1-1-2012

Men at Work: Public Construction, Labor, and Society at Middle Republican Rome, 390-168 B.C.

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Abstract

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Seth G. Bernard

C. Brian Rose, Supervisor of Dissertation

This dissertation investigates how Rome organized and paid for the considerable amount of labor that went into the physical transformation of the Middle Republican city. In particular, it considers the role played by the cost of public construction in the socioeconomic history of the period, here defined as 390 to 168 B.C. During the Middle Republic period, Rome expanded its dominion first over Italy and then over the Mediterranean. As it developed into the political and economic capital of its world, the city itself went through transformative change, recognizable in a great deal of new public infrastructure. While historians have long considered Rome's rise vis-Ã -vis Italy or the Mediterranean world, the study of the contemporary urban situation has largely remained confined to formalist or topographic investigations. This thesis offers a new, more synthetic study, which draws from a variety of evidence from literary and documentary sources to numismatics and archaeological material. Because of this combinatory approach, the project speaks across specialties within the field of Classical studies, to ancient historians and archaeologists alike.

Four analytical chapters arranged both chronologically and thematically are appended with a detailed catalog of all known building projects during the time period containing field reports on those sites that have archaeological remains. The results demonstrate and in some cases quantify the high amount of labor needed to build the city's new public infrastructure. In part in order to absorb such costs, Rome's urban society transformed its Archaic economy into one that was broadly monetized and more reliant on contractual forms of labor. Such a change allowed for the massive income from the newly established Republican empire to be matched to an increasing urban supply of non-agricultural workers, as well as to a rising demand for public architecture from the office-holding Roman elite. By focusing on the labor behind the production of the Mid-Republican city, this dissertation reveals the urban expansion of Rome as a physical process on a human scale.

Degree Type
Dissertation

Degree Name
Doctor of Philosophy (PhD)

Graduate Group
Ancient History

First Advisor
C. Brian Rose

MEN AT WORK: PUBLIC CONSTRUCTION, LABOR, AND
SOCIETY AT MIDDLE REPUBLICAN ROME (390 – 168 B.C.)

Seth G. Bernard

A DISSERTATION

in

Ancient History

Presented to the Faculties of the University of Pennsylvania

in

Partial Fulfillment of the Requirements for the
Degree of Doctor of Philosophy

2012

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Seth G. Bernard

ACKNOWLEDGMENTS

I end with my family: my parents, Stephen and Shula, whose love and support for me in any pursuit that I might choose has been unquestioning. That my choice happened to be the study of ancient history has made no difference, except perhaps in stirring their own interests to match mine. The same can be said of my grandparents who did and did not see this project to its end: *sunt lacrimae rerum*, to the memory of Hanah and Martin, who always marveled at how clear my voice was on the phone all the way from Greece and Rome. To my sister, Ariele, who counts more degrees than I do; with the case thus closed, there's nothing I intend to do about it, except admire her. And finally, of all things I have gained in the course of this degree, the greatest by far was the opportunity to meet my wife, Alexa. I suspect that she already knows better than anyone the contributions that she has made: to her, I am eternally grateful.

ABSTRACT

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This dissertation investigates how Rome organized and paid for the considerable

amount of labor that went into the physical transformation of the Middle Republican city.

In particular, it considers the role played by the cost of public construction in the

socioeconomic history of the period, here defined as 390 to 168 B.C. During the Middle

Republic, Rome expanded its dominion first over Italy and then over the Mediterranean.

As it developed into the political and economic capital of its world, the city itself went

through transformative change, recognizable in a great deal of new public infrastructure.

While historians have long considered Rome's rise vis-à-vis Italy or the Mediterranean

world, the study of the contemporary urban situation has largely remained confined to

formalist or topographic investigations. This thesis offers a new, more synthetic study,

which draws from a variety of evidence from literary and documentary sources to

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INTRODUCTION

This dissertation is a study of the processes that gave rise to the city and society of
Mid-Republican Rome. It was during the Republican era, and during the Middle
Republic in particular (here 390 – 168 B.C.), that Rome established its imperial dominion
first over Italy and then throughout the Mediterranean. As it developed into the political
and economic capital of its world, Rome itself underwent transformative change; the
Mid-Republican city witnessed, to name just a few monuments, the construction of a
massive Republican circuit wall as well as the first trunk roads, basilicas, porticoes, and
aqueducts.

The Mid-Republican urban expansion of Rome, however, was not merely
measurable in terms of new public infrastructure. Creating the Republican city was
extremely costly in terms of materials and, most especially, in terms of labor, and it was
Rome's collective residents who met these costs in one way or another. Because of this,
a study of the Roman building industry has the potential to inform a social history of the
city as well. Therefore, the research presented here not only describes those physical
changes taking place at Mid-Republican Rome, but it also aims to clarify how Rome
organized and paid for the human effort expended in the creation of new infrastructure,
and how these processes effectively transformed the city's socioeconomic structures.

