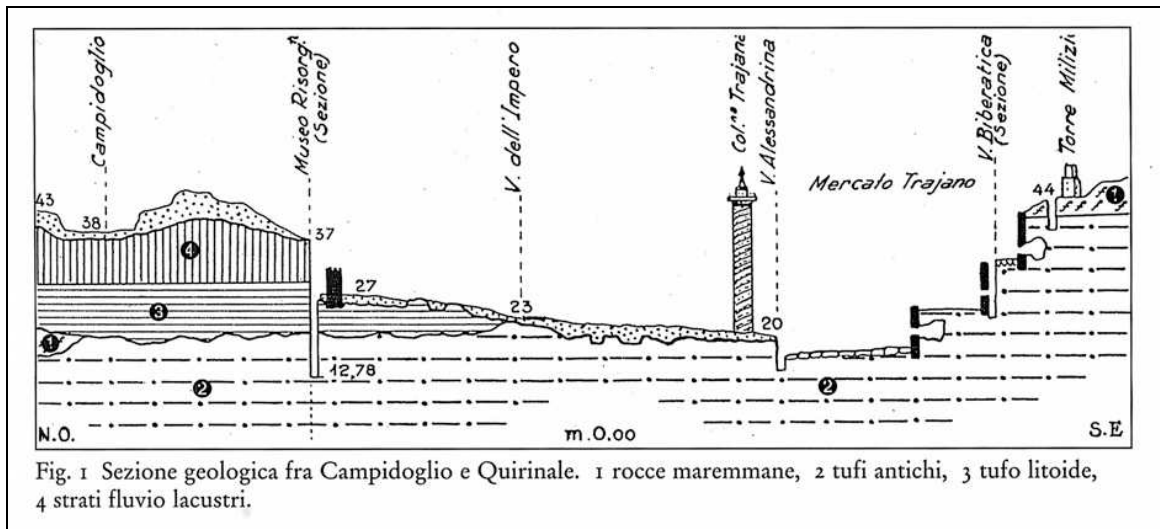


FIGURE 2. Geologic cross-section of the saddle between the Campidoglio and Quirinal hills showing the elevations of the Column and Markets of Trajan in relation to neighboring modern structures and geologic strata of 1) stone of the Maremma; 2) ancient tufas; 3) lithoid tufa; and 4) fluvio-lacustrine deposits. After S. Rizzo, "Indagini nei fori imperiali. Oroidrografia, foro di Cesare, foro di Augusto, templum Pacis," *Mitteilungen des Deutschen Archäologischen Instituts. Römische Abteilung*. 108 (2001) fig. 1.



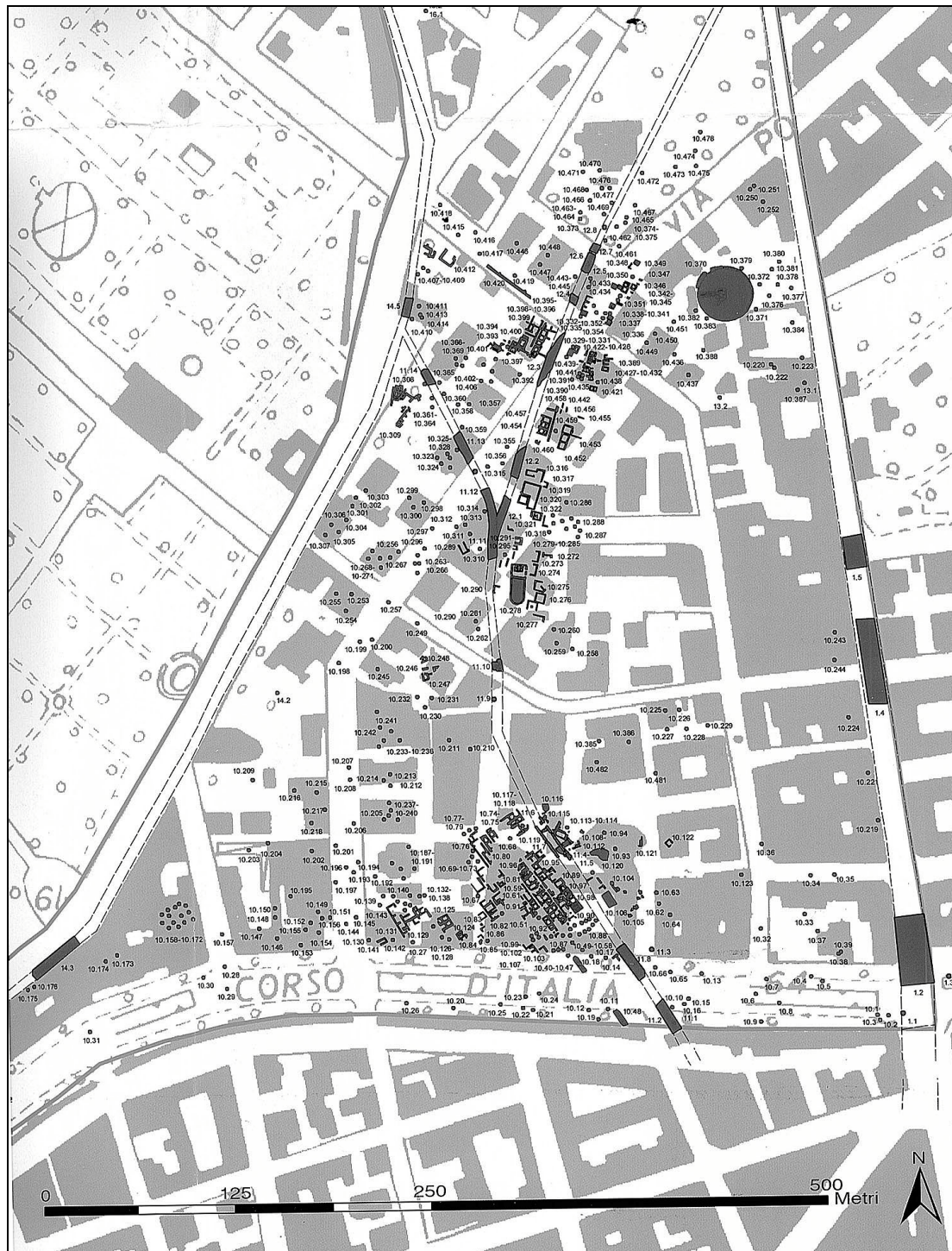


FIGURE 3. Plan of the Via Salaria necropolis north of the Corso d'Italia, Rome, illustrating development of the zone from ca. 300 BCE to 300 CE through the find-spots of individual finds, in relation to the modern Corso d'Italia, Via Pinciana, Via Salaria, and Via Po, after C. Cupitò, *Il territorio tra la Via Salaria, L'Aniene, Il Tevere e la Via "Salaria Vetus"* (Rome 2007) Plan.



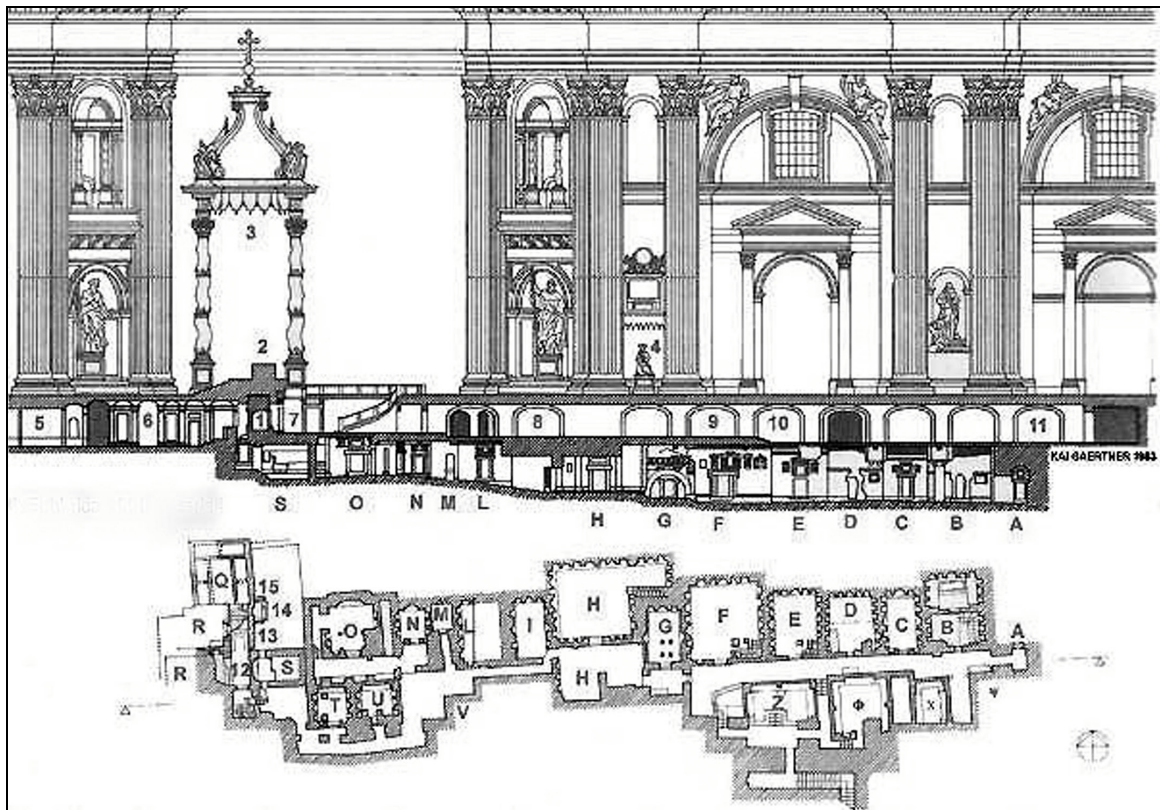


FIGURE 4. Section and plan of the early imperial necropolis on the Vatican built over by Constantine in constructing a basilica of St. Peter around the presumed location of Peter's grave, after R. Krautheimer, S. Corbett, and A.K. Frazer (eds.), *Corpus Basilicarum Christianarum Romae* vol. V (Vatican City 1977).

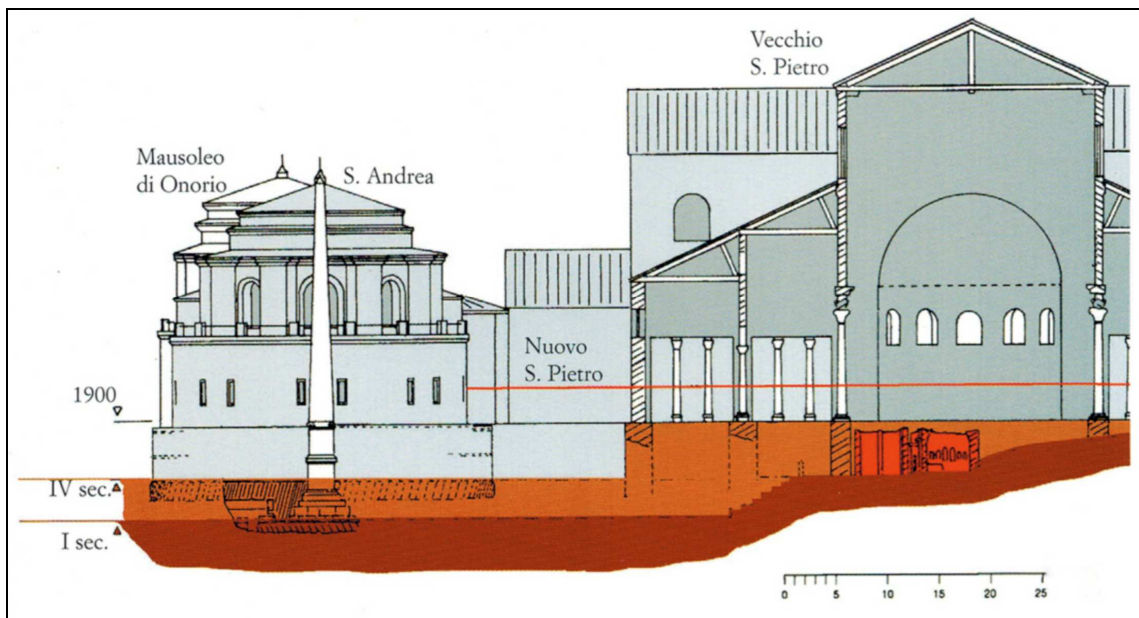


FIGURE 5. Section of the Vatican hill showing the levels of the necropolis, the Constantinian basilica, the early third century cylindrical monument (S. Andrea), the Mausoleum of Honorius, the modern ground level and the New St. Peter's basilica, after P. Liverani and G. Spinola, *The Vatican Necropolies. Rome's City of the Dead* (Turnhout 2010) 57 fig. 19.

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## The *domus* of the Republican aristocracy on the Palatine

Filippo Coarelli

### Abstract

C. Krause's studies of the *domus tiberiana* have revealed the existence, under the imperial palace, of an entire Republican quarter laid out in a regular plan after the fire of 111 BC, which destroyed the hill. Through the rich literary documentation, it is possible to identify the site of the houses of Cicero, Clodius, Q. Metellus Celere Celer and Q. Lutatius Catulus and the successive residences of Messalla, Agrippa and Germanicus

We owe the reconstruction of an entire quarter of Republican *domus* (FIGS. 1, 2) in the area later occupied by the *domus Tiberiana* to Clemens Krause<sup>1</sup>.

As we will see, the quarter has a unitary plan realized after the fire of 111 BC (which destroyed the temple of Magna Mater together with *maxima pars urbis*)<sup>2</sup>, by a group of the senatorial *nobilitas*, in the area previously occupied by the residences of some members of the Gracchan faction<sup>3</sup>. The crucial episode which resulted in this change seems, in fact, to have been the defeat of the Gracchans in 121 BC, which allowed the appropriation of a large part of the central area of the Palatine by the Metellan *factio*. The emblematic case of M. Fulvius Flaccus demonstrates that at least part of this area was in the hand of the exponents of the Gracchan party. The *domus* of the latter was expropriated and demolished immediately after the death of the consul of 125 BC, killed together with his sons and Gaius Gracchus in the riots of 121 BC.<sup>4</sup> The *area Flacciana* remained unoccupied for twenty years, until Q. Lutatius Catulus used it to build his portico, probably dedicated to *Fortuna huiusce diei*<sup>5</sup> like the temple of the Campus Martius, identified with temple B of the largo Argentina. This episode, it is difficult to interpret it otherwise, must represent a policy aimed at exalting the victory over the *populares* at the very moment when the latter regained their power, with the repeated consularships of Marius and the action of Saturninus. We should not forget that shortly after, following his death in 100 BC, the house of the latter was also expropriated and destroyed<sup>6</sup>, like those of M. Fulvius Flaccus and of Gaius Gracchus<sup>7</sup>.

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<sup>1</sup> KRAUSE 2001.

<sup>2</sup> Obs. 39.

<sup>3</sup> COARELLI 2012, pp. 287-303.

<sup>4</sup> LTUR II, p. 176 (W. Eck).

<sup>5</sup> LTUR IV, p. 119 (E. Papi).

<sup>6</sup> LTUR II, p. 35 (D. Palombi).

<sup>7</sup> Cfr. n. 4.

All these considerations seem to confirm that the quarter was realized immediately after the great fire of 111 BC, giving the opportunity to carry out a global reorganization of the area, which later would house a significant group of the Roman aristocracy<sup>8</sup>. The traces of the fire, which destroyed a large part of the city, as well as the temple of Magna Mater, can be seen in all the Republican buildings of the Palatine: for example in the House of the Griffins<sup>9</sup>, built shortly after the mid second century BC, as demonstrated by the structures in *opus incertum*, and rebuilt, after the fire, in *opus quasi-reticulatum*. The famous paintings of the early second style belong to this phase which therefore date to the last decade of the 2<sup>nd</sup> century BC, like those of other houses on the Palatine, restored at the same time.

Shortly before the mid 1<sup>st</sup> century BC, we see the arrival, in this apparently exclusive quarter, of Cicero and his brother Quintus, and even, in the same years, of an *eques*, Q. Seius Postumus: a clear indication that the original property was in crisis. Thanks to C. Krause's research it is now possible to identify with precision the house of Cicero.

The most important information which emerges from his studies in the area of the Palatine occupied by the *domus Tiberiana* regards sector 9K, which corresponds with the block situated in the north-west corner of the quarter (FIG. 1), adjoining that of sector 13, which has a totally different orientation. This area has a rectangular plan (m 23,50 x 29,40), obtained by a deep cut in the 9 m high tufa bank behind. Originally this area faced on to the road which ran along the western edge of the hill, climbing from the *Velabrum* (to be identified with the *vicus huiusce diei*), in part using the stretch of public soil which defined the quarter on this side. On the eastern side it was occupied by a series of four adjoining rooms, in tufa *opus reticulatum*; in the southernmost room, of smaller dimensions, a stairwell is visible, which demonstrates the existence of an upper floor.

At the centre of the area the remains of a great base were recovered with cement foundations and the actual structures built of travertine blocks (m 11,80 x 14.70, that is 40 x 50 Roman feet), which conforms with the earliest paving of the area, in *cocciopesto*.

In its first phase the complex can be defined as an area which was perhaps closed on three sides by a small portico, with, at the centre, a base to support a *sacellum*, a large statue or an altar. It was clearly a small public cult area of the late Republican period. Its precocious destruction has led the excavators to relate it, rightly so, to the small *sacellum* of *Libertas*, realized by Clodius in 58 BC, in the place occupied by the *porticus Catuli* and, in part, by the house of Cicero. The appearance of this *sacellum* can be

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<sup>8</sup> Cfr. n. 3.

<sup>9</sup> RIZZO 1936.

roughly reconstructed through the indications of the orator, who defines it as *ambulatio, monumentum, ambulatio et monumentum, delubrum, porticus, templum Licentiae*. An inscription with the dedication of Clodius had substituted the earlier one of Q. Lutatius Catulus. The sanctuary did not provide for a temple building (which could not have fitted into such a small area), but only a small portico, an altar and a cult statue. Given its dimensions, the base must have belonged to the altar. Shortly after its construction, the complex was demolished and replaced by a small bath complex of a private nature, which without doubt belonged to the adjacent house to the east.

This identification is decisive for the topography of the entire area. Krause's arguments are very convincing, however others can be added which go in the same direction, although with some clarification and modification of the details<sup>10</sup>. Firstly, we will reassume the data relating to the house of Cicero, in particular those regarding the episode of Cicero's exile in 58 BC.

- 1) The house on the Palatine (previously the property of the tribune of 91 BC, M. Livius Drusus) was bought by Cicero for 3.500.000 sesterces in December 62 BC from a certain Crassus, usually identified as the famous M. Licinius Crassus, consul in 70 and 55 BC but who is either P. Crassus, the praetor of 57 BC, or the father of the latter<sup>11</sup>.
- 2) At the beginning of 58 BC Clodius, tribune of the plebs, presented a proposal for a law *de capite civis Romani*. The target was clearly Cicero, for the well-known events linked to the Catiline conspiracy.
- 3) Cicero abandoned Rome around the 19<sup>th</sup> to 20<sup>th</sup> of March. His house was sacked, burnt and auctioned. Using a small part of the house and the area of the adjacent *porticus Catuli*, which was demolished, Clodius consecrated a small sanctuary on the Palatine dedicated to *Libertas*.
- 4) Cicero, recalled from exile, made his entrance into the city on September 4th.
- 5) On the 1<sup>st</sup> of October, the senate met and decided unanimously to give back to Cicero his property and to rebuild the *porticus Catuli*.

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<sup>10</sup> COARELLI 2012, pp. 303-336.

<sup>11</sup> LTUR II, p. 90 (E. Papi); PALOMBI 1994, pp. 57-61; COARELLI 2012, pp. 306 s.

The dominant position of the house is described by Cicero on a number of occasions, in terms which are perhaps rather generic but still significant: *in conspectu prope totius urbis, in pulcherrimo urbis loco; pulcherrimo prospectu; in urbis clarissimo loco*<sup>12</sup>. In particular the combination of the terms *conspectus* (in the passive sense: “visible”) and *prospectus* (in the active sense: “view”) demonstrate that it was “high up”: easily seen and had a beautiful view.

We know that in the area there were some buildings which replaced each other over time (*domus Flacci, porticus Catuli*, the sanctuary of *Libertas*): following the interventions of Clodius this area lay in relationship to the *domus* of the orator. The texts are extremely clear on this point: a part of the latter (barely a tenth, according to Cicero) had been used by Clodius to enlarge the area of the preceding portico<sup>13</sup>.

Cicero’s house is therefore in relationship with the *domus* of Fulvius Flaccus and therefore also with the buildings which later occupied the latter, the *domus* and *porticus* of Catulus.

There is no room for doubt: this area, occupied by three successive buildings, was included in the block to the south of Cicero’s house. It was subsequently occupied by the Clodian *sacellum* of *Libertas*, which also extended to the adjacent block, using a part (a tenth) of the house of the orator.

On the other hand, we also know that the house of Clodius was in the same block as Cicero’s house. Again the orator is extremely explicit<sup>14</sup>: “Why is my house cursed, if not for the fact that it is next to the walls of an impure and sacrilegious man? Therefore, until none of my household can imprudently look inside your house and see you carrying out your particular ceremonies, I will heighten my roof not to watch you from above, but so that you can no longer see the city that you have wished to destroy”.

Not only are the two houses adjoining and separated only by a wall, and therefore it would have been possible to look down from one of the houses into the interior of the other, but that of Cicero was situated in such a way that, if it was raised, it would have prevented a view of the city below. Therefore, it was on the edge of the hill, while that of Clodius lay behind, to the east.

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<sup>12</sup> COARELLI 2012, p. 310.

<sup>13</sup> Cic., *dom.* 116.

<sup>14</sup> Cic., *har. resp.* 15.33.



If we now go back to consider the actual sites, it becomes clear that the three successive constructions (*domus Flacci*, *porticus Catuli* and the sanctuary of *Libertas*) must have been located in the *insula* of sector 5-6, while area K corresponds to the expansion of the cult of *Libertas* at the expense of Cicero's house. As regards the bath structures which replaced this extension, these, as Krause has noted, correspond exactly with the *laconicum* which Cicero's architects had realized in the rebuilt house.

The vicinity of Caesar's house, which can be deduced from a reference by Cicero, also confirms this picture<sup>15</sup>. In effect, as Krause rightly notes, the distance from here to the *domus Publica* is barely *circa* 50 metres.

All these considerations, however, require a different solution to that proposed by Krause (FIGS. 3, 4).

But let us examine these elements step by step: the reconstruction which we now have of the *domus* of Cicero and of Clodius lies at the end of a chain, which can be completed with the addition of various links.

In the first place, we know that the palatine house of Quintus Cicero, to which he moved no later than April 59 BC, was situated in the immediate vicinity of that of his brother, probably at the feet of the latter, if in 57 BC it was possible for the band of Clodius to hit it with a volley of stones<sup>16</sup>. Consequently it must have been in sector 12-13 of Krause, and therefore immediately above the so-called "Via Nova", where in effect there are the remains of Republican *domus*.

The examination of Clodius's other neighbours provides information which is of even greater significance: in this context the certain proximity of the house of Q. Metellus Celer is fundamental, where his wife Clodia also resided who, thanks to Cicero, was the most famous of the tribune's three sisters.

In the first place we know that the friend and pupil of Cicero, M. Caelius Rufus, had rented an apartment on the Palatine from Clodius<sup>17</sup>; according to Cicero this was partly so that he could remain near him, but mainly so that he could frequent Clodia, the tribune's sister, with whom he had a relationship. Therefore, the house of Clodius was extremely close to that of his sister and her husband, Q. Metellus Celer<sup>18</sup>.

All this brings us back to sectors 5-6, and therefore to the great central block of the western side (FIG. 1), whose western part has a structure which is still well preserved:

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<sup>15</sup> Cic., *Att.* 2.24.3: "*consularem disertum, vicinum consulis*".

<sup>16</sup> Cic., *Att.* 4.3.2.

<sup>17</sup> *LTUR* II, p. 73 (E. Papi).

<sup>18</sup> *LTUR* II, p. 72 (E. Papi)

a great façade in *opus reticulatum*, strengthened by buttresses, which must have formed the terrace wall for a large internal garden. This is without doubt the most imposing complex of the entire quarter, as can be deduced from the description of the scarce structures still visible today. It must have occupied over half of the block, whose total surface area is 3485 sq.m: we can propose, although only hypothetically, that of these it occupied *circa* 2000 sq.m, and the other, placed further to the east in the same block, occupied 1500 sq m, which must have been that of Metellus Celer, as we shall now see.

Cicero provides us with a valuable clue for its identification<sup>19</sup>, when he describes his visit to the latter, his old friend who is now dying: “Looking at me while I was crying, he warned me, with the hesitant voice of a dying man, of the storm threatening myself and the city and, striking the wall in common between his house and that of Quintus Catulus, he often pronounced my name and even more frequently that of the Republic”.

Once again, a common wall, and also in this case there can be no doubt. We can deduce that the *domus* of Q. Metellus Celer and of Q. Lutatius Catulus lay in the same block and were divided solely by a wall. The above analysis has some interesting implications:

We know that the *domus* of Lutatius Catulus<sup>20</sup> was exceptionally large and rich, as attested by Pliny<sup>21</sup>: “his house (that of L. Crassus) was magnificent, but somewhat more luxurious was that, also situated on the Palatine, of Q. Catulus, who defeated the Cimbri, together with Marius”.

The advantageous comparison with one of the most famous contemporary houses in terms of its luxury, decorated, for the first time in Rome, with marble columns, is sufficient argument to demonstrate that it was a residence of an exceptionally high level; finally, its position as reconstructed here allows us to resolve an error (for which I am also to blame) which prevented a satisfactory solution to the argument; the alleged lack of a topographic relationship between the *domus* itself and the *porticus Catuli*, due to the incorrect siting of the latter on the northern slopes of the Palatine<sup>22</sup>. In reality, as results from the new reconstruction, the two buildings were clearly connected to each other.

The imposing western façade of the block, with the *domus* dominating at the centre, preceded by the porticus built with the Cimbrian *manubiae* bearing the name of the person who had dedicated the structure, were clearly related to the road which ran

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<sup>19</sup> Cic., *Cael.* 24.59.

<sup>20</sup> COARELLI 2012, , pp. 325-327.

<sup>21</sup> Plin., *n.h.* 17.2.

<sup>22</sup> LTUR II, p. 134 (F. Coarelli).

along the slope of the hill. This road must be identified as the *vicus huiusce diei* cited in the “Base Capitolina”<sup>23</sup>; a name yet again linked to the victory over the Cimbrians, like the temple of Fortuna of the same name, also erected by Lutatius Catulus in *campo Martio*.

In conclusion, we are now able to reconstruct the quarter with relative security (FIG. 5).

If the Ciceronian *corpus*, which provides most of our information for the mid Republican period, permits a fairly detailed reconstruction of the *domus* of the Palatine (in particular that of the orator and that of Q. Lutatius Catulus), it is also possible to interlock this data with the other important group of available texts, that relating to the residence of Augustus. Their analysis allows us to verify the information provided by Cicero. We are in fact able to establish when and by which mechanisms the entire sector of the western area of the Palatine finished in the hands of the emperor, through time undergoing a radical reconversion which concluded with the appearance of the *domus Tiberiana*.

The “House of Livia”, which certainly formed part of the Augustan complex, in fact confirms that Octavian had extended his property not only to the east, but also to the north: up to the edge of the western quarter of the Palatine and without doubt even further.

The crucial moment which determined the transfer of the large part of these *domus* to new owners is that of the triumviral proscriptions. In at least one case it is possible to follow the passage of ownership, that of the *domus* of Catulus: in fact we know that around 10 BC it belonged to Augustus, given that his two grandchildren lived there, Gaius and Lucius Caesar, and therefore very probably also the other sons of Agrippa and of Julia. In fact the contemporary great grammarian Verrius Flaccus moved there, “quare ab Augusto quoque nepotibus eius praeceptor electus transit in Palatium cum tota schola, verum ne quem amplius posthac discipulum reciperet, docuitque in atrio Catulinae domus quae pars Palatii tunc erat”, “because, chosen by Augustus as the tutor of his grandchildren, he moved to the Palatine with his entire school, after which he refused to accept other pupils, and taught in the atrium of the *domus* of Catulus, which then formed part of the palace”<sup>24</sup>.

All the evidence therefore indicates that this was the house of Agrippa, which we also know from another source, Cassius Dio<sup>25</sup>: “After the fire which burnt down the house on the Palatine, previously the property of Antonius, which he had donated to

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<sup>23</sup> CIL VI 975.

<sup>24</sup> Suet., *gramm.* 17.

<sup>25</sup> Cass. Dio 53.27.5 (25 BC).

Agrippa and to Messalla, Augustus reimbursed to Messalla, and accommodated Agrippa in his house”.

Thus we are informed that Antonius’ house on the Palatine – which clearly could not be among those bought in 36 BC, but was certainly expropriated after 30 BC – was occupied by Agrippa and Messalla, to whom Augustus had donated the residence. Therefore this must have been a large dwelling, perhaps occupying an entire block, which could have incorporated the two preceding houses. It is possible that, on the completion of the works, both returned to live in the same residences: that of Agrippa is therefore to be identified with the *domus Catulina* cited by Suetonius, where his sons continued to live after his death. Agrippa himself also owned the *horti* of Antonius in the *Campus Martius*, which before had belonged to Pompey<sup>26</sup>.

We must therefore conclude that the house of Q. Lutatius Catulus passed into the hands of Antonius, perhaps following the proscription of the previous proprietor, that after Catulus, who remains unknown. It is possible that the adjacent house of Q. Metellus Celer suffered the same fate, and that therefore the *triumvir* had unified the entire block under his ownership. This would explain the passage of the property to Agrippa and to Messalla, who would have divided the house, thus re-establishing the previous situation.

As we have seen, the characteristics of the partially excavated remains of the *domus* are perfectly compatible with these conclusions. Recent excavations have recognized the presence of restoration works after the mid 1<sup>st</sup> century (probably by Antonius); other restorations were, without doubt, carried out when the building came to form part of the property of Augustus (after 30 BC), and with its reconstruction after the fire of 25 BC.

A final argument in favour of this reconstruction is the presence of the *horrea Agrippiana* in the area immediately below the house<sup>27</sup>: this proximity thus finds its natural explanation. The link between *horrea* and *domus* must have been fairly frequent and has also been recognized in other cases<sup>28</sup>.

In conclusion, we are able to identify with a certain degree of probability some of the original proprietors of the quarter, concentrated in the years around 100 BC, or a little later; others of Cicero’s generation; and finally others of the triumviral period (L. Marcius Censorinus, *cos.* 39; Marcus Antonius, *cos.* 44; Ti Claudius Nero, *pr.* 42). Only in one case, the *Lutatii Catuli*, can we demonstrate the continuity of the same family for

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<sup>26</sup> LTUR III, pp. 51 s. (F. Coarelli).

<sup>27</sup> COARELLI 2012, p. 341.

<sup>28</sup> GUILHEMBET-ROYO 2008, p. 205.

more than one generation. In the passage from the second to the third generation, in two cases (L. Marcus Censorinus, M. Antonius) we must consider the consequences of the triumviral proscriptions, as in other cases which are not documented. Subsequently, we only find members of the imperial family (Livia, Gaius and Lucius Caesar, Germanicus) or personages who were, however, linked to the latter (the young Tiberius, Drusus the Elder).

At the end of our research, this fragment of Rome appears to us, in the course of its troubled history, as the faithful reflection of the Roman society of the last century of the Republic and the beginning of the Imperial period, before converging and dissolving in the unifying melting pot of the imperial residence.

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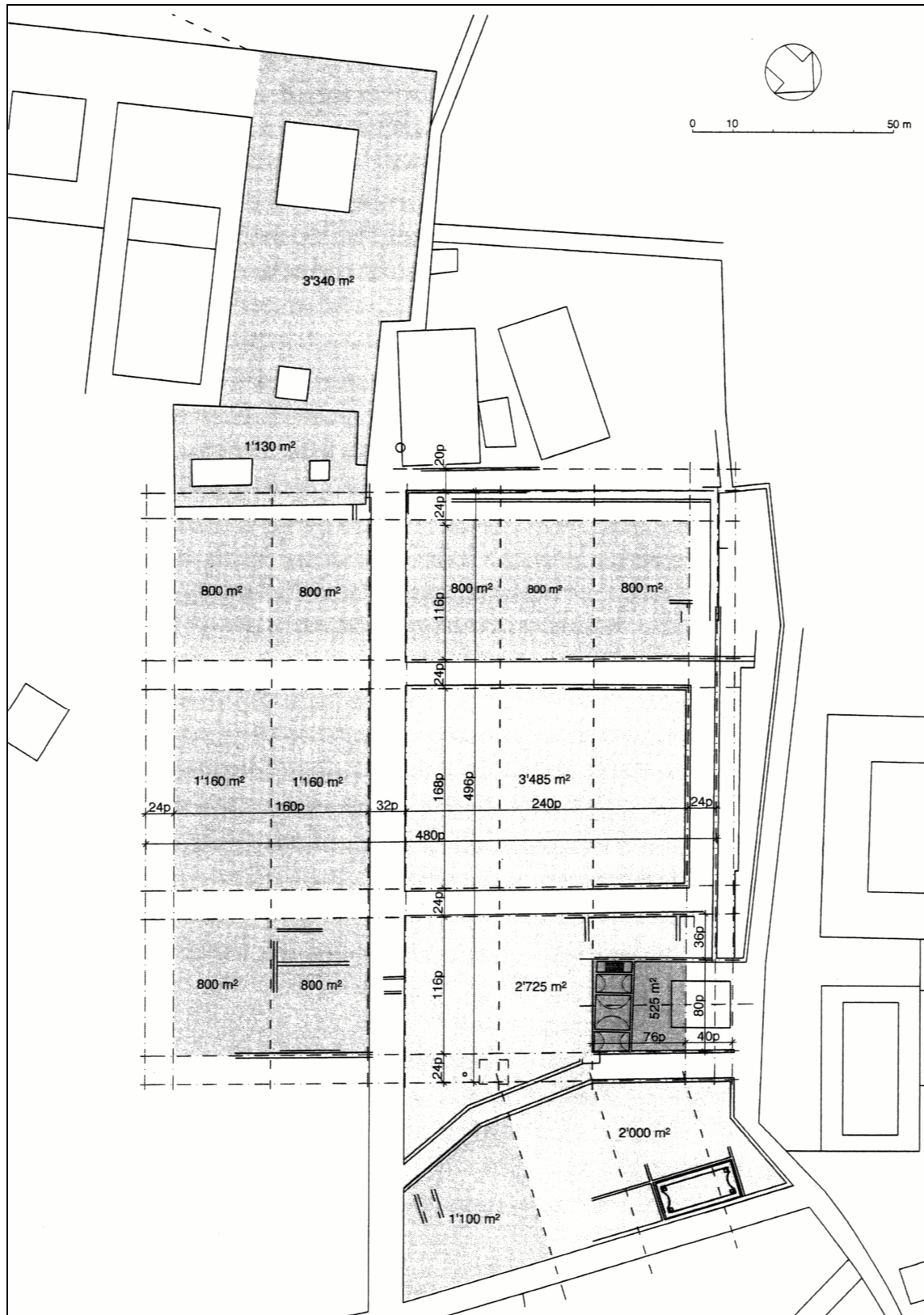


FIG. 1: General plan of the Republican quarter (from KRAUSE 2001).



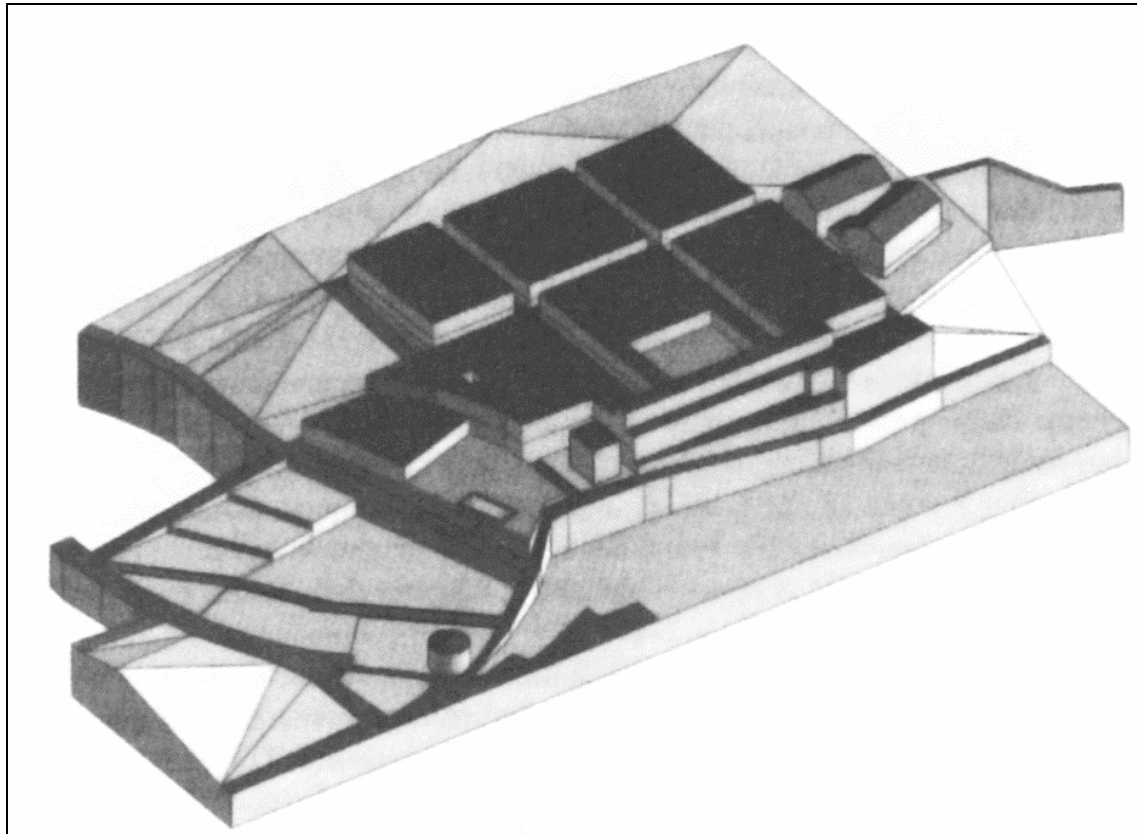


FIG. 2: Reconstruction of the Republican quarter (from KRAUSE 2001).

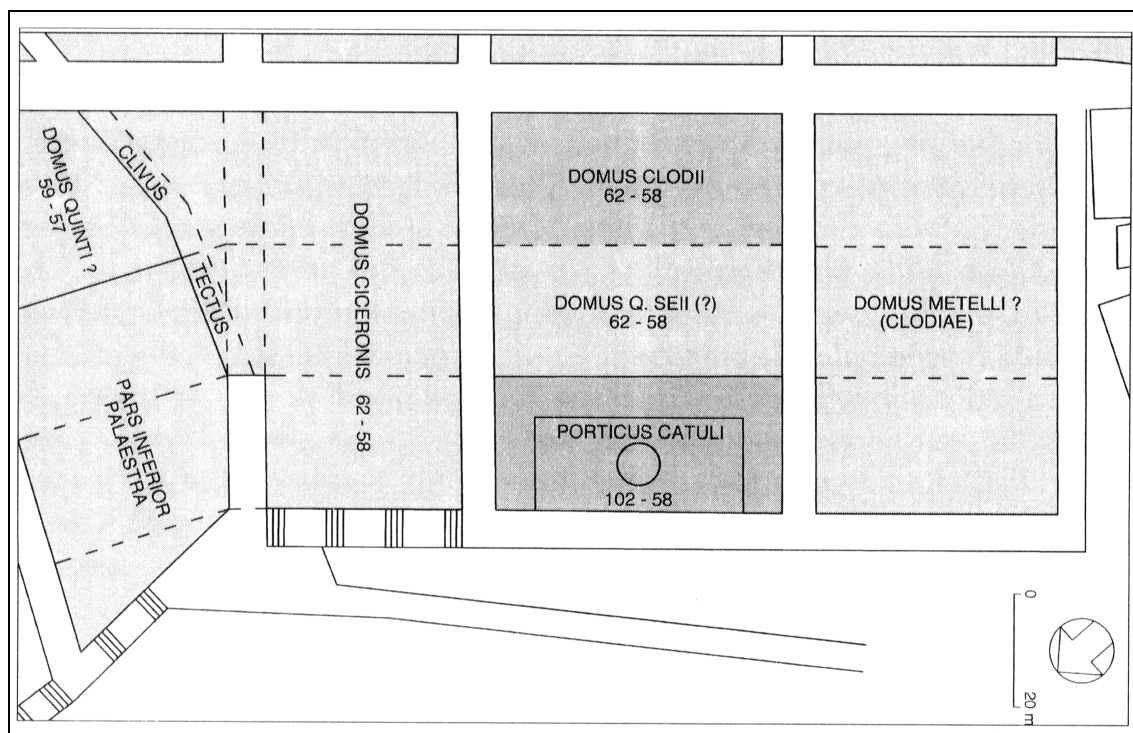


FIG. 3: Reconstruction of phase 1 (from KRAUSE 2001).

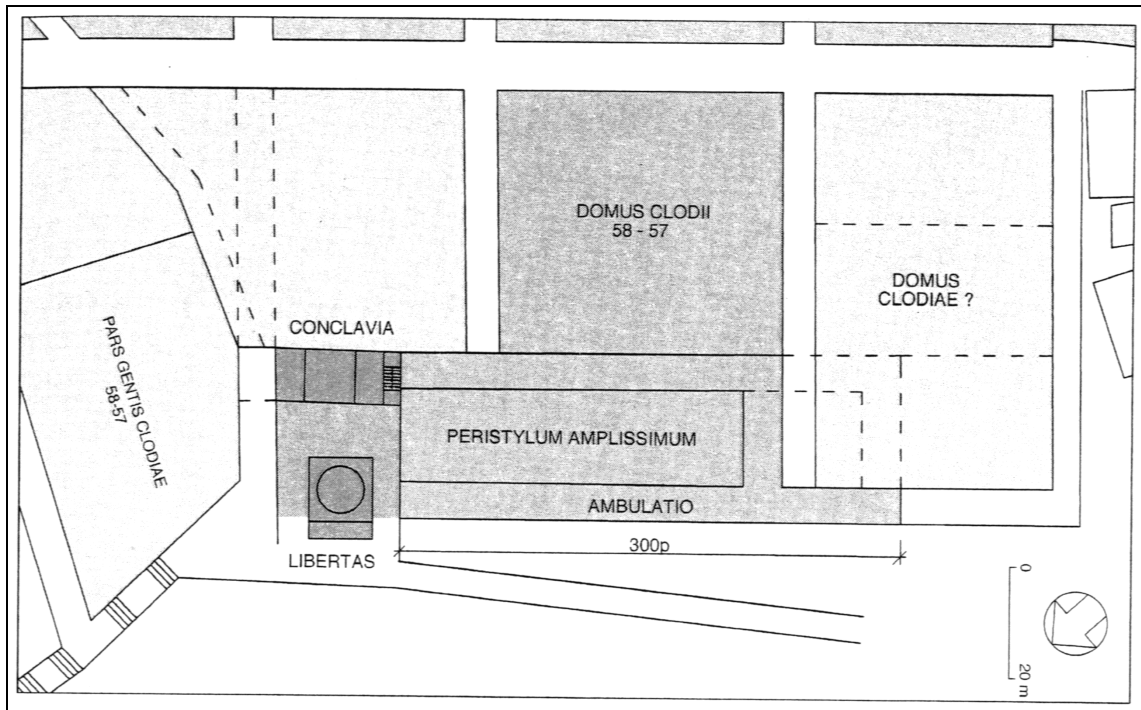


FIG. 4: Reconstruction of phase 2 (from KRAUSE 2001).