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How did the construction of Republican Rome during the Mid-Republican period serve as an impetus to the formation of Republican urban society?

This is the question that lies at the core of the present study. Answering it entails approaching Roman Republican construction as both built architectural product and human process. Studies of Republican Roman buildings from a formalist or topographical perspective go back to the beginning of the twentieth century, to the foundational efforts of scholars such as Richard Delbrück; attempts to understand the Mid-Republican city's political life go even further back.[1] This dissertation, however, finds novelty in the combination of these two approaches, one based on archaeology, the other on the analysis of literary and documentary materials. The result is a synthesis that has never been attempted before, but one which, it is hoped, will have broad relevance within the study of Roman antiquity for the ancient historian and archaeologist alike.

The importance of a study of Mid-Republican Roman urbanism comes not only of its own merit, however, but also from the fact that scholars have often recognized the dispersion of Rome across Italy and the Mediterranean through the presence of structures and institutions that were first generated in the Mid-Republican city.[2] Importantly, this approach has considered both architectural and economic structures: Rome's extent is signaled by the aforementioned aqueducts, roads, and basilicas, as well as the early

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[1] Delbrück 1907 was the first real attempt to study architecture of the Republican period. Before him, the responsibility for giving prominence to the Mid-Republican city in terms of its topography goes to a group of late 19th century scholars, in particular the *Topographie der Stadt Röm in Alterthums* begun by Jordan and finished by Hülsen or the early study on the pre-Imperial walls by Parker 1878. In terms of the political history of the period, Mommsen is the normal *vir post quem* for the study of Mid-Republican society, but Münzer's work, and the creation of the *Pauly-Wissowa Realencyclopaedie*, with most Republican entries written by Münzer himself, were foundational.

[2] This is most apparent in the archaeology of the Roman Republican colonies; the lively debate over the meaning of pits in the fora of colonies is indicative of both the currency of and problems with such an approach, see Mouritsen 2004, Coarelli 2005, and Sewell 2010.

origins of an integrated cash economy that distinguished the Roman Mediterranean from

the rest of pre-modern Mediterranean history.[3] This being the case, it is fundamental that

we approach the period of Rome's Italian expansion and the establishment of its

Mediterranean empire with a firm understanding of the developments of Roman

institutions in the city itself. For a history of Rome's Italian expansion and Republican

Empire, an urban history of Rome forms a prerequisite.

Unfortunately, historians viewing the city have more often taken the opposite

view, looking from the empire inwards. The preeminent urban historian Lewis Mumford

put it succinctly, "When one thinks of the ancient city of Rome, one thinks at once of its

empire."[4] In modern terms, this outside-in approach has had a drastic effect on the study

of the Mid-Republican city. For all of the work on Mid-Republican Roman urbanism, an

urban history of Mid-Republican Rome has never been written.[5] Instead, interest in

Republican urbanism has mostly come either from those scholars who have studied

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[3] Architecture's role as a cultural marker of Roman *humanitas*, is a sentiment found in Tacitus (*Agr.* 21).
As for coinage, while the Greek East may have invented coined money, Rome now seems to have
integrated it to greater effect. Recent research on atmospheric heavy metals in ice cores from Greenland as
well as lake sediments in Sweden, Switzerland, and Spain that have revealed a higher presence of lead and
tin in the atmosphere of the Mediterranean from 0-400 AD than at any other time prior to the industrial
revolution. This is taken as evidence for the production of coinage and as proxy data for the very high
degree of monetization in the Roman world, see de Callataÿ 2005 and Lo Cascio 2007: 621. That coinage
at Rome served as a model of the Republican colonies is clearly demonstrable through iconographic and
unitary links.
[4] Mumford 1989: 205. This has good ancient pedigree, and is a common attitude in Augustan literature,
witness, for example, Ovid at *Fast.* 2.684 intentionally conflating Rome the city with Rome the empire:
Romanae spatium est Urbis et orbis idem.
[5] At this point, it is worthwhile mentioning as exceptional the work of T.J. Cornell in his articles for the
Cambridge Ancient History and in *The Beginnings of Rome*, where the analysis of the 4th and 3rd centuries
form part of an extension of his discussion of Rome's history from the Archaic period downwards.
Elsewhere (2000), he presents a short history of Rome from 400-100 B.C. Castagnoli 1974 is outdated.