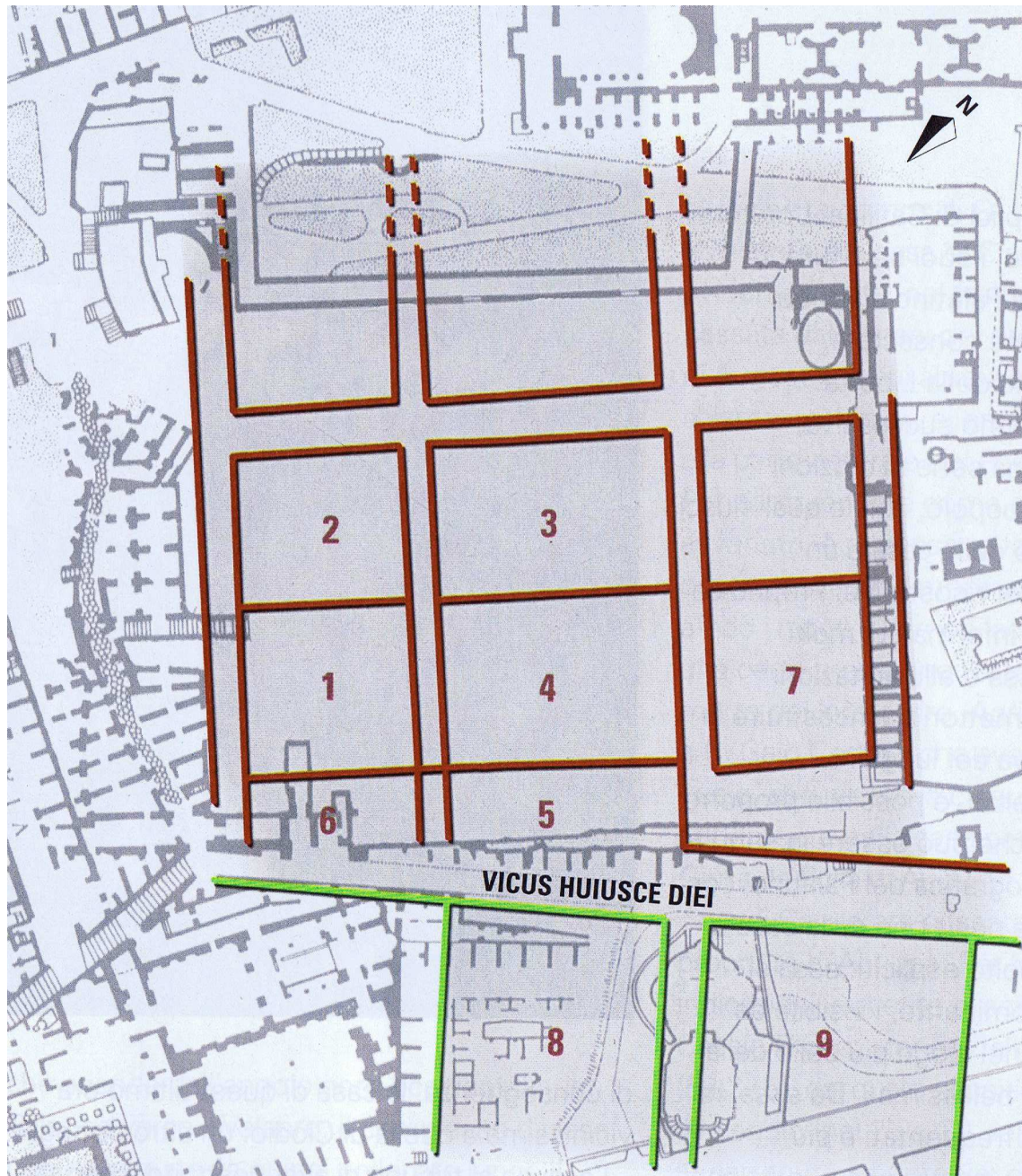


FIG. 5: Reconstruction of phases 1 and 2 (Coarelli): 1. *domus* of Cicero; 2. *domus* of Clodius; 3. *domus* of Q. Metellus Celer (I), Antonius (II), Messalla (III); 4. *domus* of Q. Lutatius Catulus (I), Antonius (II), Agrippa (III); 5. *porticus* Catuli; 6. *aedes* Libertatis; 7. *domus* of Ti. Claudius Nero (I), Germanicus (II); 8. *horrea* Agrippiana; 9. *horrea* Germaniciana.

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## **The Necropolis Along via Triumphalis: A History of the Archaeological Discoveries, the Conservation, and the Reconstruction of Part of the Suburban Landscape of Rome**

Francesco Buranelli

My contribution seeks to bring to your attention the measures taken to conserve and protect the archaeological patrimony of Rome carried out in the Vatican since the last World War and, more specifically, those conducted at various points on the most conspicuous remains of the Roman necropolis along the Via Triumphalis. The aim is to underline the importance of preserving archaeological remains, whether isolated tombs or more extensive sections of necropoleis, which, through an unfortunate modern compromise in conservation, are quite often dug up, documented, and then removed so as to make room for urban expansion.

The result of this way of operating has been a continuous and systematic elimination of Rome's necropoleis, with the consequent loss of a massive amount of historical and ritual data. This seems the more incredible, if we compare the remains of Rome's necropoleis to the important finds in the nearby towns of ancient Etruria, of *Latium Vetus* and of *Magna Graecia*. Rome, the capital of the Roman Empire, the city that boasts three thousand uninterrupted years of living history and which had a population of a million inhabitants in antiquity, has not been able to preserve, except for a minimal part, its own necropoleis.

For this reason, the necropolis studied in my contribution that has come to light at different points in the course of the twentieth century has acquired great importance for our historical understanding of the city and, being in the Vatican territory was prudently housed entirely in museums *in loco*.

This was a surprising, contemporary "integrated conservation", which even today represents an example of vigilant and thorough curatorship and is, rewarded by the continual attention of visitors to the excavations of the so-called "Vatican necropolis" under St. Peter's Basilica, and in sections of the necropolis along the Via Triumphalis, commonly known as the "Autoparco" or "Santa Rosa".

Excavations carried out during the years 1940-1947 and subsequently between 1953 and 1957 under the reign of Pius XII (Eugenio Pacelli, 1939-1958) brought to light the "Vatican Necropolis," a monumental section of a tract of necropolis along the Via Cornelia, fortunately preserved under the central nave of St. Peter's Basilica.

The excavations began upon the death of Pius XI (Achille Ratti, 1922-1939) who in his testament had asked to be buried in the Vatican grottoes. During the work of lowering the floor by about 80 centimeters, the elegant crowning cornice of a funerary building was discovered. This architectural element was still *in situ*, and formed the decoration of what was later revealed to be Mausoleum F, of the *Tulli* and of the *Caetenni maggiori*. From then on excavations continued for the entire pontificate of Pius XII, bringing to light twenty-two splendidly preserved, valuable funerary monuments along either side



of a narrow lane. The most surprising discovery, however, which has since aroused great historical, archaeological and devotional interest, was the identification of the “tomb of Peter,” a complex sequence of funerary structures for which the epigraphic and archaeological testimony has allowed us to recognize the Apostle’s sepulcher, venerated continuously for two thousand years. At the center of Michelangelo’s cupola, below Bernini’s baldachin of the High Altar of the Confession, in a nearly perfect line, in an ancient necropolis, lie the remains of the “red wall” on which is found the inscription “Πετρος ἐνι” “Peter is here”.

The Vatican Necropolis was the first, farsighted example of housing an ancient necropolis in a museum *in situ* and is still open today for public visitation, thanks to the application of sophisticated acclimatizing technology that allows complete conservation of the ancient structures and artifacts<sup>1</sup>.

In what follows I will concentrate mainly on the discovery of the necropolis along the Via Triumphalis found within the Vatican walls near the northeast corner of the Vatican City.<sup>2</sup>

This area has been known since the sixteenth century when, in 1543, Pirro Ligorio noted the existence of Roman tombs on the occasion of the construction of the Belvedere Bastion (fig. 1, n. 1). Three centuries later, in 1840, came the sporadic but precise reports by Pietro Ercole Visconti of tombs in what was then the Prato del Belvedere (fig. 1, n. 5), and under the Church of San Pellegrino (fig. 1, n. 6). But it was only after the Lateran Treaty of 1929 that the greater part of the necropolis under the Annona Vaticana building (fig. 1, n. 7) and in the area of the Galera Fountain (fig. 1, n. 2) was discovered by Enrico Josi during construction of the service structures of the modern Vatican City. The latter section was later investigated, between 1994 and 1997, first under the direction of Carlo Pietrangeli and then by the present author.<sup>3</sup>

It was not until after the Second World War, however, with the renewed expansion of construction during the 1950’s that the Vatican too hastened to bring to light (between

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<sup>1</sup> For an updated summary on the Vatican Necropolis see the fine volume by P. LIVERANI and G. SPINOLA with the contribution of P. ZANKER and an introduction by F. BURANELLI, *Le necropoli vaticane*, Milano 2010, with an extensive preceding bibliography.

<sup>2</sup> See E.M. STEINBY, *La necropoli della Via Triumphalis. Il tratto sotto l’Autoparco vaticano*, in *MemPontAcc* XVII, 2003, pp. 2-3 with an extensive preceding bibliography. As regards the recent finds in the vicinity of Santa Rosa, some mention was given in *L’attività della Santa Sede* 2003, pp. 1294-1295; *ibid.*, 2004, p. 1308; and by F. BURANELLI, L. PANI ERMINI, in the preface to the volume by E.M. STEINBY, *cit.* The preliminary account of the excavation was published by F. BURANELLI, P. LIVERANI, G. SPINOLA, *I nuovi scavi della necropoli della Via Trionfale in Vaticano*, in *Rend. Pont. Acc. Rom. Arch.*, 2005-2006, pp. 451-472; while in depth analysis and details are found in the guide *La Necropoli Vaticana lungo la Via Trionfale*, edited by F. Buranelli and with texts by P. Liverani and G. Spinola, Rome 2006 and in the fine volume by P. LIVERANI, G. SPINOLA, *Le necropoli vaticane cit. a nota 1*, pp. 141-285.

<sup>3</sup> P. LIVERANI, *La topografia antica del Vaticano*, Vatican City 1999, pp.45-46, n.2 (Belvedere Bastion); pp. 46-52, n. 3 (Galera Fountain); pp. 58-60, n. 7 (Prato di Belvedere), p. 61, n.8 (S. Pellegrino); pp. 61-90, n. 9 (Annona); P. LIVERANI – G. SPINOLA, *Mosaici in bianco e nero dal tratto vaticano della necropoli della via Trionfale*, in *Atti V Colloquio AISCoM*, Rome 1998, pp. 219-230.

1956 and 1958) the most important section of the necropolis, known as the “Autoparco” section (fig. 1, n. 4). This work, directed by Filippo Magi, was systematically published only in 2003 by Margareta Steinby in a fine volume of the *Memorie della Pontificia Accademia Romana di Archeologia*<sup>4</sup>. This was the year (2003) that brought to light a new segment of the necropolis during excavation for an underground parking garage in the nearby neighborhood to the north, better known under the place name of Santa Rosa (fig. 1, n. 3). This area constitutes the natural continuation of the “Autoparco” section of the necropolis, to which it was later reunited by means of an expressly built and hitherto unique excavation carried out in 2009 under the road bed.

The sector of this necropolis thus reunited, constitutes today the largest tract of the extant Roman cemetery on the northeast slope of the Vatican hill, occupying an area of nearly one thousand square meters excavated, restored, and permanently housed *in situ* in a museum since the beginning of the finds in the 1950’s.

Today, thanks to more reasonable renovations, the old “terrace” outside the excavation enabling the public to visit the site only from a distance, has been replaced by a metal bridge suspended from the upper floor of the buildings that have enveloped the excavation, allowing the public to visit the necropolis in its entirety, safeguarding the archaeological remains, while at the same time granting a unique and rare opportunity to preserve all of the finds in their original position: from the more important wall structures to the earthen graves, from the inscriptions to the grave goods, to the human remains. This system allowed the conservation and thus study of the ancient landscape and topography in which the necropolis developed: a steep and difficult plot of land of a gravelly nature subject to washouts and landslides ever since antiquity and, as we shall see, shaping the development of the necropolis itself.

Not only can one observe a more conspicuous slope than the present situation of the plot might lead one to believe, but the fan-shaped layout of the graves noted on the map is derived from the fact that the topography of the land was quite pronounced, formed by natural indentations and rises, and as a consequence the tombs are distributed following the curves of the natural plane.

Numerous graves of diverse typologies have come to light, from chamber tombs of a certain prestige to poorer open-air depositions.

In particular, more than thirty monumental tombs have been identified, found at different levels along the hillside and preserved in some cases up to the top, as well as a hundred or so individual interred tombs. The necropolis seems to have been used between the Julio-Claudian era and the Constantinian era, although surviving traces of later use have also been noted (fig. 2).

Tombs of a monumental character for the most part occupy the eastern margin at a lower level and facing the Via Triumphalis, whereas the more modest graves are concentrated in the center part, higher up but less on a slope. These nonetheless capture one’s attention for numerous reasons, both for their socio-historical relevance

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<sup>4</sup> E.M. STEINBY, cited in note 2.



and for the preservation of the apparatus of funerary ritual, rarely found in such wealth and detail in other contemporaneous necropoleis of central Italy. These sites are constituted by little buildings, almost miniature rooms, surrounded by earthen burials which in many cases are marked by burial stones and altars with inscriptions that provide us with valuable information about the circumstances of the dead.

On the lower terrace, among the more monumental tombs, is the burial chamber of the *Passieni*, Tomb VI, of which only the western corner remains exposed. Two altars of high quality dating to the Neronian era come from this area. The first (fig. 3), was dedicated to a daughter Flora by (*Tiberius Claudius*) *Optatus*, freed slave of Nero, *tabularius a patrimoniis*, i.e. administrative archivist of the emperor's private patrimony, and by *Passiena Prima*. At a later time, mention was made also of a son *Tiberius Claudius Proclus* and, beneath the garland, of *Lucius Passienus Optatus*, freed slave of a woman and brother of *Passiena Prima*. The fact that the man dedicating the inscription, *Optatus*, declares himself a freedman of Nero leads one to believe that the altar had been sculpted during the reign of this emperor: if in fact the dedication had been inscribed in the Flavian era, after the *damnatio memoriae* of Nero, it is more likely that *Optatus* would have been styled more cautiously as simply an imperial freedman (*Augusti libertus*) without further specification.<sup>5</sup>

The second altar (fig. 4), of similar quality and dating, is dedicated to *Passiena Prima*, presumably the woman named among the preceding altar's dedicators, by her freedman *Lucius Passienus Evaristus*. At her death, *Evaristus* was added as well among those to whom it was dedicated by his wife, a freedwoman, of the same surname (*Prima*) as the patroness of the husband, evidently in her honor. This second altar shows on the crown, within a half-shell, the portrait of the deceased with a hairstyle typical of the late Julio-Claudian era (known, for example, from a portrait of Agrippina the Younger). We seem to have here a group of freedmen all connected, either directly or indirectly, to the *familia Caesaris*. For *Optatus*, the connection is explicitly stated; for the *Passieni* we might suspect them to be freedmen connected in some way with *Gaius Sallustius Crispus Passienus*<sup>6</sup>, second husband of Agrippina the Younger, mother of Nero himself. As is well known, the property of *Passienus Crispus* (who some sources say was assassinated by his distinguished wife) was inherited by Agrippina and through her passed into the imperial property.<sup>7</sup>

Adjacent to the tomb of the *Passieni*, immediately to the southeast, is that of the *Natronii*, Tomb IV. On the back side of this tomb is to be found a marble funerary aedicula with a portrait of *Tiberius Natronius Venustus*, a child with delicate features, four-years, four months and ten days old (fig. 5). This portrait from the Julio-Claudian

<sup>5</sup> The altar, decorated with a *gorgoneion* above a garland in the center, and with eagles and protomes of rams in the corners, did not carry out a cinerary function; above the marble garland two little nails were meant to hold fresh garlands. Although these iconographic and stylistic elements were quite widespread in the early Flavian era (cf. D. BOSCHUNG, *Antike Grabaltäre aus den Nekropolen Roms*, Bern 1987, pp. 96-97, nn. 643, 644, 649, 651, 656), they are also well represented in Neronian production.

<sup>6</sup> R. HANSLIK, in *RE*, XVIII, Stuttgart 1949, s.v. *Passienus*, cc. 2097-2098, n. 2; *PIR*, p.146.

<sup>7</sup> *Schol. ad Iuv.* 4.81; *HIER., Chron.* to a. 38 (p. 178 HELM).

era is of high quality and has an unusual typology, insofar as it was executed separately and then later inserted into the marble shrine.<sup>8</sup>

From the same tomb comes a fine bust in terracotta (fig. 6), dating from about half a century after the infant's portrait, portraying an elegant lady with an impressive coiffure, known as the "*Schildtoupet*", similar to what can be found in the late Flavian era.<sup>9</sup>

A little farther to the south is a funerary building richer than those examined thus far, Tomb VIII (fig. 7). This tomb dates to the mid-third century A.D. and lies above an earlier grave of the first century. The building is preserved to a notable height and from the point of view of architectural typology bears a close resemblance to that of Mausoleum Z, "of the Egyptians", in the necropolis under St. Peter's Basilica.<sup>10</sup> The chamber room has a square floor plan with the entrance on the east side and two *formae* covered with *arcosolia* on each side and in the back. Preserved in the *arcosolia* are traces of frescoes in which can be seen, amidst the festoons of leaves, a peacock and a basket of fruit. The floor is decorated with a figurative mosaic in black and white tesserae: within one inset with a braided pattern, various cupids harvesting grapes from vines on a bower frame the principle group, which consists of an inebriated Dionysius leaning on a young satyr. The latter figure had been damaged in antiquity and was partially restored, with the damage repaired with patchwork, without the portrait being refashioned.<sup>11</sup> Two nearly intact sarcophagi were placed on the floor, and the fragments of at least another three were found on the surrounding floor and holes. The two complete sarcophagi are datable to the last third of the third century: the first (fig. 8) is decorated with two winged victories bearing a portrait of the deceased in a *clupeus*;<sup>12</sup> the second is an oval-shaped, strigil sarcophagus (fig. 9) with an amphora in

<sup>8</sup> Very similar are several infant portraits from the Tiberius-Claudius period: cf. for example B. DI LEO, in A. GIULIANO (ed.), *Museo Nazionale Romano. Le sculture*, I/9,1, pp. 172-174, n° R132; B. ANDREAE (ed.), *Bildkatalog der Skulpturen des Vatikanischen Museums, I, Museo Chiaramonti*, Berlin-New York 1995, p. 17\*, nn. 193 and 194, table 131 and 132-133.

<sup>9</sup> Cf. For example. AA. AMADIO, in A. GIULIANO (ed.), *Museo Nazionale Romano. Le sculture*, I/9, Rome 1987, pp. 202-203, n° R158. Another fragment of the same type was found within the strata in the sector of the Autoparco cf. E.M. STEINBY, cited in note 2, p. 121, n. 6, table 25.2.

<sup>10</sup> J. TOYNBEE, J. WARD PERKINS, *The Shrine of St. Peter and the Vatican Excavations*, London-New York-Toronto 1956, pp. 51-57; H. MIELSCH, H. VON HESBERG, *Die heidnische Nekropole unter St. Peter in Rom. Die Mausoleen E-I und Z-PSI*, *MemPontAcc*, XVI, 2, 1996, pp. 225-233; P. LIVERANI, *La topografia antica del Vaticano*, Vatican City 1999, p. 142.

<sup>11</sup> In the mid and late imperial era, the subject is frequently reproduced on sarcophagi and in mosaics cf. e.g. J. BALIT, in *ANRW*, II, 12/2, 1981, p. 363; C. AUGÉ, P. LINANT DE BELLEFONDS, in *LIMC*, III, s.v. "*Dionysos (in Peripheria Orientali)*", Zürich-München 1986, p. 522, n. 81-83; stylistically, the mosaic of sepulcher VIII seems close to the late-Severan productions and has similarities with various examples from Ostia of the mid-third century cf. G. BECATTI, *Scavi di Ostia*, IV, *Mosaici e pavimenti marmorei*, Rome 1961, pp. 195-196, n° 373, table LXXXVII.

<sup>12</sup> The sarcophagus is iconographically and stylistically similar to others of Roman production of the mid/second half of the third century AD: cf. H. SICHTERMANN, in *RM*, 86, 1979, pp. 358-363, table 95-100; G. KOCH, H. SICHTERMANN, *Römische Sarkophage*, München 1982, pp. 238-241, n. 284 and 285; P. KRANZ, *Jahreszeiten-Sarkophage*, *ASR*, V, 4, Berlin 1984, pp. 212-213, n. 102, 104, 105, 107 and, above all, 108 (iconographically almost identical); G. SPINOLA, in P. LIVERANI (ed.), *Laterano 1. Scavi sotto la basilica di S. Giovanni in Laterano. I materiali*, Vatican City 1998, p. 32, n° 63, fig. 71.

the central mandorla, showing in its corners the figures of a philosopher and a man in prayer (*orans*).<sup>13</sup> The cover, reconstructed from numerous fragments and decorated with dolphins among waves, is the only one preserving an inscription: buried inside was *Publius Cesilius Victorinus*, a Roman *eques* who died at the age of 17. This sarcophagus is roughly contemporary with the preceding one, though it was certainly placed in the burial chamber first, because it is wedged between an *arcosolium* and the sarcophagus with the winged victories. Although certainty is impossible, the *orans* nonetheless exhibits several details (such as the presence of a bird in a tree to his left) that make plausible an interpretation of the image as a clue to the Christian faith of the deceased. If this reading is correct, the great interest in this burial would be obvious, because it would concern the Christian burial of a personage of a somewhat elevated level, insofar as he was a member of the equestrian order already in the pre-Constantinian era, the first to be found on the Vatican outside of the zone more closely linked to the burial of Peter. Of the other sarcophagi, discovered in fragments, two coffins and other minor parts could be recomposed. One coffin shows the hunting scene of the Caledonian boar (fig. 10), of noteworthy quality comparable to the best exemplars of the series such as the large travertine sarcophagus in the Palazzo dei Conservatori and that with an analogous subject in Woburn Abbey, both from the second half of the third century A.D.<sup>14</sup> The other reconstructed coffin belongs to a ribbed sarcophagus (fig. 11) with a male portrait in the center within a *clupeus*. This sarcophagus has excellent parallels (both in subject and in the portrait) in analogous marble urns that can be attributed to the second half of the third century A.D.<sup>15</sup> From these elements it can be deduced that the tomb, built in the mid third century, was used at least until the end of that century. Given the discovery of ceramic fragments of Forum Ware inside the sarcophagus, its re-use in a shop during the high Middle Ages can be presumed: two sarcophagi (left intact though deprived of their lids) might have served as mangers, while the others were reduced to fragments and thrown into the *formae*, presumably to make space in the area.