Rome's colonies, or those who have studied the communities that were absorbed into Rome's spreading hegemony.[6]

This has often limited our approach to the urbanism of Republican Rome to questions of influence, which trace how forms we observe outside of Rome moved inwards. Was the city of the Republic an Etruscan city or a Hellenistic city, and when did it change over from one to the other? What are the signs of this nascent Hellenism? While books continue to be published to answer these sorts of questions, there is good evidence on all sides, and it is becoming increasingly apparent that the Republican city escapes any single, dominant model.[7] Instead, the city was *sui generis* and deserves to be treated as such.

In order to understand the physical and economic developments of the Mid-Republican city on their own terms, and in order to understand the historical relationship between them, I have chosen to concentrate on the public construction industry. When I specify "public" construction, I am interested in the role of the state and its agents, and this study limits itself to those buildings financed through state means.[8] This definition has the benefit of good authority among ancient sources.[9] The focus on public

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[6] E.g. Frank Brown 1980, who uses his excavations at the colony of Cosa as his model; or the work of Mario Torelli, e.g. Torelli and Gros 2007, which employs the author's deep first-hand knowledge of the archaeology of Etruscan cities.

[7] Sewell 2010 conforms closely to the older paradigm by trying to find "Greek" and "Italian" influences, and concluding that Rome contained elements of both. But the entire concept of "influence" has long ago been rejected by Michael Baxandall 1985: 58-62 as creating a false active/passive dichotomy. Focusing on patterns of influence denies the power that Rome itself had on its urban form.

[8] While I am cognizant of a great deal of recent interest into the very definition of the state in this period of history, above all in the work of Hölkeskamp, with the wish to avoid a *reductio ad absurdum* I will refer here to the Roman state as metonymy for the various organs and magistrates, elected and otherwise, who made up the decision-making apparatus; cf. more theorizing of a similar approach in Tilly 1992: 34.

[9] Front. *De Aq.* 3.2 classifies buildings based on the source of financing. See also Nisbet and Hubbard *comm. ad* Hor. *Carm.* 2.15.15 §*privatis* (1978, 249-50) with further references and an argument for this concept stemming from Greek thought. Rodgers in his commentary on Frontinus (2004: 136) includes structures that were given over to public use, whatever their original intention, along with state-financed

construction is partly dictated by the fact that the material evidence for domestic

architecture at Rome prior to the Empire remains slight, notwithstanding some important

recent gains.[10] However, this is not only a question of evidence. There was a natural

connection between the construction of public monuments and the Roman people

because Rome's treasury, which provided the resources for public architecture, was filled

by the actions of its citizenry through triumphs and taxes. As public finances extended

beyond individual means, public architecture tended towards monumentality in its

materials and scale.

Monumentality raises the issue of the process behind Roman public architecture.

The value of the building process as a means of understanding historical change must be

emphasized: in the pre-industrial world, monumental construction was among the most

demanding social activities by virtue of the amount of manpower it required. In other

words, a basic but important relationship exists between building and society expressed

in demographic terms: monumental architecture naturally has what I would term a "social

dimension." Scholars have often used a history of construction to stand in for a history of

a city at a particular moment in time. Exemplary in this regard is Richard Goldthwaite's

study of the transition from Medieval to Renaissance Florence as demonstrated through

the changing attitudes towards the production of public architecture.[11] Nor has such

interest been confined to the growth of great cities: Donald Woodward presents a subtle

study of the building worker moving among the towns dotting the early modern British

public works, but for present purposes and for the focus on construction rather than use, a financial
definition suffices.
[10] Carandini 2010 reviews Roman domestic architecture and incorporates the author's own recent
archaeological work; however, on this see the criticism of Moorman 2001; Sewell 2010: 124-25.
[11] Goldthwaite 1982.

countryside. He estimates that 10-20% of the adult male labor force in early-modern

England was occupied in building operations; among trades, only shipping (mariners) and

distribution (merchants) occupied such large sectors of the population.[12] Such

scholarship has also examined Italy and Rome in other periods: Egmont Lee, who has

published an edition of the important Roman census of 1527, which lists professions

among other details, has called building "perhaps the most important single industry of

Renaissance Rome."[13]

Scholars of Roman antiquity have also noted the ability of architecture to tell

socioeconomic history through its attachment to labor, although until very recently such

interest has been hampered by the nature of the evidence. Peter Brunt wrote two

influential articles on the theme, the first incorporating the building industry as a

prominent employer of the "Roman mob," and the second taking on the topic directly. In

Brunt's conception, the urban residents of the city of Rome not involved in agricultural

production had to earn their keep one way or another, and a great number of them

attached themselves in a casual manner to the building trade. Cities historically feature

high rates of underemployment, rather than unemployment, and this meant that casual

labor for construction could provide a necessary component to urban economies.[14]

Brunt's evidence was almost exclusively literary. Rome's lack of non-literary

documentation of the building industry is striking even in comparison to other ancient

societies. In contrast, a rich epigraphic corpus of building contracts from the Classical

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[12] Woodward 1995: 24-25.
[13] Quotation from Lee 1982: 145.
[14] Brunt 1966: esp. 14; 1980.