Immediately to the south, between another tomb of a second phase marked by *arcosolia* (Tomb VII) and a terrace wall, is a broad, triangular space intended to accommodate numerous simple inhumation burials, datable to the third century, covered with bricks or (presumably) with wooden boards no longer preserved.

Worth noting on the middle terrace is a *columbarium* (Tomb III) preserved up to the piers of the vault arches, with well-preserved decorations and very fine stuccoes in excellent condition (fig. 12). The tomb rises to a higher level than the preceding tombs and is part of a series of chambers, with cinerary niches and mosaic floors, dating back to the first phase of the monumental presence in this area, beginning in the course of the first century A.D. The walls are punctuated by niches framed by *aediculae* with pediments and columns (fig. 13): these too are decorated with stuccoes, often painted

<sup>13</sup> Cf. M. SAPELLI, in A. GIULIANO (ed.), *Museo Nazionale Romano. Le sculture*, I/8, Rome 1985, pp. 242-245, n° V,11.

<sup>14</sup> G. KOCH, *Die Mythologischen Sarkophage*, XII,6, Berlin 1975, pp. 102-103, n° 67 and p.105, n° 71; LIMC, II, "Atalante", p.942, n° 24.

<sup>15</sup> J. STROSZECK, *Löwen-Sarkophage*, Berlin 1998, p. 128, n° 175, p. 130, n° 192, p. 131, nn. 195 and 196.

with scenes that remain for the moment beyond our interpretive grasp, owing both to the rareness of the subjects and to the abundant gaps.

The part of the funerary area enclosed between the western border of the excavation and the line of chambers to which Tomb III belongs houses several more humble burials of the first phase. These are in a good state of preservation because, as already mentioned, during the course of the second century the area was buried by a landslide (or a series of slides) of considerable depth composed of the gravel and sand characteristic of the geology of the Vatican hill. Among these burials is a particularly interesting type of tomb formed by a little chamber with a barrel-shaped cover and many traces of simple frescoes on the walls and a terracotta cinerary urn inserted into the floor. The dimensions of these monuments are extremely small, thus allowing for funerary practices only from an external position.

The most interesting among these is certainly Tomb XX: on the left door post, in travertine, a figure in a tunic is represented surrounded by the tools of a master builder (fig. 14). The inscription below informs us that here lies *Alcimus*, a servant of the Emperor Nero who was *custos de Theatro Pompeiano de scaena*. The epitaph therefore commemorates a man in charge of maintenance of the monumental stage building (*skene*) of the most important theater in Rome. Above the terracotta urns inserted into the floor within were found several oil lamps in excellent condition that belong to later funerary practices in the little tomb, datable from the end of the first to sometime during the second century; deposited in a corner was a double-handled glass urn with a double conical lid that survives in well-preserved fragments, still containing the ashes of the deceased.

Still other epigraphic discoveries of interest may be cited, such as a funerary altar found near the western boundary of the excavation (the highest point, just south of Tomb XIII), sealing an incineration found at its base (fig. 15). The altar was dedicated to *Marcus Vibius Marcellus*, who was *legatus coloniae Augustae Firmae*: a representative of the province of *Baetica* in *Hispania*, modern day Écija. Many other inscriptions bear evidence of a social or topographical character worthy of particular attention. To mention just a few, one notes in the necropolis the presence of several *tabellarii*, persons mostly of servile status who held a position similar to today's postmen; of a *hortator* from the *Venetae* team of charioteers, whose task it was to urge on his team's horses in the circus races; and of an imperial servant *ex nemore Cai et Luci* (fig. 16), a place name referring to a woodland in memory of Augustus's two heirs, who died prematurely in the years 2 and 4 A.D. respectively, located in the area of the *Naumachia Augusti* in Trastevere.<sup>16</sup> Noteworthy in this inscription, among other things, is the fact that we have here the only testimony in Latin of this form of the name: the other sources always speak of a *Nemus Caesarum*.<sup>17</sup>

<sup>16</sup> Cf. A.M. LIBERATI, s.v. "*Naumachia Augusti*", in *LTUR*, III, Rome 1996, p.337; E. PAPI, s.v. "*Nemus Caesarum*", *ibid.*, p. 340.

<sup>17</sup> *Res gestae divi Augusti*, app. 2; Suet., *Aug.* 43.2; *CIL* VI, 31566 = XI, 3772; cf. also *TAC.*, *Ann.* 14.15.2. In Greek cf. Cassius Dio, 66.25.3-4.

Finally, in a lane between two terrace walls (dating to the end of the second or to the beginning of the third century) was found a funerary altar in travertine dating to the first half of the first century A.D., dedicated to the sculptor *Tiberius Claudius Thesmus*, who is represented below the inscription busy at work producing a bust (fig. 17).<sup>18</sup> Likenesses of sculptors are not common: in funerary contexts in Rome, one finds just one other altar, without inscription, from the Hadrianic era preserved in the Vatican Museums depicting a sculptor portraying his wife in a *clupeus*.<sup>19</sup>

The unusual state of conservation of the area allows several observations that help us to better understand several aspects of Roman funeral ritual. Consider a terracotta urn found among the burials of the central area containing the ashes of a deceased person and covered by the neck of an amphora; below this form of protection was deposited a small statuette portraying a sleeping servant with an oil lamp nearby (fig. 18). Here we have an iconographic representation known from several other examples (one of which is preserved in the Vatican's Chiaramonti Museum<sup>20</sup>) but which has not previously been found *in situ*. The subject represents a lantern-bearer slave awaiting his master at the door: perhaps the urn holding the statuette, without inscription and devoid of all decoration, belonged to a servant who wanted to be portrayed carrying out his humble and devout task.

Thus far, only the finds have been presented. Now let us describe the development of the necropolis on the basis of the evidence from the excavations.

We can identify three main phases, which we shall present with the aid of an up-dated 3-D computer graphics program capable of rendering traditional excavation maps three-dimensionally and of adding to the archaeological data the topography of the terrain in a scientific and realistic manner.

The first phase, which lasted until around 80 A.D., is characterized by isolated burials which occupied in a random way the natural slope of the Vatican hill (figs. 19-20).

A second phase, separated from the preceding one by a first landslide which partially covered the older tombs, lasted to the mid second century and is characterized by the construction of columbaria of medium dimensions with facades aligned so as to standardize the development of the necropolis with better-ordered secondary routes (figs. 21-22).

Towards the mid third century another more destructive landslide of gravel and clay obliterated almost completely the oldest tombs and created the basis for the

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<sup>18</sup> P. LIVERANI, in AA.VV., *Vixerunt Omnes. Romani ex imaginibus. Ritratti romani dai Musei Vaticani*, (cat. of the exhibit) Tokyo 2004, (Italian ed. Tokyo 2005), p. 26, fig. 10.

<sup>19</sup> Galleria Candelabri, inv. 2671; G. LIPPOLD, *Die Skulpturen des Vatikanischen Museums*, Berlin 1956, pp. 317-318, n. 52, table 142; P. LIVERANI, in *Vixerunt omnes Romani ex imaginibus. Ritratti romani dai Musei Vaticani*, (cat. of the exhibit) Tokyo 2004, pp. 110-112 n. 14, (Italian ed. Tokyo 2005, pp. 62-63); G. SPINOLA, *Il Museo Pio Clementino*. 3, Vatican City 2004, pp. 255-256 (with preceding bibliography).

<sup>20</sup> B. ANDREAE (ed.), *Bildkatalog der Skulpturen des Vatikanischen Museums, I, Museo Chiaramonti*, Berlin-New York 1995, p. 101\*, n° 340, table 1068.

construction of new ones and, a bit later, of burial chambers, raising the ground level by several meters. The columbaria now are bigger, and one notes a greater organization of the space, which remains unaltered until the beginning of the fourth century, when the gradual abandonment of the necropolis was dictated by the construction nearby, under the reign of Constantine of St. Peter's Basilica (fig. 23).

To realize the virtual reconstructions of the different diachronic phases of the necropolis we have commissioned the architects Stefano Borghini and Raffaele Carlini to develop the *Progetto KatatexiLux*. Via a 'three-dimensional' model connected to a database containing the archaeological information related to the excavation, they carried out an *ExAnte*, that is an interactive software able to manage all the data and information of an archaeological site still under excavation. The result is a *real time* model, based on an application programmed in the *object oriented programming* language C++ which exploits the performance of the rendering engine *3d open source OGRE (Object-Oriented Graphics Rendering Engine)*. This choice allowed us to realize a *real-time* model, which does not lack photorealism, but rather applies leveraging technology, for example *render baking* or *to texture*, and thus offers a navigable model which is extremely realistic and convincing<sup>21</sup>.

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<sup>21</sup> Cfr. S. BORGHINI - R. CARLANI, *La restituzione virtuale dell'architettura antica come strumento di ricerca e comunicazione dei beni culturali: ricerca estetica e gestione delle fonti*, in *Tecnologie per la comunicazione del patrimonio culturale* (a cura di E. Ippoliti e A. Meschini), vol. 4, n. 8 (2011), pp. 71-79.



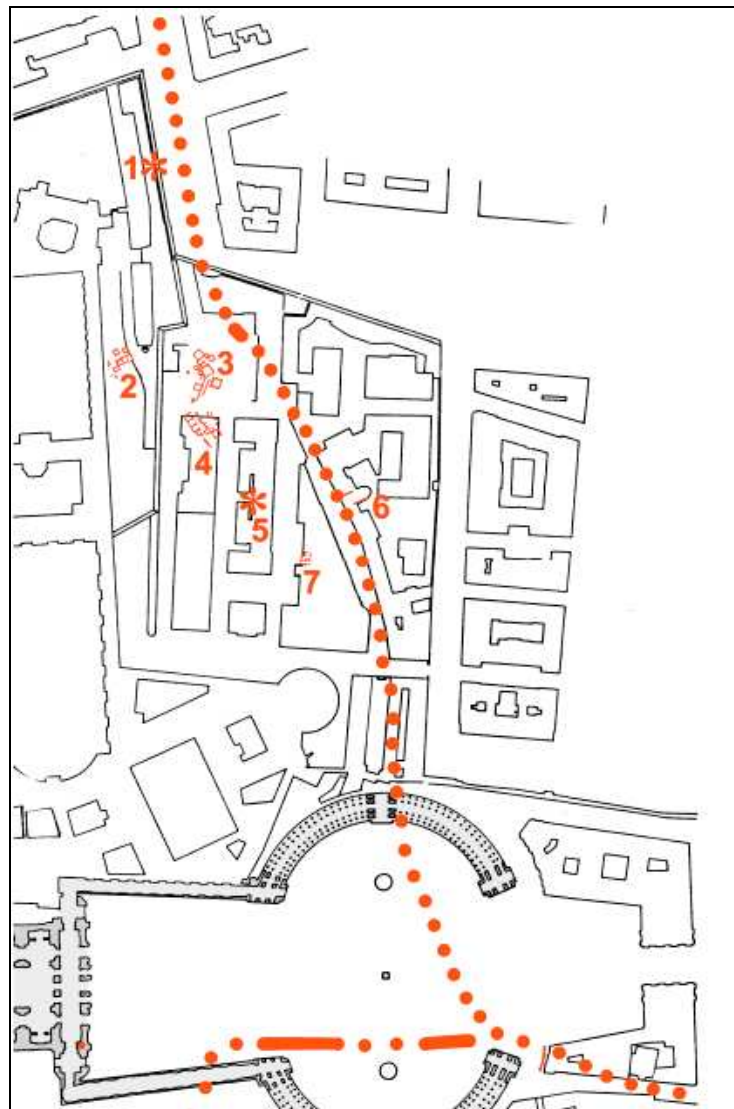


Fig. 1 Rinvenimenti di tombe lungo la via Trionfale.

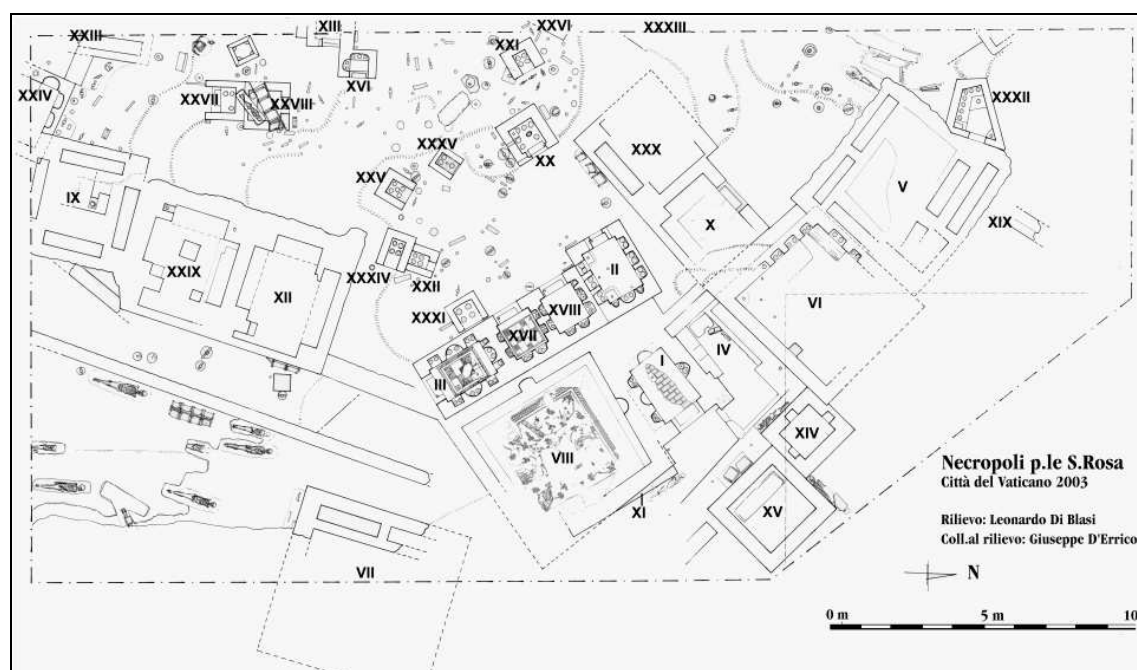


Fig. 2 Planimetria della necropoli di Santa Rosa.



Fig. 3 Altare di Flora, figlia di Optatus, tabularius a patrimoniis.



Fig. 4 Altare con dedica a Passiena Prima.



Fig. 5 Edicola funeraria marmorea del fanciullo Tiberius Natronius Venustus.





Fig. 6 Piccolo busto fittile di donna della tarda età flavia.



Fig. 7 Sepolcro VIII, pavimento in mosaico con scena dionisiaca.





Fig. 8 Sepolcro VIII, sarcofago con vittorie alate e ritratto muliebre clipeato.



Fig. 9 Sepolcro VIII, sarcofago strigilato con filosofo e orante appartenente al cavaliere Publius Caesilius Victorinus.





Fig. 10 Sarcofago con scena di caccia al cinghiale Calidonio.



Fig. 11 Sarcofago baccellato con leoni, scena di aratura e ritratto virile clipeato.



Fig. 12 Sepolcro III, particolare della decorazione in stucco.





Fig. 13 Veduta del sepolcro III.



Fig. 14 Sepolcro XX, con stele del servo di Nerone Alcimus, custos de Theatro Pompeiano de scaena.





Fig. 15 Altare dedicato a Marcus Vibius Marcellus, legatus Coloniae Augustae Firmae.





Fig. 16 Cippo di un servo imperiale ex Nemore Cai et Luci, un giardino nell'area della Naumachia Augusti a Trastevere.



Fig. 17 Ara di travertino dedicata allo scultore Tiberius Claudius Thesmus raffigurato mentre realizza un busto.





Fig. 18 Statuetta marmorea di un servo addormentato.



Fig. 19 Rilievo tridimensionale della prima fase della necropoli.



Fig. 20 Ricostruzione virtuale in 3D della prima fase della necropoli realizzato con il progetto KatatexiLux.



Fig. 21 Rilievo tridimensionale della seconda fase della necropoli.





Fig. 22 Ricostruzione virtuale in 3D della seconda fase della necropoli realizzato con il progetto KatatexiLux.



Fig. 23 Ricostruzione virtuale in 3D della terza fase della necropoli realizzato con il progetto KatatexiLux.



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## TRIPHEION – ATRÎPE

### *Reconstructing the Changes of Cultic Space in a Late Antique Upper Egyptian Town\**

Rafed El-Sayed

#### 1. Introduction: Rome and abroad...

This paper is concerned with historic reconstructions of urban contexts and cultic landscapes far away from the centre of the Roman World<sup>1</sup>. Although an integral part of the Roman Empire from 30 BC to 639 AD<sup>2</sup>, the *provincia aegyptus*<sup>3</sup> retained many of its traditional peculiarities throughout the Roman domination<sup>4</sup>. Already during the 1<sup>st</sup> millenium BC Egypt had become a melting pot of mediterranean cultures<sup>5</sup>, still keeping its distinct Egyptian culture and way of thinking that allowed for new ideas to be incorporated without necessarily abrogating archaic beliefs and conceptions: new features would either meld with old ones or simply exist beside them<sup>6</sup>. Thus, the religious cosmos of Graeco-Roman Egypt was, like its topographic map, a patch work of cultic and urban manifestations consisting of Egyptian style villages and small towns as well as ancient Egyptian but partly hellenized *nome* capitals next to newly

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\* This article is meant as a preview on my research that will be presented soon within more comprehensive studies currently in preparation.

<sup>1</sup> I would like to thank Chrystina Häuber, Franz Xaver Schütz and Gordon M. Winder for the kind invitation to provide a contribution to the Rome-Symposium publication.

<sup>2</sup> On Roman Egypt see in general the recently published *Oxford Handbook of Roman Egypt* edited by Christina Riggs, Oxford 2012. Cf. still ALAN K. BOWMAN, *Egypt after the Pharaohs 332 BC-AD 642*, London 1986 and Naphtali Lewis, *Life in Egypt under Roman Rule*, Oxford 1983. Titles will be cited at full length only once and will be given in short form hereafter with reference to the note that contains the full citation.

<sup>3</sup> Cf. Alan K. Bowman and Dominic Rathbone, Cities and Administration in Roman Egypt, *Journal of Roman Studies* 82, 1992, 108–127 against T. Mommsen, *Römisches Staatsrecht*, <sup>3</sup>Leipzig 1887, II.2, 859 n. 2.

<sup>4</sup> Cf. Roger S. Bagnall, Roman occupation, in: Donald B. Redford (ed.), *The Oxford Encyclopedia of Ancient Egypt*, vol. 3, Oxford 2001, 148–156; Friederike Herklotz, *Aegypto Capta: Augustus and the Annexation of Egypt*, in: Riggs, *Handbook* [s. n. 2], 11–21.

<sup>5</sup> Cf. in general Günter Vittmann, *Ägypten und die Fremden im ersten vorchristlichen Jahrtausend, Kulturgeschichte der antiken Welt* 97, 2003; Friedhelm Hoffmann, *Ägypten. Kultur und Lebenswelt in griechisch-römischer Zeit. Eine Darstellung nach den demotischen Quellen*, Berlin 2000; Naphtali Lewis, *Greeks in Ptolemaic Egypt. Case Studies in the Social History of the Hellenistic World, Classics in Papyrology* 2, 1986, reprint : 2001.

<sup>6</sup> On syncretism in Hellenistic and Roman Egypt cf. Laurent Bricault / Miguel John Versluys (eds.), *Isis on the Nile. Egyptian Gods in Hellenistic and Roman Egypt. Proceedings of the ivth International Conference of Isis Studies, Liège, November 27-29 2008, Religions in the Graeco-Roman World* 171, 2010; OLAF E. KAPER, Synkretistische Götterbilder in hellenistischer und römischer Zeit, in: Herbert Beck (ed.), *Ägypten – Griechenland – Rom. Abwehr und Berührung, Städtisches Kunstinstitut und Städtische Galerie*, 26. November 2005-26. Februar 2006, 2006, 305–309; David T.M. Frankfurter, *Religion in Roman Egypt: Assimilation and Resistance*, Princeton 1998; L. Kákosity, Probleme der Religion im römerzeitlichen Ägypten, *Aufstieg und Niedergang der Römischen Welt* II, 18.5, 2894–3049, 1995.

founded truly Greek and Roman cities<sup>7</sup>, most of them adorned with sanctuaries dedicated to both, Egyptian and Greek-Roman gods<sup>8</sup>.

Egypt's distinct geographic setting would always be determinative for its administration and topography. Divided into the upper Egyptian Nile valley and the lower Egyptian delta, both bordered by the western and eastern deserts, it was formed by three constitutive environments: the Nile valley, the realm of the living; the (low) desert escarpment – the realm of the dead; and the (high) desert plateau, a hostile transit area<sup>9</sup>. In addition, ever since the formation of the Egyptian state, Roman Egypt remained a composition of more or less 42 districts (*nomoi*) as cultic and administrative units with a *nome* capital (*metropolis*) as its administrative and cultic centre<sup>10</sup>. In the *metropoleis* the major temple precincts of the *nome's* chief deity were located, to which the minor sanctuaries of the urban hinterland were subordinated.

#### *Cities, towns, and villages in Roman Egypt*

Greek impact on the urbanisation of Egypt occurred as early as the 7<sup>th</sup> century BC, when certainly king Amasis, but probably already king Psamtik I, initiated the foundation of a Greek emporion at Naukratis in the Nile delta, Egypt's first Greek *polis*<sup>11</sup>. Next was the foundation of Alexandria in 331 BC by Alexander the Great and the foundation of

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<sup>7</sup> The only existing monographic work on the city in Graeco-Roman Egypt cf. Richard Alston, *The City in Roman and Byzantine Egypt*, London and New York 2002; but cf. the critical review of Roger S. Bagnall, *Journal of Egyptian Archaeology* 89, 2003, 297–300. A recent overview is Laurens E. Tacoma, Settlement and Population, in: Riggs, *Handbook* [s. n. 2], 122–135.

<sup>8</sup> For the Greek cities like Alexandria and Ptolemais cf. Katja Müller, *Settlements of the Ptolemies. City Foundation and New Settlements in the Hellenistic World*, *Studia Hellenistica* 43, 2006. Even at Siwa Oasis in the Libyan desert (Ammon in Classical antiquity) there existed aside from the two Egyptian style temples a pure Greek style temple, cf. Klaus-Peter Kuhlmann, Das Ammoneion: Ein ägyptisches Orakel in der libyschen Wüste, in: Günter Dreyer / Daniel Polz (eds.), *Begegnung mit der Vergangenheit. 100 Jahre in Ägypten. Deutsches Archäologisches Institut Kairo 1907–2007*, Mainz 2007, 77–87 (esp. 80). For the Hellenization of the Nomos Panopolites during the Ptolemaic-Roman era, cf. the forthcoming PhD study of Esther Wegener.

<sup>9</sup> On Egypt's landscapes cf. e.g. Sarah Parcak, The Physical context of Ancient Egypt, in: Alan B. Lloyd (ed.), *A Companion to Ancient Egypt*, vol. I, Chichester 2010, 3–22 with further reading.

<sup>10</sup> On the Egyptian nomes during Roman times see now Manfred Weber und Angelo Geissen, *Die alexandrinischen Gaumünzen der römischen Kaiserzeit. Die ägyptischen Gaue und ihre Ortsgötter im Spiegel der numismatischen Quellen*, *Studien zur spätägyptischen Religion* 11, 2013 and still Wolfgang Helck, *Die altägyptischen Gaue*, *Tübinger Atlas zum Vorderen Orient*, Beihefte, Reihe B Nr. 5, 1974; idem, Gaue, in: Wolfgang Helck / Wolfhart Westendorf (eds.) *Lexikon der Ägyptologie*, vol. 2, Wiesbaden 1977, col. 385–408; Stefan Skowronek, Aus den Forschungen über die ägyptischen Verwaltungsbezirke in der römischen Zeit, in: Krzysztof M. Cialowicz / Janusz A. Ostrowski (ed.), *Les civilisations du bassin méditerranéen. Hommages à Joachim Sliwa*, Cracovie 2000, 443–453 has hardly anything to say.

<sup>11</sup> On Naukratis cf. recently R.I. Thomas and A. Villing, Naukratis revisited 2012: Integrating new fieldwork and old research, *British Museum Studies in Ancient Egypt and Sudan* 20, 2013, 81–125 and F. Leclère, *Les villes de Basse Égypte au premier millénaire av. J.-C.*, Le Caire 2008. See also generally Lewis, *Greeks* [s. n. 5].

Ptolemaïs Hermiu in Upper Egypt under Ptolemy I (306/4–283/2 BC)<sup>12</sup>. Roman impact on the urban setting of Egypt starts with administrative changes under Augustus<sup>13</sup>, peaks in Hadrian's foundation of Antinoöpolis in 130 AD and Septimius Severus' grant of city councils to all *nome* capitals in 200 AD<sup>14</sup>.

Any study concerned with urbanism in Egypt encounters basic terminological difficulties<sup>15</sup>. These difficulties originate firstly from the disparity of Greek-Roman and Egyptian culture, especially in the realm of settlement patterns and architectural traditions<sup>16</sup>. Partly these difficulties owe to the fact, that we do not know what most Egyptian cities, towns and villages looked like<sup>17</sup>. Our knowledge of the settlement structure of Roman Egypt is rather incomplete, since only few cities, towns and villages have been carefully and extensively excavated and thoroughly documented by archaeologists<sup>18</sup>. Notably, most studies within this area of research refer to the smallest unit of the settlement: the house<sup>19</sup>. Hypothetical reconstructions of the urban setting thus play a prominent role within the field of research discussed here.

The use of the terms 'city' and 'town' and the differentiation of 'town' and 'village' in scholarly literature is therefore inconsistent<sup>20</sup>. For our purpose however, it may suffice

<sup>12</sup> On Alexandria cf. Judith S. McKenzie, *The Architecture of Alexandria and Egypt. 300 BC- AD 700*, London/New Haven 2007; On Ptolemaïs see Müller, *Settlements* [s. n. 8]; R.S. Bagnall, *Cults and Names of Ptolemais in Upper Egypt*, in: W. Clarysse et al. (eds.), *Egyptian Religion: The Last Thousand Years. Studies Dedicated to the Memory of Jan Quaegebeur*, Vol. II, *Orientalia Lovaniensia Analecta* 85, 1998 and still Gerhard Plaumann, *Ptolemaïs in Oberägypten. Ein Beitrag zur Geschichte des Hellenismus in Ägypten*, Leipzig 1910.

<sup>13</sup> See Livia Capponi, *Augustan Egypt. The Creation of a Roman Province*, New York/ London 2005; on Augustus' politics concerning the Egyptian cults cf. Ilse Becher, *Augustus und seine Religionspolitik gegenüber orientalischen Kulturen*, in: Gerhard Binder (ed.), *Saeculum Augustum II. Religion und Literatur*, Darmstadt 1988, 143–170.

<sup>14</sup> Cf. Bowman and Rathbone, *Cities and Administration* [s. n. 3], 107–127; Andrea Jördens, *Das Verhältnis der römischen Amtsträger in Ägypten zu den 'Städten' in der Provinz*, in: Werner Eck (ed.), *Lokale Autonomie und römische Ordnungsmacht in den kaiserzeitlichen Provinzen vom 1. bis 3. Jahrhundert*, *Schriften des Historischen Kollegs* 42, 1999, 141–180.

<sup>15</sup> Paola Davoli, *Settlements – Distribution, Structure, Architecture: Graeco-Roman*, in: Lloyd, *Companion*, vol. I, 350 [s. n. 9]; Wolfgang Müller, *Urbanism in Graeco-Roman Egypt*, in: Manfred Bietak/ Ernst Czerny / Irene Forstner-Müller (eds.), *Cities and Urbanism in Ancient Egypt. Papers from a Workshop in November 2006 at the Austrian Academy of Sciences*, *Denkschriften der Österreichischen Akademie der Wissenschaften Wien LX*, 2010, 217–256 (esp. 217–219).

<sup>16</sup> Frank Kolb, *Die Stadt im Altertum*, München 1984, 36–40.

<sup>17</sup> Müller, *Urbanism* [s. n. 15], 217.

<sup>18</sup> Exceptions are sites like Elephantine island near Aṣwān and Karanis/Kōm Awšīm in the Fayyūm; on Karanis cf. E.M. Husselman, *Karanis. Excavations of the University of Michigan in Egypt 1928–1935. Topography and Architecture*, Ann Arbor, 1979; on Elephantine cf. e.g. Felix Arnold, *Elephantine XXX: Die Nachnutzung des Chnumtempelbezirks. Wohnbebauung der Spätantike und des Frühmittelalters*, *Archäologische Veröffentlichungen* 116, 2003. Cf. generally the overview given by Davoli, *Settlements* [s. n. 15].

<sup>19</sup> Cf. Manfred Bietak (ed.), *House and Palace in Ancient Egypt. International Symposium in Cairo, April 8. to 11.1992*, *Denkschriften der Österreichischen Akademie der Wissenschaften Wien XIV*, 1996.

<sup>20</sup> Davoli, *Settlements* [s. n. 15], 350.

to allude to the problem and to explain that in the terminology used here, together with the four Greek-Roman *poleis* I refer to the *nome* capitals (*metropoleis*) as cities, the settlements ranging between small towns and larger villages as towns, and the smaller and smallest units as villages or hamlets<sup>21</sup>.

## 2. Approach

### *The transformation of cultic spaces in Egyptian town sites during Roman times*

The Roman domination of Egypt entailed essential changes to the legal situation of Egypt's people and institutions including the cultic sphere<sup>22</sup>. Although the temples had been deprived of their privileges and sources of wealth from the early Roman times<sup>23</sup>, building activities and cultic practice, nevertheless, continued until the 4<sup>th</sup> century<sup>24</sup>, and even, in one exceptional case, until the second half of the 6<sup>th</sup> century<sup>25</sup>, but generally their longevity depended on regional conditions<sup>26</sup>. Especially in the oases temple building went on until the 4<sup>th</sup> century<sup>27</sup>.

On the other hand, starting with the early 2<sup>nd</sup> century, the traditional institutional cultic practice in many Egyptian temples came to an end. Most temples were abandoned starting from the late 2<sup>nd</sup> to the 4<sup>th</sup> century<sup>28</sup>. Even the great temple at Luxor (*Diospolis magna*) was converted into a Roman military camp at the end of the 3<sup>rd</sup> century after it

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<sup>21</sup> To my understanding, Egyptian towns should have a temple precinct or sanctuary at least.

<sup>22</sup> Bagnall, Roman occupation [s. n. 4].

<sup>23</sup> R. Bagnall, *Combat ou vide: christianisme et paganisme dans l'Égypte romaine tardive*, *Ktema* 13, 1988, 285–296; idem, *Egypt in Late Antiquity*, Princeton 1993, 261–268; Frankfurter, *Religion*, [s. n. 6], 27–30; 178–179.

<sup>24</sup> U. Verhoeven, *Neue Tempel für Ägypten: Spuren des Augustus von Dendera bis Dendur*, in: D. Kreikenbom et al. (eds.), *Augustus – Der Blick nach außen. Die Wahrnehmung des Kaisers in den Provinzen des Reiches und in den Nachbarstaaten. Akten der internationalen Tagung an der Johannes-Gutenberg-Universität Mainz vom 12. bis 14. Oktober 2006*, Wiesbaden 2008, 229–248.

<sup>25</sup> The situation on the island of Philae with the Temple of Isis still being involved in pagan cult practice until the mid sixth century must be considered as a regional exception but still a late antique reality, cf. Jitse S. Dijkstra, *Philae and the end of ancient Egyptian religion. A regional study of religious transformation (298-642 CE)*, *Orientalia Lovaniensia Analecta* 173, 2008.

<sup>26</sup> G. Hölbl, *Altägypten im Römischen Reich. Der römische Pharao und seine Tempel, 1: Römische Politik und altägyptische Ideologie von Augustus bis Diocletian. Tempelbau in Oberägypten*, Mainz 2000; idem, *Altägypten im Römischen Reich. Der römische Pharao und seine Tempel, 2: Die Tempel des römischen Nubien*, Mainz 2004.

<sup>27</sup> G. Hölbl, *Altägypten im Römischen Reich. Der römische Pharao und seine Tempel, 3: Heiligtümer und religiöses Leben in den ägyptischen Wüsten und Oasen*, Mainz 2005; O.E. Kaper, *Temple Building in the Egyptian Deserts during the Roman Period*, in: O.E. Kaper (ed.), *Life on the fringe. Living in the Southern Egyptian Deserts during the Roman and early-Byzantine periods. Proceedings of a Colloquium Held on the Occasion of the 25th Anniversary of the Netherlands Institute for Archaeology and Arabic Studies in Cairo, 9–12 December 1996*, CNWS Publications 71, Contributions by the Netherlands-Vlaams Institute in Cairo 2, 1998, 139–158.

<sup>28</sup> Frankfurter, *Religion* [s. n. 6], 27–30.

had been out of use most probably since the beginning of that century<sup>29</sup>. A similar fate awaited the sanctuary at Tripheion-Atrîpe in the Panopolitan hinterland with its temples that was probably partly converted into an imperial way station (see below). The precinct of Hathor at Dendera was still endowed with a new birth house (*mammisi*) under Trajan and Marc Aurel and the area in front of the main gate of the temenos was rearranged and endowed with fountains<sup>30</sup>, before it was converted into a monastery in late Roman times<sup>31</sup>. Especially in Lower Egypt some temples remained in use until their abrupt closure by violence. The most famous cases of sanctuaries that were destroyed during riots were the temples of Serapis at Alexandria<sup>32</sup> and Canopus<sup>33</sup>, which were violated in 391/92.

Despite the somewhat riotous situation in the northern Delta, few of the many Egyptian temples were actually destroyed in late Roman times<sup>34</sup>. Most of the temples went through a slow process of abandonment and conversion. This generally slow process of change started in some instances with the 1<sup>st</sup> century AD and lasted in a few cases until the 5<sup>th</sup> (temple of Isis at Menouthis)<sup>35</sup>, or even until the 5<sup>th</sup>–6<sup>th</sup> century (Temple of Isis on Philae)<sup>36</sup>, again depending very much on the regional situation<sup>37</sup>.

<sup>29</sup> Mohammed el-Saghir et al., *Le camp romain de Louqsor avec une étude des graffites gréco-romains du temple d'Amon, Mémoires publiés par les Membres de l'Institut Français d'Archéologie Orientale du Caire*, 1986; Bagnall, *Egypt*, [s. n. 23] 263.

<sup>30</sup> Georges Castel / François Daumas / Jean-Claude Golvin, *Dendera – monuments de l'enceinte sacrée: Les fontaines de la porte nord*, Le Caire 1984.

<sup>31</sup> Pierre Zignani, *Le temple d'Hathor à Dendara. relevés et étude architecturale*, Bibliothèque d'Étude 146, 2010.

<sup>32</sup> Michael Sabottka, *Das Serapeum in Alexandria. Untersuchungen zur Architektur und Baugeschichte des Heiligtums von der frühen ptolemäischen Zeit bis zur Zerstörung 391 n. Chr.*, *Études alexandrines* 15, 2008; McKenzie, *Architecture* [s. n. 12]; Edward J. Watts, *Riot in Alexandria. Tradition and Group Dynamics in Late Antique Pagan and Christian Communities*, Berkeley/ Los Angeles/ London 2010.

<sup>33</sup> Peter Grossmann, Zur Gründung des Heilungszentrums der Hl. Kyros und Johannes bei Menouthis, in: Ernst Czerny et al. (eds.), *Timelines. Studies in Honour of Manfred Bietak*, vol. III, *Orientalia Lovaniensia Analecta* 149, 2006, 203–212.

<sup>34</sup> Most temples were actually destroyed during the 19<sup>th</sup> century. The abbot Shenoute who is allegedly assumed to have been responsible for several temple destructions in the Panopolite nome, can actually not be made responsible for even a single temple destruction in the classical meaning, Cf. Stephen Emmel, Shenoute of Atripe and the Christian Destruction of Temples in Egypt: Rhetoric and Reality, in: J. Hahn/ S. Emmel / U. Gotter (eds.), *From Temple to Church. Destruction and Renewal of Local Cultic Topography in Late Antiquity, Religions in the Graeco-Roman World* 163, 165 with n. 15; Rafed El-Sayed, Shenoute und die Tempel von Atripe. Zur Umnutzung des Triphisbezirks in der Spätantike, in: Hermann Knuf et al. (eds.), *Honi soit qui mal y pense. Studien zum pharaonischen, griechisch-römischen und spätantiken Ägypten zu Ehren von Heinz-Josef Thissen*, *Orientalia Lovaniensia Analecta* 194, 2010, 519–538, pl. 93–97 (esp. 521).

<sup>35</sup> Grossmann, Menouthis [s. n. 33]; Dominic Montserrat, Pilgrimage to the Shrine of SS Cyrus and John at Menouthis in Late Antiquity, in: David Frankfurter (ed.), *Pilgrimage and Holy Space in Late Antique Egypt, Religions in the Graeco-Roman World* 134, 1998, 257–279.

<sup>36</sup> Dijkstra, *Philae* [s. n. 25], 347.

<sup>37</sup> J.H.F. Dijkstra, The fate of the temples in late antique Egypt, in: L. Lavan and M. Mulryan (eds.), *The Archaeology of Late Antique 'Paganism'*, *Late Antique Archaeology* 7, 2011, 389–436.



*Historical reconstructions: a multitrack approach*

To understand the complex transformations of cultic spaces in Egyptian settlements during the Roman domination a multitrack approach focussing on regional contexts is considered most promising. This means first and foremost a combination of documentary and archaeological evidence, including papyrological, epigraphic and field archaeological evidence<sup>38</sup>. However, a consideration of all available *in situ* and *ex situ* evidence is hindered by the problem that much of the material unearthed and surveyed up to now has not yet been comprehensively published. Some of the material known already could not be related to certain sites or contexts, since it could not be accurately identified<sup>39</sup>. It further means an inclusion of evidence and reconstructions that lie outside the chronological frame of Roman Egypt and outside the disciplinary boundaries of Egyptology. Such an extension of scope is required for example when investigating the problem of temple destruction. Since most of the destruction happened in the high Middle Ages and later, an inclusion of the research disciplines concerned with the Islamic period of Egyptian history is required<sup>40</sup>.

**3. Case Study: Tripheion – Atripe<sup>41</sup>***Historic background: from pagan sanctuary via imperial way station to Christian convent<sup>42</sup>*

The town about which we are concerned was named Ḥw.t-Rpy.t in hieroglyphic-Egyptian inscriptions, Tripheion in Greek papyri, and Atripe in Coptic texts<sup>43</sup>. The site with the archaeological remains of the ancient town is located in Upper Egypt on the west bank of the Nile about seven kilometers to the modern provincial capital Sūhāğ (fig. 1) <sup>44</sup>. The archaeological mound lies at the foot of the western mountain chain, where the town's necropolis is located (fig. 2).

To date, no evidence is available that goes back further than the 4<sup>th</sup> century BC. The town was probably founded much earlier<sup>45</sup>, however, its heydays started at the end of the 2<sup>nd</sup> century BC. During the late Ptolemaic period the sancturay of the goddess Repit

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<sup>38</sup> A good example is Dijkstra, *Philae* [s. n. 25].

<sup>39</sup> This is the case with a pedestal found at the site of the White Monastery near Atripe that might also originate from Atripe or Ptolemaïs. Cf. G. Wagner / V. Rondot, *Zeitschrift für Papyrologie und Epigraphik* 103, 1994, 252; Cf. Rafed El-Sayed & Yahya El-Masry (eds.), *Athribis I. General Site Survey 2003–2007. Archaeological & Conservation Studies. The Gate of Ptolemy IX. Architecture and Inscriptions*, Le Caire 2012, 17.

<sup>40</sup> A good example is Klaus P. Kuhlmann, *Materialien zur Archäologie und Geschichte des Raumes von Achmim, Sonderschriften des Deutschen Archäologischen Instituts, Abteilung Kairo* 11, 1983.

<sup>41</sup> Atripe is one of the case studies discussed in my habilitation project on the changing religious landscapes of the ninth upper Egyptian *nome*.

<sup>42</sup> Cf. in general *Athribis I* [s. n. 39], 1–35; El-Sayed, Schenute [s. n. 34].

<sup>43</sup> Cf. *Athribis I* [s. n. 39], 3–7.

<sup>44</sup> It is known in Egyptological literature and early travelogues as „Athribis“ and must not be mistaken for the homonymous city in the Nile Delta. Cf. on this *Athribis I* [s. n. 39], 3.

<sup>45</sup> Cf. *Athribis I* [s. n. 39], 15.

(Triphis), the local chief divinity, was enlarged first under Ptolemy IX (116–107/88–81) and again under Ptolemy XII (80–58/55–51). The latter was responsible for a new temple building project that counts among the largest of that period. The temenos was extended and covered one quarter of the town's total area. A new temple was founded and dedicated to the Panopolitan triad, consisting of the deities Repit, Min, and Kolanthes, that counted among the Egyptian sanctuaries of the first order<sup>46</sup>.

As with most of the Egyptian temples the temple buildings of Tripheion-Atrîpe remained still unfinished when they were finally given up. Last reliefs in the main temple of Tripheion were executed in the name of Domitian at the end of the first century<sup>47</sup>. These inscriptions provide the last unambiguous evidence to date the functioning of the temples. The 2<sup>nd</sup> and 3<sup>rd</sup> centuries provide no evidence deriving from the temple precinct at Tripheion<sup>48</sup>, and this makes abandonment or at least a slow decline of the cultic practice during this period probable. The only 2<sup>nd</sup> to 3<sup>rd</sup> century evidence available so far from the site itself originates from the town's necropolis<sup>49</sup>.

Mention of the town is made next in documentary sources dating to 298 and 300 AD respectively. In P. Panop. Beatty I, a palace (παλατιον) is mentioned, that was located according to the papyri in Tripheion<sup>50</sup>. The problem with this statement is that this could refer either to the town, the temple precinct or to the temple of Triphis itself<sup>51</sup>. Hence a decision on the basis of the papyrological evidence is not possible. In case the temple was meant, a conversion of the temple building into an imperial 'palace' and consequently the end of the cultic practice would be certain.

The archaeological evidence from the temple precinct available to present is, just as the papyrological, not so easy to interpret. This is mainly due to the extensive reuse of the temple area by Christian occupants lasting from the 4<sup>th</sup> to the 12<sup>th</sup> century and the destruction of a good part of the lime stone buildings from the 12<sup>th</sup> century onwards<sup>52</sup>.

A palace could not have been built into the temple without the previous cessation of the cultic practice in the sanctuary. In fact, a brick water installation built into the principal entrance of the main temple (fig. 3) which precluded accessibility to the main temple axis must be judged as *terminus ante quem* for the abandonment of the building

<sup>46</sup> *Athribis I* [s. n. 39], 18–19.

<sup>47</sup> *Athribis I* [s. n. 39], 208.

<sup>48</sup> On this lack of evidence cf. M.A. Stadler, Egyptian Cult. Evidence from Temple Scriptoria and Christian Hagiographies, in: Riggs, *Handbook* [s. n. 2], 457–473.

<sup>49</sup> *Athribis I* [s. n. 39], 20–21.

<sup>50</sup> T.C. Skeat, *Papyri from Panopolis in the Chester Beatty Library Dublin, Chester Beatty Monographs* 10, 1964, 34–35; *Athribis I* [s. n. 39], 22–23; on the possibilities of interpretation for 'palace' in the respective context as any kind of way-station cf. F. Millar, *The Emperor in the Roman World (31 BC – AD 337)*, London 1977, 20; 41–42.

<sup>51</sup> *Athribis I* [s. n. 39], 6–7; El-Sayed, Schenute [s. n. 34], 532.

<sup>52</sup> On the reuse and destruction cf. El-Sayed, Schenute [cf. n. 34], 531–538.

as a pagan sanctuary and the beginning of its reuse<sup>53</sup>. Unfortunately the water installation could not be dated closer than being of late Roman date. Neither the water installation nor any other of the remaining built-in components in the temple ruin can be ascribed to typical late Roman palace or camp architecture<sup>54</sup>.