Greek world supported the study of Alison Burford on Epidauros or others on Periklean Athens.[15]

Because of the limited documentary evidence, Brunt's work was little expanded upon in the 1970s and 80s.[16] The way forward would eventually come not from new archival material—Roman historians can hardly afford to sit around waiting for such things to appear—but rather from a turn toward the material evidence. Above all, the work of Janet DeLaine combines an interest in exploring the socioeconomic dimensions of architecture with a firm understanding of the archaeological evidence. Technical studies of the material evidence for Roman construction had previously been the domain of architectural historians, rather than those with interests in socioeconomics.[17] Instead, in her monograph on the Baths of Caracalla published in 1997, DeLaine applied 19th century construction-estimating manuals to the physical remains of the Baths themselves in order to quantify the labor requirements necessary for the monument. This allowed her to discuss the schedule of building, the composition of the workforce, and the building process with much more detail than had previously been done. Her figures are perhaps less important than the methodology behind them, which supplements the shallow written evidence with the deeper dataset found in Rome's substantial archaeological remains.[18] DeLaine's work with the archaeological record has prompted a re-examination of Rome's monuments in search of the "social dimensions" to Roman

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[15] Burford 1969; on Athenian building contract inscriptions, see Randall 1953; Epstein 2008. It was exposure to this material that suggested the topic in Roman terms to me years ago when I prepared a Regular Member field report on building contracts at Epidauros for Guy Sanders in the Spring of 2005.
[16] Skydsgaard 1983 essentially restates Brunt's thesis.
[17] This is not to say that the exemplary studies of Roman construction from the mid-twentieth century, above all Blake 1947 and Lugli 1957, do not preserve their immense value, only that we can now use the evidence found in them to expand upon other topics.
[18] DeLaine 1997. This has given rise to imitative studies quantifying construction, e.g. Shirley 2001.

architecture. At present, nothing of this interest has been carried backwards to periods of

Roman history earlier than the Empire, and for this alone, this study bridges an important

gap.

The motivation for this study, however, lies not only in filling a scholarly lacuna.

I also hope to contribute to our broader understanding of Rome's early urban

development. It is commonly said that Rome of the Augustan period was a city of a

million residents.[19] Brunt reasonably conjectures that the city may already have reached

375,000 people by the time of the Gracchi.[20] It is difficult to find a city of this size in the

Western world prior to industrializing London in the 19th century; even from a more

global perspective, parallels are few.[21] Obviously, rapid population growth does not

happen in a vacuum, but it accompanies an expansion of infrastructure to support what

would become one of the largest cities in pre-modern world history.

Where did the roots of this impressive metropolis lie? An image of constant,

homogenously-paced expansion from the earliest proto-urban settlements to the Augustan

city has been criticized as simplistic, and fairly so.[22] To understand the more complex

passage of the city through time, it is necessary to distinguish moments of change, and

also to define those terms through which this change should be understood. This

dissertation pursues a materialist conception of historical change; the method insists on

the importance of underlying economic factors.[23] But how best to investigate such

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[19] One million residents is a cipher that probably means more for its impressiveness than for its historical accuracy. Even so, lower suggestions remain unconvincing, as see both Lo Cascio 2006: 59 and Scheidel 2007: 78 n. 177.
[20] Brunt 1971a, 384 followed by Harris 2007, 517.
[21] Scheidel 2007, 78; similarly, Kehoe 2007, 543.
[22] Coarelli 1995, 19.
[23] This paradigm is Marxist at its origins: "The mode of production in material life determines the general characteristics of the social, political and spiritual processes of life," Marx 1904: 11-12; and most

factors? Here, public construction can play a key role. During the Mid-Republic, three

general developments in Roman architecture can be observed; all three are detailed in

great depth in the following chapters, but can be summarized as follows:

1. A quantitative change in the amount of construction. Beginning c. 300 B.C.,

   Rome begins to build with a high level of sustained activity. This is in contrast to

   the Early Republic, when many have pointed out that the fifth century saw a

   decline in public building, particularly of temples.[24]

2. A qualitative change in the type of construction projects. Expansion in the

   different types of public monuments, especially in secular buildings, has been

   well discussed in formalist terms by Pierre Gros among others, but it deserves to

   be set into an economic-historical framework.[25]

3. Technological changes in the manner of construction. Innovation in this period

   has received no attention, but shifts in technology can be observed. For example,

   significant shifts will be outlined in the strategic employment of different building

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famously, Engels in the *Anti-Dühring*, 1970: 292: "The materialist conception of history starts from the principle that production, and with production the exchange of its products, is the basis of every social order…According to this conception, the ultimate causes of all social changes and political revolutions are to be sought not in the minds of men…but in changes in the mode of production and exchange." See Wilk and Cliggett 2007, 96-100 The articles in Wickham, ed. 2007 offer an evaluation of Marxist theory to historical understanding in the Post-Soviet period, when the teleological framework has been abandoned, and Marx has become normalized as a "major social theorist whose ideas can be drawn on, just like Malthus, or Smith, or Weber."