*Reconstructing the transformation of cultic spaces in 2<sup>nd</sup> to 5<sup>th</sup> century Tripheion-Atrîpe*

Cultic spaces in ancient Mediterranean cultures were mainly connected to urban contexts, especially in Egypt, where the only exceptions are rock-cut *speoi* mostly located in uninhabited but regularly frequented areas such as quarries<sup>55</sup>, necropoleis<sup>56</sup>, and desert valleys used as traffic ways<sup>57</sup>. In most cases, Egyptian necropoleis were located adjacent or at least proximate to a settlement<sup>58</sup>. At Tripheion-Atrîpe it is situated in the adjacent western mountain in the centre of which a rock-cut *speos* was inaugurated during year 33 of Augustus<sup>59</sup>. Settlement and sanctuary usually formed a symbiotic ensemble but were clearly separated from each other by a temenos wall. Very often the settlement developed around a preexisting temenos, and this was most probably also the case at Tripheion-Atrîpe<sup>60</sup>.

Processions played an important role in Egyptian religion until Roman times<sup>61</sup>. They were performed on stone slabbed procession roads (*dromoi*) that connected separated way stations consequently traversing the living quarters of the settlement and thus being main arteries of the urban setting. At Dîme (*Soknopaïou Nesos*) in the Fayyûm, at

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<sup>53</sup> El-Sayed, Schenute [cf. n. 34], 536; *Athribis I*, 108 [s. n. 39].

<sup>54</sup> On late Roman palace or camp architecture see P. Grossmann, *castrum*, in: Aziz S. Atiya (ed.), *The Coptic Encyclopedia*, vol. 2, New York/ Toronto 1991, 464–469; Usama A. Wareth / Pierre Zignani, Nag al-Hagar, a Roman Fortress with a Palace of the Late Roman Empire: Second Preliminary Report, *Bulletin de l'Institut Français d'Archéologie Orientale* 92, 1992, 185–210.

<sup>55</sup> Rosemarie Klemm, Vom Steinbruch zum Tempel. Beobachtungen zur Baustruktur einiger Felstempel der 18. und 19. Dynastie im ägyptischen Mutterland, *Zeitschrift für ägyptische Sprache und Altertumskunde* 115, 1988, 41–51.

<sup>56</sup> Klaus-Peter Kuhlmann, El-Salamuni: Der Felstempel des Eje bei Achmim, in: Günter Dreyer und Daniel Polz (eds.), *Begegnung mit der Vergangenheit. 100 Jahre in Ägypten. Deutsches Archäologisches Institut Kairo 1907–2007*, Mainz 2007, 179–183; *Athribis I* [s. n. 39], 13–14, 20–21, 71.

<sup>57</sup> Cf. André Bernand, *Pan du désert*, Leiden 1977 (Wādī l-Ḥammāmāt); Philippe Derchain, *Elkab I. Les monuments religieux à l'entrée de l'Ouady Hellal. Elkab*, Bruxelles 1971 (Wādī Hilāl).

<sup>58</sup> E.g. the necropoleis of Akhmim to the east of the city, cf. for the site Kuhlmann, *Materialien* [s. n. 40], 52–54; and the necropolis of al-Ašmunayn (Hermupolis magna) at Tūna al-Ġabal, cf. K. Lembke, City of the Dead: Tuna el-Gebel, in: Riggs, *Handbook* [s. n. 2], 205–222.

<sup>59</sup> *Athribis I* [s. n. 39], 20.

<sup>60</sup> *Athribis I* [s. n. 39], 10.

<sup>61</sup> F. Perpillou-Thomas, *Fêtes d'Égypte ptolémaïques et romaines d'après la documentation papyrologique grecque*, Leuven 1993; F. Coppens, Temple Festivals of the Ptolemaic and Roman Periods, in: J. Dieleman and W. Wendrich (eds.), *UCLA Encyclopedia of Egyptology*, Los Angeles 2009, URL: <http://escholarship.org/uc/item/4cd7q9mn> [13/09/01].

least, the Roman *dromos* was enclosed by a wall and could be crossed by the inhabitants through an underground passage<sup>62</sup>.

At Tripheion-Atrîpe a *dromos* has been excavated partly running in an east-west direction to the main gate of the temenos (figs. 2, 4)<sup>63</sup>. It divides the living quarters of the town, into a northern and a southern part. The starting point might have been a quay or a gate at the central eastern boundary of the town where a canal connecting the town with the Nile once might have ended<sup>64</sup>. It would have been part of a cultic connection between the sanctuary of Triphis at Tripheion and the sanctuary of her divine husband Min at Panopolis, staged and celebrated during visiting processions<sup>65</sup>. The archaeology of this part of the site remains again insufficiently investigated. It is, nevertheless, clear that the *dromos* had been given up and built over in late Roman times, probably more or less concurrently with the abandonment of the temple precinct, some time after the cessation of cultic processional festival activity.

Little is known about the living quarters. The layout of the settlement, however, was reconstructed during the site survey directed by the author. The street pattern follows the orientation of the enclosure wall of the first temenos in a north-south direction (fig. 5). During the enlargement of the temple precinct in late Ptolemaic times older houses, the remains of which were investigated during a sounding east of the eastern outer wall of the great temple, were built over. In the course of another sounding in the area of the south-eastern quarter of the site, a compound probably dating to the 2<sup>nd</sup>–3<sup>rd</sup> centuries was investigated. In one part of the building, a dump of table ware dating to the 3<sup>rd</sup> century was found that might be connected to the visit of the emperor Diocletian<sup>66</sup>.

However, most archaeological and epigraphic data originates from the temple area, since this part of the settlement is the best explored so far. Further it is the most converted area of the entire settlement, and we have archaeological evidence for reuse

<sup>62</sup> Paola Davoli, Archaeological Research in Roman Soknopaiou Nesos: Results and Perspectives, in: Katja Lembke, Martina Minas-Nerpel, Stefan Pfeiffer (eds.), *Tradition and Transformation: Egypt under Roman Rule. Proceedings of the International Conference, Hildesheim, Roemer- and Pelizaeus-Museum, 3–6 July 2008, Culture and History of the Ancient Near East* 41, 2010, 53–77; eadem, The Temple Area of Soknopaiou Nesos, in: Mario Capasso and Paola Davoli (eds.), *New Archaeological and Papyrological Researches on the Fayyum. Proceedings of the International Meeting of Egyptology and Papyrology, Lecce, June 8<sup>th</sup>–10<sup>th</sup> 2005, Papyrologica Lupiensia* 14, 2005, 95–124.

<sup>63</sup> Rifaat el-Farag/U. Kaplony-Heckl/K.P. Kuhlmann, Recent Archaeological Exploration at Athribis (Hw.t Rpij.t), *Mitteilungen des Deutschen Archäologischen Instituts, Abteilung Kairo* 41, 1985, 1–8; Athribis I [s. n. 39], 110–113.

<sup>64</sup> Athribis I [s. n. 39], 10, 112.

<sup>65</sup> Athribis I [s. n. 39], 10.

<sup>66</sup> Rafe El-Sayed et al., Athribis Report 2011, unpublished. The ceramic assemblage consisting of a significant number of almost intact vessels might be interpreted as the table ware of the emperor's entourage.

and transformation dating from the late Ptolemaic to the early Islamic period<sup>67</sup>. The areas investigated to date provide, on the other hand, very little documentary material that would help much in reconstructing the use of cultic and urban spaces at second, third and fourth century Tripheion-Atrîpe<sup>68</sup>.

The archaeology of the site is a quite complicated matter that demands a proper approach if one wishes to answer the many questions concerning its transformation in late Roman times. Ongoing excavations lacking the proper approach will not only fail to answer the questions that this short contribution partly deals with, they will simply be judged as meaningless and irrevocable destructions of valuable archaeological evidence.

### *Epilogue: Reconstructing regional cultic landscapes of Roman Egypt*

The cultic landscape of an Egyptian town was an integral part of the larger cultic landscape of the district (*nomos*) in which it was located. Tripheion-Atrîpe was situated in the ninth *nome* of Upper Egypt, called *Nomos Panopolites* from Ptolemaic times onwards, since the main deity of the ninth *nome*, the fertility god Min, was identified with the Greek god Pan<sup>69</sup>. The great temple at Tripheion-Atrîpe presumably was the major sanctuary on the Panopolitan west bank and represented the cultic centre of the *nomes'* western *toparchies*<sup>70</sup>. It was consistently designed as an encyclopaedia of the religious conceptions and cultic topography of the entire ninth *nome* and functioned as counterpart to the great cultic centre of Min on the east side of the river at the *nome* capital Panopolis<sup>71</sup>. Through festivals, including visiting processions commemorated according to a common festival calendar, the cultic centres on both sides of the Nile were interconnected. General changes to the cultic practice would have been reflected equally on the local level. Thus, to understand the transformations of the cultic topography a look at the broader context is indispensable.

This short contribution is part of a larger project concerned with the changes of the cultic landscape of the Panopolite *nome* in late antiquity<sup>72</sup>. In ancient Egypt, cultic relations were not confined within the *nome* boundaries<sup>73</sup> and thus the study includes the *polis* of Ptolemaïs Hermiu in the 8<sup>th</sup> Upper Egyptian *nome* only 15 kilometres to the

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<sup>67</sup> See on this matter El-Sayed, Schenute [s. n. 34], 531–538.

<sup>68</sup> W.M.Fl. Petrie, *Athribis, British School of Archaeology in Egypt* 14, 1908, ii complains about the few ostraca and nearly no papyri he could find during his survey in 1906/07.

<sup>69</sup> Angelo Geissen/ Manfred Weber, Untersuchungen zu den ägyptischen Nomenprägungen III: 8.–16. oberägyptischer Gau, *Zeitschrift für Papyrologie und Epigraphik* 149, 2004, 283–306, Tf. I–II (esp. 289–290).

<sup>70</sup> *Athribis I* [s. n. 39], 8. The *nomes* were divided into administrative sub-districts called *toparchia*. Cf. Skeat, *P.Panop. Beatty* [s. n. 50], xxxv–xxxvii.

<sup>71</sup> *Athribis I* [s. n. 39], 10–11.

<sup>72</sup> URL: [www.min-panos.uni-goettingen.de](http://www.min-panos.uni-goettingen.de). The VolkswagenStiftung generously supported the project, for which I am very grateful.

<sup>73</sup> Renate Müller-Wollerman, Gaugrenzen und Grenzstelen, *Chronique d'Égypte* 91, 1996, 5–16.



south (-east) of Akhmim-Panopolis and Tripheion-Atrîpe. In the opinion of the author, Ptolemaïs was part of the same cultic topography as the main cultic centres of the 9<sup>th</sup> nome, Achmim-Panopolis and Tripheion-Atrîpe.<sup>74</sup> All three of these cultic centres shared the worship of the Panopolitan triad, regardless of the degree of their hellenization<sup>75</sup>.

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<sup>74</sup> Ptolemaïs is part of the author's project on the ancient cultic landscapes of the ninth upper Egyptian nome, including an archaeological information system for the area. Ptolemaïs is included since to the opinion of the author it formed a cultic landscape together with Akhmim and Tripheion-Atrîpe and most probably also Abydos (cf. mummy label Louvre inv. prov. 504, on which Osiris is named Lord of Abydos and Athribis, cf. *Athribis I* [s. n. 39], 11; on the close relation of Abydos and Akhmim cf. Maria-Theresia Derchain-Urtel, *Priester im Tempel. Die Rezeption der Theologie der Tempel von Edfu und Dendera in den Privatdokumenten aus ptolemäischer Zeit*, *Göttinger Orientforschungen*, IV. Reihe: Ägypten, Bd. 19, 1989, 237–245; I would like to thank Chrystina Häuber for discussing this idea with me since 2009.

<sup>75</sup> On the worship of Min, Triphis and Kolanthes at Ptolemaïs cf. G. Lefebvre, *Égypte gréco-romaine*, *Annales du Service des Antiquités de l'Égypte* 13, 1914, 215–226 and *Athribis I* [s. n. 39], 9; regarding Triphis at Akhmim cf. Kuhlmann, *Materialien* [s. n. 40], 43, 48 n. 230.

## Figures

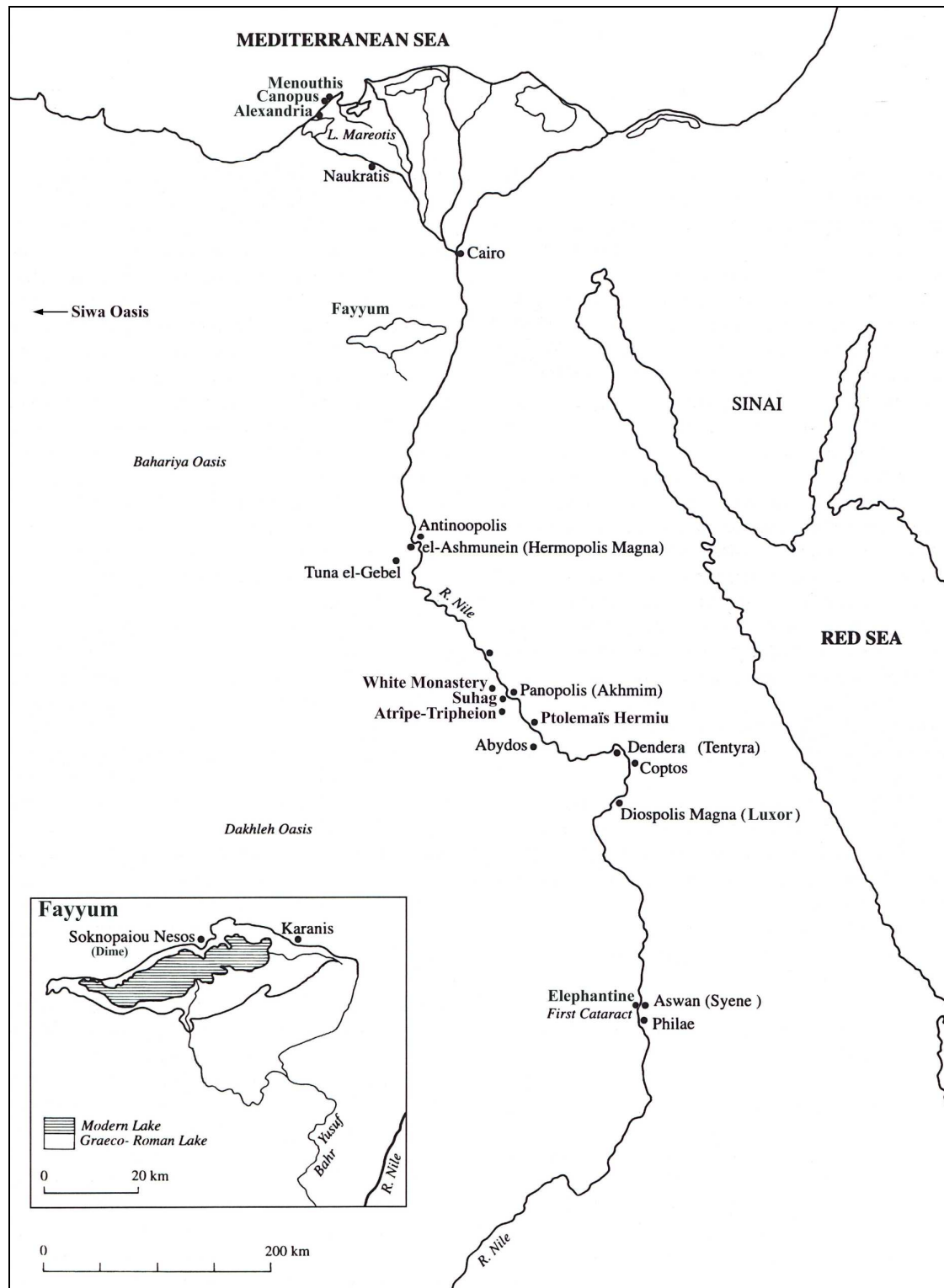


Fig. 1: Map of Egypt with toponyms mentioned in the text (based on M.L. Bierbrier (ed.), *Portraits and Masks. Burial Customs in Roman Egypt*, London 1997)



Fig. 2: Tripheion-Atrîpe, general view of the temple precinct from the east. To the left: *dromos* leading to main *temenos* gate. To the right: ruin of the great temple of Min and Repit. In the background: western mountain containing necropolis, *speos*, and quarries (*Athribis I* [s. n. 39], fig. 2.1.11.).



Fig. 3: Water installation blocking the main entrance to the Temple of Ptolemy XII (*Athribis I* [s. n. 39], fig. 2.3.6.).





Fig. 4: Tripheion-Atrîpe: *dromos* leading to main *temenos* gate. To the left: remains of domestic and funeral (?) architecture (*Athribis I* [s. n. 39], fig. 2.3.18.).





Fig. 5: Atrîbis general site plan (*Atrîbis I*, pl. VI.).





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## Reconstruction and Narrative: Re-imagining Auckland's Heritage in Walking Tour Guides

Gordon Winder

This paper reports on the experience of compiling three walking tour guide books of Auckland's inner city for a geography conference held at The University of Auckland in 2003. The guides, published under the title *Historical Geography on Foot*, are laid out as pocket-sized booklets, and as the bearer walks the routes described in the guides, he or she encounters not only the streetscape of the city, but is also brought into relation with other places and times through narratives, maps and photographs in the guide. The guides sketch in past geographies related to the places where the holder of the guide is directed to stand. These geographies include both previous buildings and uses on the site, and relations and connections with other places and regions. Reconstruction work was necessary in the preparation of these guides, but they do not emphasise past urban order. Rather than impose order on the built landscape the guides encourage walkers to discern conflicts, ironies and tensions at work in the city. Rather than trumpeting the heroic efforts of the great men and women who stand behind the great buildings that remain, the guide books use an ironic tone to accentuate the gaps between aspirations and achievements. Even many of the landforms that persist are now encoded with different ideologies than those of their builders. Rather than claiming Auckland as a central place dominating its own much larger territory, the guides highlight the extraordinary ways in which this remote settlement was integrated into transnational networks and commercial systems. They highlight the fantastic long distance networks that made everyday life in historical Auckland. In re-imagining the city's past geographies at various scales and in terms of diverse networks, and enthusiasms, the guides invoke globalisation and its pitfalls in the city's history. A decade after the guides were produced and in the context of discussion of reconstructions of ancient Rome it is perhaps time to reflect on these guidebooks as examples of reconstruction, narrative and the re-imagination of urban heritage.

### Far from Rome

Auckland is, indeed, far from Rome. When compared with Rome, which has been the main focus of the papers in this volume, Auckland is not only located almost at Rome's antipode but was never an ancient city, even though, as Tamaki, it was a region of Maori settlement for around 600 years before 1871 when the City of Auckland was officially established. The city does have ancient sites, notably the terraces of the Maori fortifications on the slopes of some of the isthmus' volcanoes, and the stone edged fields of Maori cultivation that can be seen to the south of the city centre on the Manukau Harbour. From a probable peak Maori population of around 10,000 inhabitants in pre-colonial times, the region's population continued to grow only slowly under colonial impulses, reaching 69,000 inhabitants in 1890 and 128,000 in 1908. Growth was faster thereafter, so that in 1966 Auckland boasted 500,000 and today over 1,400,000. The region, comprising 559 square kilometres, continues to have a

relatively low urban density compared to its European sisters: just 2,700 people per square kilometre. Nevertheless, the rate of development especially in the second half of the twentieth century has dramatically reformed the region's urban landscape.

However, for anyone attempting a reconstruction of Auckland's heritage, the city's relatively short history is actually unhelpful. Boasting only 69,000 residents in 1890, but 1.4 million today, the City of Auckland is in fact dynamic. This is something that it shares with ancient Rome. As we have seen, scholars of the Rome of antiquity face the problem of a rapidly changing built landscape marked by demolitions, rebuilding and reuse of materials, renovation, archaeological discoveries and attempts by diverse groups to conserve "heritage."

Scholars researching Auckland face a similar problem: Auckland is dynamic. Built on a narrow isthmus among 50-odd volcanic cones and craters and not one but three harbours, the city is constantly buffeted by breezes, gusts, waves and storms, and these set the tone for the human activities that have dramatically transformed the city's built landscape over the past 140 years. As one poet observed at the Auckland Writers and Readers Festival in 2012 which celebrated books set in the city, even a poem set in Auckland and written no more than 15 years earlier may linger long after the landscape features that it describes have disappeared. A sculpture garden in the city's Western Park accentuates this idea by featuring objects that could have been rescued from the demolition of historic buildings in the city's central business district, and, under the provocative placard 'their last resting place,' invites park users to reflect on the (lost) value of heritage, even though the objects on display are in fact reconstructions (Figures 1 and 2). Auckland's central districts are already a palimpsest heavily worked over by erasures and new inscriptions, including heritage markers incised into the newly laid stone pavements. Efforts to commemorate the city's heritage remain controversial as was recently seen in public outrage over a statue of a baton-wielding special constable erected to remember the (suppression of) workers' strikes in the city. Nevertheless, in recent years, and importantly since the publication of *Historical Geography on Foot*, 23 uncontroversial walking tour guides have been prepared by the city council (Matthews and Matthews Architects Ltd., no date) and these are available online. While the council's inner city guides largely celebrate great men and women, and great architecture, Maori heritage and changing coastal and suburban landscapes also feature prominently in the many guides which now cover many other parts of the city. Since 2003 several companies have emerged offering heritage tours of the city.

While Auckland's palimpsest landscape presented the main challenge for us as we compiled walking tour guides for the inner city for the 2003 conference, the format we chose for the guidebooks further constrained our project. Since our target audience comprised historical geographers gathered for an international conference, our team from The University of Auckland – myself (then senior lecturer in geography), Dr. Matt Henry (then a doctoral student in geography, now Lecturer in geography at Massey University), Dr. Joanne Whittle (then a doctoral student in history) and the geography department's Geo-graphics unit, led by cartographer Dr. Igor Drecki, who was ably assisted by Emma Newcombe and Jan Kelly – chose to work around the idea of an historical atlas that could be held in your hand. There would be three volumes,

each pocket-sized (10 x 21 cm). Two-tone printing was used to limit the production cost. The guides would each feature a front cover showing title, theme and photos of locations, an inside page showing the route map, acknowledgements and references, a back cover with information on the final location plus the details of the publisher. In addition, each volume had eight double pages (20 x 21cm) each of which was themed and featured combinations of thematic maps, tables, graphs, historical photographs or cartoons, plus a considerable amount of text generally organized in 9cm wide columns. Space on these pages was further constrained by the need for inserts showing a photo of the location the walker was intended to reach, and giving directions. The space constraints were the price that we paid so that the slender volumes would slip neatly into a pocket or handbag. Each guide featured a 2 hour walk in the downtown, with two of them beginning in the university's own grounds.