A means of understanding urban change that is not discussed as much here is the Weberian model of the consumer city. This is first and foremost because I am more interested in the urban situation and less in the relationship of Rome to its hinterland, which is the deciding factor in any producer/consumer city-model; however, see Morley 1996 for a sophisticated approach to these questions also in the Republican period. And furthermore, Wilson 2002b, 265-67 for a critique of heuristic power of the Weberian model in the Roman world—of course Rome magnitude consumed more than it produced, but we need to search for more interesting ways to understand the the socioeconomic complexity of the metropolis. As Morley 2008: 124 admits, the consumer debate at this point is "generally recognized to have run into the ground."

[24] E.g. Drummond in *CAH* VII 2^2 132.

[25] Gros 1996 *passim*.

materials. Lifting technology, crucial to monumental construction, also changes

significantly from the fourth century B.C. onwards.

These three developments are implicated in the organization of labor at Rome. A

quantitative advance entails an increasing permanence to the workforce attached to

construction; formal and technological developments speak to the capacity to innovate in

a stabilizing workforce. All of this meant a change not only architecturally but

economically. While I have referred to the building industry, I hesitate to use the word

"industrialization;" however, it is plausible that such permanence and innovation in

Roman construction produced a new level of specialization.[26] V. Gordon Childe was the

first to understand the analytical power of a materialist historical approach in

understanding the development of cities; he designated the rise of craft specialization as

the fundamental marker to what he termed the "urban revolution."[27] Monumental

architecture or demographic thresholds become, in his conception, signals of more

structural developments in the modes of production.[28] This dissertation also seeks to

locate the formation of a city, in this case Republican Rome, within rising specialization,

here embodied by these three developments in Rome's building industry.

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[26] *Pace* Coarelli 1977, to my mind Roman architecture never achieved the sort of industrialization seen in the building industry after the industrial revolution, and this word is inappropriately applied to Roman construction,. For discussion of the variable approaches of Roman architects even in the most celebrated achievements of imperial architecture, see the conclusions of Lancaster 2005a: 81 on the Colosseum.
[27] Childe's model has been applied to the emergence of urban sites in Iron Age Latium by Guidi 1982, but I think this misses the point: Childe's "urban revolution" is not comprised of a checklist of separate prerequisites for the identification of a city, but rather a number of interrelated factors, which collectively support a materialist reading of urbanism based on economic changes. Seen as theory, rather than as a framework, this is a more usefully applied general point that urban development needs to be located in economic change (and, in particular, in craft specialization). I am not sure, therefore, that the criticism of Cornell 1995: 101, that Childe represents the specific picture of a Near-Eastern urban development, need apply; Childe himself (1950: 17) tried to include the Greek Mediterranean into his model.
[28] Childe 1950, esp. 16. Childe's continuing influence, with much revision and elaboration is commented upon by Wailes 1996: 11, and can be seen in many of the articles in Storey 2006.

Along these lines, I want to argue that these developments speak to economic

transformation and, hence, historical change. To understand what this entails, one may

start with a concrete example from Greek antiquity, which has been better studied in this

regard. There were two primary ways of organizing monumental construction in the

Mediterranean during the fifth century B.C. The first is that found in the epigraphic

evidence from Periklean Athens or Late Classical Epidauros where the large task of

construction was arranged piecemeal by contracts, let out by state or priestly treasuries,

and taken up by contractors.[29] The second can be exemplified in the court of Dionysios I

of Syracuse, and was not unusual in ancient monarchies: here, building was arranged for

by labor corvée where the citizens of Syracuse were compelled as part of their obligations

to their ruler to provide actual physical labor in the construction of Syracuse's public

works.[30] Different modes of production can be expressed in the organizational process

behind construction: it is the second system (corvée) that appears in public works

programs in Archaic Rome, and the first system (contracting) that emerges in our

epigraphic record of building contracts from Rome by the time of Sulla.[31]

This dissertation argues that the all-important shift at Rome from a monarchic,

corvée-based labor system to a contractually-based labor system making use of both free

and slave labor for the organization of public construction occurred in the Mid-Republic.

When one considers that the cost of public building contracts later made up a major

percentage of the state's domestic budget, this shift was not only confined to how

buildings were built, but it was also significant for the entire state apparatus: Polybius in

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[29] This system is well detailed for Epidauros by Burford 1969.
[30] Labor corvées used in building the Epipoae fortress described at Diod. Sic. 14.18.
[31] Corvée in Archaic Rome: p. 118; Sullan building contracts: p. 86.

his time noted that public works contracts had become by far the costliest item in that portion of the budget controlled by the senate not controlled by the consuls; that is, building and repair of buildings made up Rome's costliest domestic expenditure (6.13.3). The evidence for this change stems from an examination of various corpora, archaeological, literary, and numismatic, and will be presented in great detail in the proceeding chapters. It can be related to the three architectural changes summarized above, and all of the details appear to converge, not by coincidence, upon the mid-to-late fourth century B.C. Such an economic transition was total, what can be called in recent economic theory "institutional change," because it remade more than the rules by which the economy of the Roman city operated, it remade the Roman economy itself.[32] I would not go so far as to suggest that the expansion of Rome's building industry transformed Rome's economy in and of itself. However, an examination of public construction does serve as a clear, if yet untested, manner through which to observe such economic change because of the natural relationship between monumental architecture and society.

By situating this change in the fourth century B.C., and by giving it a determinative force in shaping Rome's urban history, I am implicitly arguing against a major shift in 509 B.C., the traditional starting date of the Republican period. This is important because this earlier date continues to receive much emphasis from archaeologists, especially those engaged in recent work on the Archaic city of Rome. Archaeology of the last quarter-century, guided by Andrea Carandini, has been productive in illuminating these periods, tracing the transition at Rome from proto-urban

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[32] North 1990. For North's view of the relationship between New Institutional Economics and Marxist readings of history, see North 1990: 132-34, criticizing the overly teleological tendency of Marx's historical readings. Teleology, however, has largely been abandoned in current Marxist historiography, as see Runciman 2004.

to urban. We now know, to give three noteworthy examples, that human activity was already irrevocably shaping the landscape of Rome's hills by the Final Bronze Age (c. 1000 B.C.); that the Palatine was fortified with a wall of cyclopean masonry in the 8th century B.C., in rough correspondence to the legendary dates of King Romulus; and that several thousand cubic meters of fill were carted into the Velabrum in the 6th century to solidify the swampy landscape and transform the Forum area into a viable public space.[33]

All of this points to substantial changes to the city's appearance towards the end of the Archaic period, confirming *la grandezza* of *la grande Roma dei Tarquini*, to play on Pasquali's famous name for the sixth century city.[34] Proponents of the traditional historical scheme point to destruction layers in the Forum itself, as well as at the Archaic temple at Sant' Omobono, as archaeological evidence to demonstrate for their concerns that this grand Archaic city perished in a violent revolution in the late sixth century B.C.[35]

The question that has not been asked enough of this evidence is whether or not the revolution of the late sixth century was followed on its heels by the appearance of another Rome, the Republican city that would eventually grow into the city of Augustus. Here, it will be clear that I think the answer is that it was not. In terms of Rome's social history, at least, change does not seem to have come *deus ex machina* in 509 B.C. Instead, the old aristocracy persevered, and stories of clan-based organizations persisted in Roman society for over a century afterwards: witness, for example, the *coniuratio,* a sort of private military organization that appears in the Archaic period in episodes such as that of

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[33] Late bronze age: Lugli and Rosa 2001; wall on the Palatine: Carandini and Carafa 1995; fill in the Forum: Ammerman 1990.
[34] Pasquali 1936.
[35] Forum destruction, with particular reference to the phases of the Comitium: Coarelli 1988: vol. 1, 145; Sant' Omobono: Pisani Sartorio in *LTUR* II s.v. "Fortuna et Mater Matuta, Aedes" p. 283, "Alla fine del VI sec. in concomitanza con la caduta dei Tarquini (509 a.C.), sulla base dei dati di scavo il tempio risulta distrutto violentemente."

Mastarna and the Vibenna brothers, but is easily detectable in the Early Republic as well.[36] The famous *lapis satricanus*, which records an offering to Mars by the *suodales* of Publius Valerius (Publicola?), provides good contemporary evidence of similar social arrangements surrounding one of the tyrannicides purportedly responsible for the overthrow of the monarchy.[37] It is not until the start of the third century B.C. when signs appear, however subtle, of an erosion of the ability of these aristocratic leaders to exploit such relationships, as Emilio Gabba and, more recently, Chantal Gabrielli have pointed out.[38]