The project also relied upon a modest effort to reconstruct parts of the former city in map form. For this purpose the city engineer's 1908 *City Engineering Plan* provides fantastic detail on urban built form for the inner city. The plan specifies the number of floors in each building and the construction materials used, as well as detailing the city's street furniture. Further, it is possible to collate street addresses with data from commercially produced city directories published in 1889 and 1908 and so it can be used to reconstruct aspects of the city's economy. For example, shipbuilding and timber processing concerns on the city's waterfront can be mapped 1889-1908 to reveal a pattern of expansion along the city's waterfront (Winder 2006). Similarly, by mapping the city's clothing retailers and clothing production units the presence of a distinct clothing production and retail district on part of the city's main commercial street can be identified (Winder 2006). From these and other sources we were able to produce 19 maps for inclusion in the guides. These suited our project which was designed to be didactic and to promote historical geography as a way of understanding the city.

Subsequently, *The University Heritage Trail* published in 2005 by The University of Auckland Business School to mark its centenary, and with text written by Dr. Diana Morrow of the university's history department, conformed to the same size constraints but eschewed the historical atlas plate format. Instead it featured historical and contemporary photographs, a large amount of text in a slightly smaller font size but still organized in 9cm wide columns and only the one map to describe the general walking route. The trail is themed – architectural and historic attractions are featured – but the overall effect is very different: colour, the focus on great men and some women and their surviving buildings set a positive tone for the walk experience. This approach served the purposes of the edition, which was didactic: to commemorate the successes of the University's businessmen and scholars. And this raises the issue that this paper confronts: which narrative is appropriate or effective in addressing and communicating the city's heritage?

### **Palimpsest as narrative**

'Palimpsest' is the frame for the *Historical Geography on Foot* guides published in 2003. These feature familiar themes from urban geography: the city as contested space;

relations between city and hinterland; business networks; urban processes; and district formation. The guides seek to highlight projects, erasures, and survivors in city building, competing perspectives, different scales, districts, networks, attempts to discipline citizens and to create order and virtue, as well as efforts at resistance, and examples of disorder and vice. In contrast, 'city building' is the frame for the narrative of *The University Heritage Trail* (2005). It narrates heroic citizens, great buildings, urban order and progress, city branding and place making. The sites that it features include remnant heritage buildings, monuments, parks, cemeteries, and art works, and the lives of the prominent citizens who made the city great.

The differences can be quickly seen from the two volumes' different representations of the same statue. Since both guides traverse Albert Park which is located adjacent to the university's grounds, both feature the statue of Governor Grey, erected in 1904. The one guide comments:

A memorial to one of Queen Victoria's most loyal and distinguished servants. Sir George Grey (1812-1898) was Governor of New Zealand from 1845-1853 and from 1861-1868. He also served as Superintendent of Auckland Province 1875-1876, a Member of House of Representatives and Premier of New Zealand from 1877-1879. Upon his death in 1898, it was resolved to create a memorial in his honour. However, it was not until 1902 that London sculptor F. J. Williamson (who had recently completed Victoria's statue) was commissioned to undertake the work. The statue, which depicts Grey as he appeared in 1868, was originally placed on a pedestal at the intersection of Grey's Avenue and Queen Street. However, it was eventually deemed a traffic hazard in that location and in 1922 moved to Albert Park. On Waitangi Day 1987, the statue's head was removed as a protest against perceived violations of the Treaty of Waitangi. A replacement was designed and sculpted by Ron Burgess. Today, head intact, Grey continues to gaze approvingly at the many now large and established trees which he originally donated to the park in 1882 (Morrow 2005: 29).

The inscription which users of the guide would be able to read at the base of the statue -- "Soldier, Statesman, Lover of his Fellowmen, whose wisdom, eloquence, and strong personality gave to the people of this colony a large measure of the liberties they now possess." -- is then printed as a testimony to the high regard in which he was held by his fellow colonists. Altogether this is an accurate and edifying description of the statue, its production and relocation, and one that serves to accentuate the respect that citizens have for their former governor and the debt of gratitude they owe to his city-building initiatives. The guide proceeds to identify other civic builders, whether politicians, architects or businessmen, and their legacy buildings.

Sir George Grey also features prominently in *Historical Geography on Foot*. Under the heading 'Civic Memory' the guide invites the walker regarding Grey's statue to read:

The statue of Sir George Grey (governor then prime minister) retired to Albert Park from its place in Queen Street. The move made way for tramline straightening outside the Town Hall, but the park is a fitting place for Sir



George's statue. Albert Park memorializes the city's ambitions as a disciplined and ordered node in Queen Victoria's empire. Previously the site of the Albert Barracks and government Domain, the City Council acquired the land in 1879 from an indebted Improvement Commission established by the one-time Provincial Government. The Park design owes to City Council investments during the prosperous years of the 1880s. The City quickly settled the issue of passive versus active recreation: it ignored proposals for cricket, race horse training and a Grammar School playground. The winning proposal in its design competition envisaged a genteel park laid out for gardens and walks, though public speaking could be licensed on the slopes near Wellesley Street. Signs of the immigration and police barracks and armoury were removed, but a flagstaff, band stand and obsolete artillery confirmed the military meanings of the Park. Queen Victoria's statue appeared at the centre of what was the old barracks. A later statue memorialized the city's Boer War contingent. The City Council subsidized band performers until it established its own Municipal Military Band in 1924 for Sunday afternoon performances in city parks. True, the 'Britishness' of the formal park design was subverted by the planting of an eclectic assortment of exotic species, most secured from the Pacific Rim and Asia, but Albert Park nonetheless, provided a genteel Victorian public space to buffer Princes Street mansions from the city proper (Henry and Winder 2003: 1).

There is, unfortunately, no reference in these guides to the protest action directed at Grey's head, but the text goes on to provide examples of the various projects, uses and users that have attempted to subvert the Council's plans, some of which, like the celebration of hemp that took place in the Park in 2002, succeeded, if only temporarily. Governor Grey makes other appearances in the *Historical Geography on Foot* series, for example as benefactor to the city's public library, but in each case his name is subordinated to the discussion of elements of the built environment – in his case a town hall, city library, and park among other objects like churches, missions, kindergartens, and shops – that projected orderly futures for citizens. The particular walk is titled 'Vice and civic virtue' and emphasizes that Auckland's streets witness to civic projects to reform past citizens, but that right in amongst these bastions of virtue could be found the very vices they sought to stamp out.

So, for example, walkers are invited to consider both the solidity of and the conflict that surrounded the city's town hall (Henry and Winder 2003: 4, 6, 7). Designed as the city's premier civic space, its construction was nonetheless marked by protests, the operations of the council that occupied the building were fractious, and the use of the hall as public space was also marked by conflict. But the Queen Street side of the Town Hall also featured in protest action as for example during the Depression years (Figure 3):

It was on the Town Hall balustrade in April 1932 that Jim Edwards, leader of the Unemployed Workers Movement, was batoned whilst speaking to an audience of postal workers and unemployed. The resulting riot, which swirled along Queen Street, marked the nadir of New Zealand's depression experience, and heralded the election of the first Labour government, under (Michael Joseph) Savage, in 1935 (Henry and Winder 2003: 4).

Of course the Town Hall also figured in other political campaigns. For example, reformers campaigned for prohibition and temperance in the 1920s (Figure 4). They used marches, street corner proselytizing and band performances in their political campaigns for temperance. They were resisted, in this case, by the Manager of the City's tram system and by the Superintendent of the City's parks who ruled against the use of public space for some of these activities. But, in the guides walkers are invited to consider how the city's protestant evangelicals not only looked down on the Town Hall from the Karangahape Road ridge but also had city hall surrounded: "Unity Hall, the Sunday School Union, the Methodist Mission, the YMCA (1853), YWCA (1886) and the Baptist Tabernacle on Queen Street, and the Salvation Army hall on Grey's Avenue (1883) all lined up within easy reach of the City Council chambers" (Henry and Winder 2003: 6).

In contrast, Thomas O'Brien's extravagant picture palace, the Civic, opened in December 1929 (Henry and Winder, 2003: 8). Designed by Bohringer, Taylor and Johnson (Melbourne) and Arnold Zimmerman (New York), the Civic seated 3,500, whether for cinema or live theatre, and boasted a dance floor and tearooms. Zimmerman styled the interior after Ebersson's school of atmospheric cinema design, and so the theatre offered a truly exotic experience for Aucklanders intent on escaping to other worlds through cinema or theatre. As early as 1911, when half of the films shown in New Zealand were American, Hollywood dominated Aucklanders' cinematic imaginations, and, with the highest rate of film-going in the world in the 1930s, New Zealanders were addicted to Hollywood, which, by 1926 had tied up 95 percent of New Zealand screen time through its block-booking system (Elliott 1989). The Civic is a much loved temple to the exotic and its bar is named for a famous dancer, Freda Stark, who entertained servicemen 1939 to 1945 and was renowned for her solo performance of de Falla's *Ritual Fire Dance*, clad mostly in gold paint.

'Views from the ridge' is the title for a second guidebook that, rather than celebrating the persistence of an elite landscape on the Princes Street ridge next to Albert Park, speaks of the mercurial world of Auckland business and politics and its manifestation in that landscape (Winder and Henry 2003). Here, when Auckland was the capital of New Zealand, the mansions of city's colonial merchant princes nestled beside the locales of colonial government and military, but the apparent solidity of the surviving structures masks disappearances from the ridge. Remnant elements of the built landscape, such as a synagogue and several villas converted into university buildings, a wall left over from the former barracks, the house that was built to be the home of the governor but was only ever briefly used by him, and the club house for Auckland's colonial business elite, are related to vanished elements, such as the parliament buildings, Admiralty House, church, barracks and fort, along with numerous villas. There was even a prominent headland that was once crowned by the substantial fort, but which was quarried in order to contribute the land fill along the city's waterfront. At the foot of the ridge, in the city's main commercial street, can be found the remnant structures associated with the city's vibrant nineteenth-century finance sector: one bank facade and one insurance building. These remnants are treated as emblematic of the vaulting ambition of Auckland's colonial elites, their sudden reversals of fortune, and the shifting sands of the colonial economy.

The third guide book, titled 'Crews, Cliques and Speculators,' narrates the activities in the built environment of:

crews of workers, cliques of agents, publicans and retailers, and speculators in land and horse futures who roosted in the lower part of the central city. Whether they aimed to light up the night sky, to telegraph the news, fashionably clothe town folk or to wash the citizenry in beer, these urban workers pursued their trades with zeal. This urban landscape boasts follies, relics and survivors that attest to the ironies of inner city land use change (Winder, Henry and Whittle 2003: 1).

One heritage building highlighted here is the former government customs house which historically served as the base for Her Majesty's excise men as they pursued smugglers and purveyors of illicit alcohol, but which today houses duty free stores selling fragrances, clothes with designer labels, wine and tobacco. Another is the former home of the Farmers' Union Co-operative Company's mail order business and department store, now converted into a private hotel and pub. In 1921 the co-operative boasted £568,000 capital and 17,206 shareholders some of them scattered through Polynesia. Farmers' management espoused Christian and co-operative values and Robert Laidlaw, General Manager, published a Christian tract *The Reason Why* which circulated overseas. The guidebook maps Laidlaw's North American trip of March to September 1915 on which he took in such sites as the World's Fair in Oakland, Sears Roebuck and Montgomery Ward mail order departments Chicago, the Ford Motor Co., Detroit, the T. Eaton and Co., department store, Toronto, and the National Suit and Cloak Co., New York and Honolulu. His store was already emulating US business practices and so was infused with not only co-operative and Christian values but also American efficiency ideas like F.W. Taylor's scientific management, and F. Gilbreth's motion studies (Hunter 1999).

Then there is the former head office of the Auckland Electric Power Board. Responsible for the promotion of electricity consumption, this publicly owned utility company built the distribution infrastructure for Auckland and modernized the city. But the AEPB's efforts were subverted by frequent power shortages and it was forced to impose restrictions on users (Whittle 2011). Its windows showcased the bright new consumer world of the future electric household but its inspectors policed over consumption with fines. The building's grand exterior now fronts modest enterprises such as a dentist and law offices. Then there are the few survivors of the city's once thriving public houses. Built in 1870, the Occidental Hotel survived when its model in San Francisco fell to the earthquake of 1906. By the 1970s Auckland's Occidental was a shabby hangout for socialists and journalists, but in the late 1990s it was renovated as a focal point in the city's new 'fashion quarter.' Refitted by Creneau International (1999) the Occidental is a themed Interbrew Belgian beer café, and much of the interior was made in Belgium (Kaiser 2002). Nevertheless, the Occidental Hotel must still be counted as a survivor. As drinking culture changed, the hotels near High Street faced an 'ebb tide' in the beer trade. Some hotels vanished, others retained their form but have new functions, while some hotel names are detached from their buildings and fitted to new premises. So the formerly Californian Occidental, temporarily home to the Socialist

Unity Party of New Zealand and an unofficial museum of the city, is reborn as a Belgian beer cafe with a ceiling painted to simulate the smoke stains that once it wore proudly. And so the guidebook speaks to the ironies that are manifest in the palimpsest that is the city's main commercial street.

## Review

*Historical Geography on Foot* seems to have met the needs of its intended users, the attendees of the International Conference of Historical Geographers who met in Auckland in 2003. They commented appreciatively on what they had learned about the city, the maps and illustrative material, and the theoretically informed framing of the guidebook's narratives. Currently, the guidebooks continue to be used in The University of Auckland's geography courses to inspire inquiry into urban processes in the inner city and to illustrate geographical concepts such as 'district' or 'moral landscape' as well as 'palimpsest,' and 'heritage.' In this regard they are challenging, because they encourage fantastic time-space juxtapositions and combinations and themselves can be rendered as inadequate to the task of reading the ever changing urban landscape of the city. Perhaps some have been annotated to themselves become palimpsests. Reconstruction is required for heritage conservation and civic memory, but in such a dynamic urban landscape such ephemeral objects as pocket-sized walking tour guides may be an appropriate form of reconstruction. These involved limited efforts at reconstruction: some maps of former shopping districts, office buildings, coastlines, picture theatres, shipping routes, parades and conflict zones; a few historical photographs of buildings that used to be there and of some historical characters; and some diagrams and graphs representing historical statistics of the drink trade, postal services and gambling. These efforts were further constrained by the format and remain ephemeral, hand-held objects that may have been lost in someone's pocket or left on a table. Their lives were extended by Tourism Auckland who reprinted them in 2005. Since then, the City, in collaboration with Ngati Whatua, the New Zealand Historic Places Trust, the Heart of the City foundation, and Tourism Auckland, has commissioned a much larger project to highlight Auckland's heritage through walking tours. Their choices – in terms of tone, heritage objects, emphasis in interpretation and narrative framing, and use of images and maps – are remarkably different to those favoured in the apparently more modest *Historical Geography on Foot* series.

Nevertheless, narrative remains vital to all of these reconstructions, and the authors of the historical geography guides deliberately sought to show that even so young a city as Auckland can claim to have many, alternative and competing narratives, even regarding the built environment. There is no equivalent in Auckland to the long and ancient history of publications, guide books and texts reconstructing, interpreting and narrating the ancient city. As Rome struggles to catalogue, archive, and interpolate data from this enormous weight of documents, Auckland struggles to find acceptable ways of remembering its past landscapes. In this context the *Historical Geography on Foot* guide books remind us of the competing narratives and ways of knowing past urban landscapes that simultaneously confound and enliven historical reconstructions.

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**Figure 1. Architectural fragments, Western Park, Auckland. Photo 1.**

(Photograph: G.M. Winder 2014). Sculptor John Radford installed these sculptures as part of a three-piece art work which is described in the adjacent plaque as "TIP. A permanent trisculptural installation by New Zealand architect John Radford. These works have been inspired by the changing face of Auckland's urban landscape. Each of these three sculptures (and the interiors inside sculptures one and two) are based on Auckland buildings demolished in the 1980s." The works are reconstructions dating from 1999 of buildings that once appeared in Auckland.



**Figure 1. Architectural fragments, Western Park, Auckland. Photo 2.**





Figure 1. Architectural fragments, Western Park, Auckland. Photo 3.

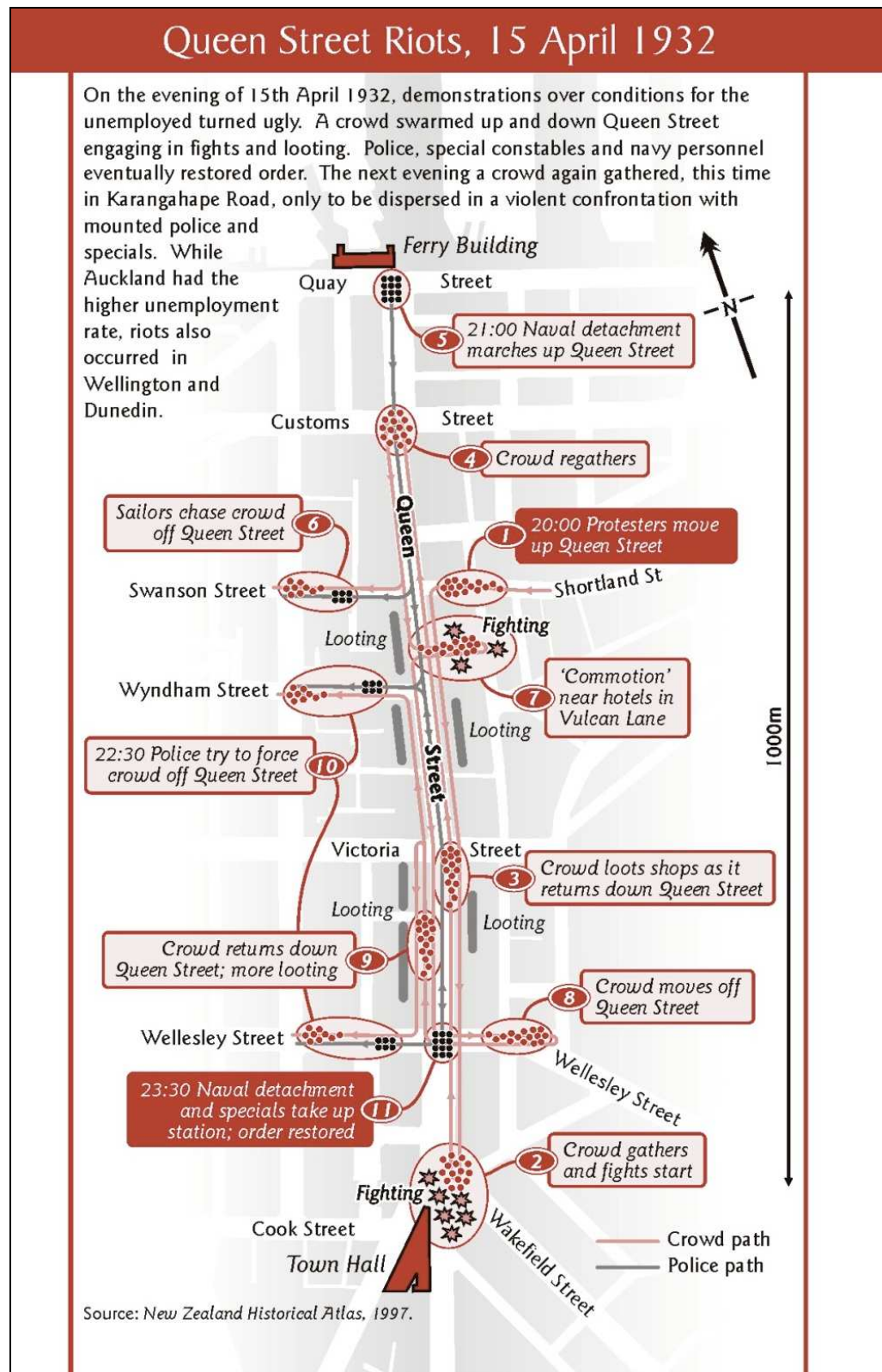




**Figure 2. Plaque in Western Park, Auckland.**

(Photograph: G.M. Winder 2014). Another of the plaques explaining sculptor John Radford's reconstructed architectural fragments located in Western Park. The inscription reads: "*TIP* A permanent trisculptural installation by New Zealand architect John Radford. *EAF*, Sculpture two. Based on the building that stood at 191 Queen Street Auckland 1886-1984. *HOME*, Interior of sculpture two. Based on the average two storey Ponsonby boarding house. *TIP* was funded by an anonymous benefactor, 1999." (Note that Ponsonby is a neighbourhood in Auckland immediately adjacent to the western side of the central business district. The boarding houses have largely been removed and were modest accommodation for the many seasonal and migrant male workers who floated in and out of the city's port).