Others have also noted these shifting political currents at Rome over the course of the fourth century, and they have defined this movement in modern terms as the opening of a new stage within the "conflict of the orders" or in the "rise of the nobility," the closing of the aristocratic ranks to the exclusion of the plebeian class.[39] Wiseman has even questioned the very existence of the consular college before the Licinio-Sextian laws of 367 B.C.[40] But the study of the political struggles of Republican Rome and that of the city of Republican Rome have not always run parallel, with historians not taking the

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[36] Gabrielli 2003b: 255-56. Within this paradigm, we can recall the arrival of Attius Clausus (Appius Claudius) to Rome with his great band of *clientes* (Liv. 2.16; Suet. *Tib.* 1: Atta Claudius), Coriolanus who is able to enlist his own followers with the Volscians (Dion. Hal. 7.21.3), or the Fabii at Cremera (Liv. 2.49), to name just a few examples in the literary record. On the topic, see further Cornell 1988; Harris 1990; Gabrielli 2003a: Ch. 3.

[37] On the *lapis satricanus*, Stibbe, Colonna, De Simone, and Versnel 1980; Cornell 1995: 144; Forsythe 2006: 199 is skeptical of a connection. For doubts on the authenticity of accounts of Publicola's role in the anti-monarchic coupe, Wiseman 2008a: 308, 318. Add to that the fact that the consular *fasti* record that Valerius Publicola, the supposed champion of the Republic, held four consulships (!) between the years 509/8 and 504/3.

[38] Gabba in *St.R.* 1.2 11-12; Gabrielli 2003b expands Gabba's argument linking the newly discovered fragment of Livy Book 11 and its description of the prosecution of L. Postumius Megellus to this context.

[39] For the first, Raaflaub 2005; for the second, Hölkeskamp 1987. On both, Millar 1989.

[40] Wiseman 1995: 103-28, esp. 103-7.

archaeological material seriously enough and vice versa.[41] This is ultimately where this

dissertation finds its place. The connection between city and society at this point,

however, is not difficult to make: for example, if problems of debt lay at the center of the

political conflicts of the Early and Mid-Republic, Livy explicitly tells us at a crucial

moment in the lead-up to the Licinio-Sextian rogations, that at least some of this debt was

brought about through spending on public building (6.32.1-2). This passage from Livy

will be taken up in more depth in the following chapters, but I mention it here to stress

that construction is a necessary component of the history of the early developments—

political, social, economic—of the Roman Republic.

Our perspective on urban change in this period is immediately enriched if we note

that major shifts in Rome's architecture accompanied those more remarked upon

sociopolitical shifts of the fourth century and onwards. All told, the fourth century shows

the signs of an urban revolution along several lines; social but also architectural

developments provide historians with a point of access. The goal, then, is to include the

building industry in these discussions of Mid-Republican Rome's economy and society,

and by doing so to explain the early development of the Republican city in a more

complex manner than as an instantaneous shift from monarchy to Republic in 509 B.C.

The Chronological Parameters

As is now clear, the confining dates of this study matter. The scope of the project begins

at the city's nadir, in the wake of the invasion of the Gauls, and finishes firmly in the

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[41] Russell T. Scott's contribution to Raaflaub, ed. 2005 entitled "The Contribution of Archaeology" appears first and foremost occupied with identifying points of contact between the archaeological and literary record. None of the historians in the volume otherwise discusses much of the material culture.

period of the Republican Empire, when the end of *tributum* in Italy would signal a leap in magnitude to the income derived from imperial conquest. This range is 390 to 168 B.C., but these are more approximate than fixed boundaries. First of all, in the case of the Gallic sack, our sources are not in agreement over the exact date. In economic terms, the Roman conquest of Veii in 396 is just as fundamental in setting the stage for the developments of the next half-century: historians have emphasized the acquisition of the *ager Veientanus* and the beginning of military *stipendium*.[42] Those with interest in political history of the Republic have often circled the Licinio-Sextian legislation of 367 B.C. as the defining moment of the Mid-Republican period, when the consulship was opened to the plebeians.[43] Here, however, my concerns are primarily urban, and it is impossible to discuss the Mid-Republican city without including the construction of a massive circuit wall begun, according to Livy, in 378 B.C. As the next chapter details, the historical context for this wall must consider the Gallic sack beforehand as well as the social problems attested afterwards.