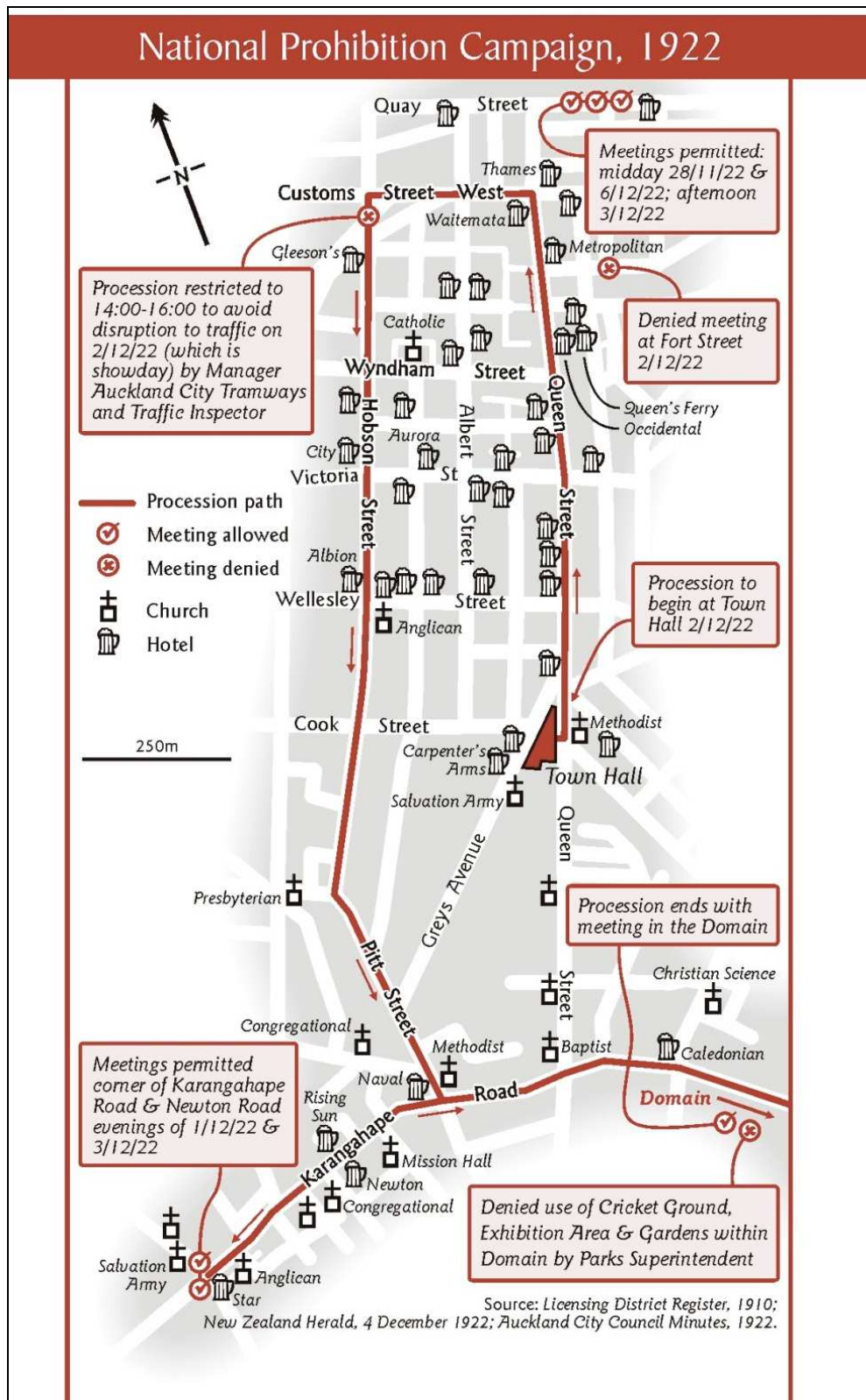




**Figure 3: Queen Street Riots, 15 April 1932.**

This map from the *Historical Geography on Foot* walking tour guides, based on part of a *New Zealand Historical Atlas* plate, was meant to indicate some geographical interrelationships associated with a protest action on Queen Street. (Source: Henry and Winder 2003: 4).





**Figure 4: National Prohibition Campaign, 1922.**

This map, specially created for the *Historical Geography on Foot* guides, further develops the theme of spatial juxtaposition to facilitate a geographical interpretation of events in urban space, in this case highlighting the urban landscape as a contested and performative space. (Source: Henry and Winder, 2003: 6).



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## **Reflections by the discussants**



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**Reflections on the International Symposium “Reconstruction and the Historic City: Rome and Abroad – an interdisciplinary approach”,  
LMU Munich, 17-19 October 2012**

Richard Gordon

In view of the wide range of papers and perspectives presented at the conference, it is impossible to offer more than a brief account of the projects and topics that seemed to me of greatest interest. Apart from those papers (La Rocca, Ritter) that attempted to convey a sense of the alterity of ancient Rome by setting up contrasting (largely implicit) conceptions of visual perspective and satisfying urban space, most participants were agreed that the major problem is how to do justice to a vast three-dimensional palimpsest, itself full of lacunae, composed over a period of 1800 years up to the Lombard invasions (cf. Winder on modern Auckland). But whereas a palimpsest contains a limited number of scriptural layers, different parts of Rome contain layer upon layer, layers that are often inextricably mixed both by ever-renewed constructional activity, ancient and modern, and by the irrevocably destructive intrusions of treasure-hunters and more recently archaeologists. Establishing a satisfactory stratigraphy even of a large Egyptian village such as Karanis, an abandoned site which could be excavated more or less *in toto*, is impossible without making innumerable assumptions, many of which may well be mistaken. ‘Doing justice’ is as much a conceptual as a pragmatic matter. Moreover, the guide-notion of a three-dimensional palimpsest completely ignores the typical problems faced by the ancient historian who wants to include the information, itself filtered and far from innocent, provided by contemporaries or near- contemporaries in surviving literary texts (Wiseman). There is no royal road here, only varying judgements about the methods and perspectives that are appropriate a) to different professional abilities; b) to scholars enjoying differential access to indispensable materials; and c) to different working-scales, from the panoptic to the minuscule, from the Nuova Forma Urbis to the single building. The sense in which we can speak theoretically of convergent enterprises will be correspondingly weak. The development of models of urban development by geographers (Schütz) has nothing in common with efforts to reconstruct a stucco ceiling in the ‘House of Augustus’ on the Palatine (Lipps). The varying methods and approaches construct the objects of their own enquiry and thus the kinds of results to be expected. What all have in common, however, is the need to work with a notion of tolerable uncertainty, that is, with models.

“Not only is our evidence uncertain, but our subject is in constant flux” (Wiseman). The earliest mode of organising empirical knowledge about the ancient city of Rome (alongside pilgrims’ guides, which belong to a different genre) was the guide-book to antiquities, a vogue fostered by great patrons such as the Cardinals Alessandro Farnese and Rodolfo Pio da Carpi (‘Carpensis’). <sup>1</sup> These guide-books, beginning with Andrea Fulvio’s (1510-43) *Antichità di Roma*, were organised topographically, but, from the time of Girolamo Ferrucci’s re-edition of Fulvio in 1588, also offered images as a complement to the text. These images themselves derived from the revival of the trade

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<sup>1</sup> Cf. S. Rossetti, *Rome: a bibliography from the invention of printing through 1899, I: the guide books* (Munich 2000).



in select views of monuments in the middle of the sixteenth century, when the Fratelli Tramezzino, Salamanca and Lafreri began to produce views of ancient (and modern) monuments including the Arch of Septimius Severus [1547] and the equestrian statue of Marcus Aurelius in the Piazza del Campidoglio [1548]. Others were directly commissioned from engravers such as Nicolas Beatrizet, Jacob Bos and Étienne Dupérac. This latter group included impressions of the tomb of Caecilia Metella on the Via Appia, at least one of the Trajanic reliefs from the Arch of Constantine (1553), the Pyramid of Cestius (1557), and the Colosseum after restoration (before 1570), as well as numerous individual monuments, such as the Laocoön (by Bos, 1548) or the Farnese Hercules (1562). The illustrated guides of the late Renaissance thus spawned the two major means of presenting the historical city, the topographical description by Regio or Rione, which assumed the abstraction provided by mapping, and the elevation, the mode preferred by architects.

It is clear that a fundamental choice has already been made here: a dynamic or Weberian conception<sup>2</sup> of the city, with its ideal types and its dominant population groups, its relation to the hinterland and to the wider world, is by definition excluded from consideration (cf. again Winder on Auckland). We are dealing with a fundamentally antiquarian not a sociological view of the city, even if it is “in constant flux”. In the context of this dominant historical legacy, John Bodel’s work on Roman necropoleis is thoroughly innovative. His attempt to historicize the relation between the living and the dead by looking at the shifting relation between necropoleis and inhabited areas in the *suburbium* over a period of six centuries rather than, say, merely reiterate the familiar dogmas relating to *res religiosae* or *loci religiosi* (Gaius, *Inst.* 2.4, 2.6, cf. Cicero, *Leg.* 2.22) offers a challenge to more traditional – antiquarian, architectural, topographic – concerns with the historical city. Yet his project itself would no doubt be impossible in the absence of the detailed entries assembled in the five volumes of *LTUR: Suburbium*.<sup>3</sup> Here again, however, we need to remember that this macro-sociological concept is just one type of socio-historical approach, which defines its own reality in relation to a specific problem. Another is the conservation and reconstruction of the site of the Necropolis del Autoparco in the Vatican City, which includes close attention both to topography and ritual practices (Buranelli), and W. Van Andringa’s new three-volume work on the Porta Nocera cemetery at Pompeii, which offers yet another way of making sense of a necropolis, by focusing on the social archaeology of religious practice.<sup>4</sup> His story is one of the intense use and re-use, mainly by freedpersons, of a single burial-site over a century or so, and the different, personalised means used by the individual families to render their tomb-sites meaningfully sacred.

Everyone knows Lanciani’s archaeological map of ancient Rome. It is a truism that the reconstruction of the historical city for any given century, at least in antiquity, is like a sixteenth-century map of Africa – some dots of fair certainty amid expanses of white – *terra incognita*. “Reconstruction” has always tacitly meant locating buildings that can be

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<sup>2</sup> W. Nippel (ed.), *Max Weber: Die Stadt*. Studienausgabe der Max-Weber-Gesamtausgabe 1.22.5 (Tübingen 2000); H. Bruhns and W. Nippel (eds.), *Max Weber und die Stadt im Kulturvergleich*. Kritische Studien zur Geschichtswissenschaft 140 (Göttingen 2000).

<sup>3</sup> A. La Regina and V. Fiocchi Nicolai (eds.), *Lexicon Topographicum Urbis Romae: Suburbium* (Rome 2001-08).

<sup>4</sup> W. Van Andringa, *Mourir à Pompéi*. CEFR 468 (Paris 2013).

named with greater or lesser certainty, on the model of the Severan map, for those areas where it survives (itself now understood as an idealising and simplifying undertaking). No one has ever thought it might involve a reconstruction comparable to that of post-Fascist Ostia. Granted that limitation, it may seem obvious that large-scale mapping projects must begin by settling individual details through the integration of literary and archaeological evidence. But in fact concentration on getting single buildings 'right' often simply opens up a mare's nest of uncertainties, as the case of the Palatine temple of Apollo beautifully illustrates (Claridge). Ancient literary sources provide fairly extensive information about the temple, its twin statues, its inlaid doors, the golden tripods dedicated by Augustus – all 'soft' information however, delightful to the reconstruction-artist but useless for mapping purposes. While everyone accepts the identification of the podium at the SW corner of the Palatine, the excavations and related hypotheses over the past century have led simply to confusion so dense that Claridge can actually – and I think plausibly, despite the chorus of protests – propose turning the building round 180°, with its perron facing the ramp up the Palatine from the Forum. While this section of the Palatine is exceptionally complex, partly because of erosion, the radicality of Claridge's argument reveals in an extreme form the dangers inherent in attempting to "reconstruct" ancient buildings, even those ostensibly as prominent as this.

I have pointed to the 'soft' nature of ancient accounts of familiar buildings. Before moving on to the modern challenges of digital mapping, I would like to reaffirm Wiseman's sceptical view of the marriage between literature and archaeology by invoking a discussion he does not refer to in his paper but in which he was involved. It concerns the relation between Ovid's long and circumstantial account in the *Fasti* (3, 523-696) of the popular festival of Anna Perenna, which he says was held on or near the banks of the Tiber, and the site discovered in 1999 by Marina Piranomonte in the Piazza Euclide in modern Parioli, which the inscriptions prove was dedicated to Anna Perenna and her nymphs but is a Roman mile north of the Aurelian Wall and a long way from the Tiber.<sup>5</sup> Ovid's three etymologies of the name Anna Perenna suggest that there were three sites associated with her in the late Republic, one not far from the bank of the Tiber, as the festival implies, another by the Numicus river, and the third at Bovillae. Wiseman pointed out that, according to the Tiberian *Fasti Vaticani*, the festival at Rome was celebrated near the first milestone along the Via Flaminia in the Campus Martius: *Feriae Annae Perennae (in) via Flam(inia) ad lapidem prim(um)*.<sup>6</sup> Since miles from Rome were measured from the Servian wall (in this case, the Porta Fontinalis, near the Clivus Argentarius), this probably indicates a spot somewhere near the mausoleum of Augustus and the modern Via Ripetta.<sup>7</sup> On this basis, Wiseman suggested that the festival (and the fountain) of Anna Perenna was at some point after the completion of the *Fasti Vaticani*, possibly under Caius, relocated to a site considerably farther out of

<sup>5</sup> E.g. M. Piranomonte, s.v. *Annae Perennae Nemus*, in A. La Regina (ed.), *LTUR Suburbium* 1 (2001) 59-63; ead. (ed.) *Il Santuario della musica e il bosco sacro di Anna Perenna* (Rome 2002); ead., "La fontana sacra di Anna Perenna a Piazza Euclide: tra religione e magia", *MHNH* 5 (2004) 87-104.

<sup>6</sup> CIL I<sup>2</sup> 1 p.242 = *InscrIt* XIII.2, 172f.

<sup>7</sup> T.P. Wiseman, "Documentation, Visualization, Imagination: the Case of Anna Perenna's Cult-Site", in L. Haselberger and J. Humphrey (eds.), *Imaging Ancient Rome: Documentation, Visualization, Imagination*. JRA Suppl. 61 (Portsmouth RI 2006) 51-62.

the city and away from the Tiber. Marina Piranomonte replied that the fourth-century BC finds at the Fountain indicate that it had 'always' been dedicated to Anna Perenna. She preferred to think that the *Fasti Vaticani* is simply wrong, and that the festival was always held at the Fountain, so that Ovid's 'near the Tiber' must be poetic licence to support the claim that Anna was a nymph. There is simply no way of reconciling these positions. One may think it drastic to declare the information of calendar 'wrong'; archaeological 'facts' are often not what they seem; somewhere there no doubt lurks a false inference. The disagreement however underlines the point that in creating 'reconstructions' there are always choices to be made, which involve side-lining quantities of information, constructing a hierarchy of 'relevance', 'credibility' or whatever, a game in which the rules are rarely, if ever, spelled out.

We come finally to digital mapping. For me, the conference provided an introduction to some of the variety of current attempts to use digital resources to complement conventional encyclopaedic means of storing information about urban environments, and in particular Rome – one thinks of Platner-Ashby, Richardson's *Dictionary* and Steinby's *LTUR*, with their fixation on lemmata, inevitable partiality, inadequate imaging, and built-in obsolescence.<sup>8</sup> The two most important projects presented are the AIS ROMA and the Nuova Forma Urbis Romae, which are associated with one another and use the same basic photogrammetric data, provided by the Centro di Documentazione Forma Romae of the Comune di Roma. In the case of the NFUR, considerable technical problems were encountered in adapting commercial GIS-software to such complex mapping tasks. It was for that very reason that Chrystina Häuber and F.X. Schütz developed their own information system (AIS: Archaeological Information System). The main emphasis of their Rome project (AIS ROMA), which is available on the Internet and can be constantly up-dated on the basis of new information, is on practical utility for those concerned in any way with the topography of ancient Rome. Häuber's presentation gives some idea of the immense amount of work but also the serendipity that lies behind the apparently straightforward information provided.<sup>9</sup> The larger aim of the Nuova Forma, together with the Carta dell'Agro Romano for the Suburbium, which are official projects of the Comune di Roma, is to provide data for the new Master Plan of the city, and has already been used in the planning of various major urban projects (Le Pera). Its major achievement is to integrate the constantly increasing archaeological information with the archival resources available in Rome, particularly maps and drawings held by a variety of institutions, of which the Nolli map of 1748 and the Gregorian cadaster of 1824 are the most important (Buonora et al.). These developments, now likewise available on the Internet, will be of the greatest value not merely for relating the ancient city to the modern but in helping scholars to locate individual monuments recorded in sources such as Ulisse Aldrovandi's *Delle statue antiche* (c. 1550, printed 1556). Häuber's laudable practice of supplementing her maps with a commentary available on the Internet needs however to become normative in the field.

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<sup>8</sup> L. Haselberger and his co-workers were not invited to attend the conference.

<sup>9</sup> See also her notes on the maps of the *Horti* of Maecenas on the Esquiline at [http://www.rom.geographie.uni-muenchen.de/texts/hm\\_text3.pdf](http://www.rom.geographie.uni-muenchen.de/texts/hm_text3.pdf), together with the maps themselves at <http://www.rom.geographie.uni-muenchen.de/horti/maecenas>.

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## Re-constructing Rome: an afterthought

Rolf Michael Schneider

The Munich International Symposium „Reconstruction and the historic city: Rome and Abroad – *an interdisciplinary approach*“ was a great success. Within this wide framework the organisers brought together, probably for the first time, distinguished scholars from such different fields as ancient history, classical archaeology, history of architecture, Egyptology, history of religion, geography, archive studies, heritage studies and computer science. Together they tackled and discussed methodological, archaeological and historical questions revolving around issues of and approaches in

- 1) geography and digital mapping, fragment and reconstruction, narrative and heritage;
- 2) knowledge and space, history and topography, people and memory;
- 3) *urbs* and *domus*, public and religion, life and death, Roman and foreign, environment and infrastructure.

Ancient Rome as the Symposium's major focus provided an excellent laboratory with which to highlight scholarly achievements and fundamental problems in the thematic areas mentioned above. How do we know? How, why and what do we reconstruct? How can we map ancient Rome? Why is this such an essential historical prerequisite, especially in a city which has been re-built and changed continuously from the eighth century BC to the present day? What are the major difficulties and potentialities we face when grappling with questions of how to identify a place, a structure, a context? How can we interlace archaeological and architectural evidence with the material, textual and (art-) historical narratives? And what is the scope and limit of cross-disciplinary collaboration?

Ancient Rome has always been a city full of historical surprises. I name just three fundamental shifts in our seemingly well-established knowledge of Rome within the last fifteen years: first, the spectacular vanishing of the temple believed to be an essential element of Trajan's forum together with the drastic re-orientation of the forum's main entrance; second, the new design of Augustus' forum whose long sides are now reconstructed with four instead of two large apses; third, the heated debate about the so-called House of Augustus which has now disappeared into thin air. Only recent research has made it clear that this house had already been destroyed in 36 BC when the later Augustus had the temple of Apollo Palatinus built. As a result, this building itself has become the subject of a new controversy.

Another challenge is to qualify and understand in more detail the significance of Rome's historical maps and descriptions used since the Middle Ages. They contain crucial information about the ancient city's buildings, monuments, structures and roads. This is also true for the many editions of the *Forma Urbis*, which supply unique diachronic data of mapping, organising and perceiving Rome's urban fabric from Augustus to Septimius Severus. In addition, especially since the first century BC Rome's trend-setting architecture, monumental design and ubiquitous imagery has become a new stimulus and case in point for antique and post-antique cities.

In short, the legacy of the Munich symposium is that we need more disciplinary and cross-disciplinary research: to unfold step by step the countless layers of Rome's fascinating ancient urban fabric; to stimulate scholarly curiosity beyond conventional constraints; and to understand the beauty and the necessity of contradictory readings in reconstructing the endless histories of the eternal city.



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## The Work of Reconstruction

Gordon M. Winder

Reflecting on the challenges presented by adopting a postmodern perspective, the cultural geographers Stephen Daniels and Denis Cosgrove (1988: 8) wrote that “landscape seems less like a palimpsest whose ‘real’ or ‘authentic’ meanings can somehow be recovered with the correct techniques, theories or ideologies, than a flickering text displayed on the word-processor screen whose meaning can be created, extended, altered, elaborated and finally obliterated by the merest touch of a button.” It was with this exhilarating fear and prospect that this Symposium engaged. Digital reconstructions and digital archives promise so much. Along with the elegant online publications, the atlases, guide books and texts each reconstructing, interpreting and narrating the ancient city, there is the challenge of handling fantastic time-space juxtapositions and combinations using an array of new techniques to replace the ones with which we are familiar and which have proved to be labour intensive in the task of reading the ever changing urban landscape. Our Symposium featured many digital applications, from digital photographs, and digitized texts to geo-referenced maps all of which facilitate interpolation of other, and especially spatial, data sets and thus new interpretations. Such techniques have aided us in the work of reconstruction, and enriched the research published in this volume, but, I suspect that our fears have not diminished.

“A description of Zaira as it is today should contain all Zaira’s past” declared Marco Polo as he explained to Kublai Khan the impossibility of describing the city: “I already know this would be the same as telling you nothing” (Calvino 1979: 13). Like Italo Calvino’s fabulous interlocutors, we cannot resist the work of sifting through the palimpsest that is the forgotten city, even when, as I learned at this Symposium, Rome’s archivists struggle to catalogue, archive, and digitize data from the mountains of documents that have been assembled on the eternal city. We each enjoy the search for arcane findings in the juxtaposition of separately curious objects drawn from the interstices of the piles of documents that can be found in the vaults of the city archives, in the painstaking analysis of the figure extracted during the excavation of the ground

that will become the subway tunnel, or in the flickering light of the movie reels discovered in the chest that was abandoned in the attic of the estranged lover of the director. We are at work in the ruins in search of *Forgotten Silver* (Botes and Jackson 1995). We know that this work is never ending, for, like Leonia, one of Marco Polo's invisible cities (Calvino 1979: 91), our cities refashion themselves every day thus burying our reconstruction work under a new mountain of dislocated fragments some of which we may even subsequently recognize as being of our own making. Yet we press on with the work of reconstruction because we know that the city "does not tell its past, but contains it like the lines of a hand, written in the corners of the streets, the gratings of the windows, the banisters of the steps, the antennae of the lightning rods, the poles of the flags, every segment marked in turn with scratches, indentations, scrolls" (Calvino 1979: 13).

We are each committed to one or other of the stations on the 'circuit of heritage,' which, as Graham, Ashworth and Tunbridge (2000: 3) outlined, simultaneously locks together heritage as a means of representation, regulation, consumption, production, cultural identity and economic commodification. Reconstruction is required for heritage conservation and civic memory. So we each engage with narratives. Some of us reemphasize long established tropes, others of us oppose them, and yet others seek to reconcile competing interpretations. We each have our favoured excavation methods and representational practices, and we are well aware that narratives remain vital to our reconstructions. We know that competing narratives and alternative ways of knowing past urban landscapes simultaneously confound and enliven our historical reconstructions. Like Kublai Khan we "do not necessarily believe everything that Marco Polo says when he describes the cities visited on his expeditions..." even when the results are rendered in digital form and illuminated on the screen (Calvino 1979: 10). But we long to see these enhanced reconstructions because through them we might discern "the tracery of a pattern so subtle it could escape the termite's gnawing" (Calvino 1979: 10). So the cities rise and sink from the mountains of now digitized information, more accurate, complete, realistic and true than ever before, simultaneously more familiar and yet stranger than we had dared to imagine.

Thus will the work of reconstruction go on as the papyrus and parchment, rag and paper are metamorphosed into electrified texts and screen images, as we illuminate our invisible cities.

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