The end date is perhaps less easily defined, although it corresponds roughly with the break in Livy's text in the year 167. With Aemilius Paullus' victory at Pydna and the subsequent revocation of *tributum* in Italy, the scale of imperial income had achieved a remarkable level.[44] Again, political historians may differ; for example, the murder of Tiberius Gracchus in 133 has since Appian's *Bellum Civile* traditionally marked the rise of the sort of internal violence that characterized the Late Republic.[45] I repeat that my

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[42] Gabrielli 2003a: 86-95; Lo Cascio 2009: 19-20.
[43] Flower 2010: 51-52.
[44] Cic. *De off.* 2.76; Plin. NH 33.56; Plu. *Aem.* 38. On the amount of imperial income this entailed including 100 talents (2.4 million HS) annually from Macedon, see Harris 1979: 70-71.
[45] Appian *BC* 1.2; Brunt 1971b, 74ff.

interest, however, is in urban change, which proves more difficult to pin down. As the

second century B.C. progressed, the rise of new building technologies such as reticulate-

faced cement and marble would revolutionize the appearance of Roman architecture.[46]

While both reticulate and marble have some precedents at Rome earlier in the second

century, these technologies developed most rapidly in the period following the important

year of 146 B.C., when Roman armies sacked both Carthage and Corinth.[47] To my mind,

the technological advances of the later second century make for a discussion of a

different nature, one which looks forward more directly and in new ways to Imperial

architecture.[48] For this reason, I have excluded concrete and marble from the present

discussion, and closed with the year 168, focusing on the establishment of the Mid-

Republican city more than on its subsequent transformations.

Source Material: *Documentary and Numismatic Evidence*

It is nearly possible to count on one hand the number of non-literary documents from this

period that have bearing on this project; what little there is will be discussed. This is

unfortunate, as I have already mentioned that inscriptions in particular provide some of

the better evidence for the organization of construction projects in Greek antiquity. This

sort of information appears in the Roman world, but not before the Late Republic.[49]

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[46] The first instance that we know of marble in public architecture at Rome is the failed attempt of Fulvius
Flaccus to obtain marble tiles from the Temple of Juno Lacinia at Croton for his construction of the Temple
of Fortuna Equestris at Rome, dedicated in 173 (cf. the catalog entry under that year). Cement appears,
e.g., in the core of the podium of Temple D at Largo Argentina in the early 2nd century.
[47] That was the year in which, according to Velleius Paterculus, L. Caecilius Metellus Macedonicus was the
first at Rome to build an *aedem ex marmore* (1.11.5). See Bernard 2010 on this subject.
[48] The developments of this later period have been discussed by Coarelli 1977 and Gros 1973, 1976a, 1978.
[49] The first examples include the *Lex puteolana* of the last years of the second century (*CIL* X 1781), and
two building contracts from Rome itself dated to the opening decades of the first century B.C. (*CIL* I² 809
and VI 31603). There are, in fact, a number of wall-building inscriptions from Italy of the period following

As far as material for financial history, which plays a major role in any discussion of public construction, the best evidence by far comes from numismatics. Coinage will be used as often as possible, as I would like to explore the processes that contributed to the monetization of the Roman economy in the late fourth and third centuries B.C. Unlike the Eastern Greeks, who started to use coinage as a medium of exchange by the late 7th century B.C., the Romans were latecomers, and it is in the period of the Mid-Republic itself that coinage is first minted and used in Rome. This was a discrepancy even in the West: Sicily and Magna Graecia had monetized with the rest of the Greek world, and many Etruscan cities were minting by the Archaic period as well. Several media of value and exchange circulated at this point on the Italian peninsula, from the bronze spits of Etruria, to the *aes rude* of Central Italy, to the terra cotta *oscilla* of Tarantum. Within this multifarious context, the appearance of coinage at Rome takes on an unusual complexity at its origins.

It is perhaps for this reason that Rome's monetary history has only very seldom been applied to larger historical models of change in this early period; this is as opposed to the importance attached to coinage in the current debate over the shape and integration of the Imperial economy.[50] The topic of early Roman money remains intricate, although many of the chronological issues have been worked out by Michael Crawford in *Roman Republican Coinage* (1976).[51] Problems whose solutions relate to specific points in this

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the Social Wars that have not been well incorporated into the study of Roman construction, collected in *ILS* vol. II.1 p. 348ff.

[50] Hopkins 2002; Duncan-Jones 1994; De Callataÿ 2005.

[51] As Rutter 2001: 51-54 points out, however, there is still a good deal of *aes grave* some of it found at Rome itself that is difficult to assign. The same was already alluded to by Russo 1998. Much of this was systematized by Crawford but could stand revision in its details, although the material is hard to work with for reasons of poor preservation: cast bronze is easily corroded. The bronze of this period has potential for future work.

dissertation will be discussed in greater detail in their appropriate place. Here, I want

only to stress a more general point as to the value of coinage as evidence for a study of

public construction. Once coinage was established in the Roman world, it played a

central role in the financing of public architecture. Costs for construction as a component

of total state spending were always high: I have already noted in passing that Polybius

lists public upkeep and construction as by far the single greatest domestic expense of the

senate.[52] Richard Duncan-Jones argues that building could have represented as much as

20% of the non-military outlays in the annual Imperial budget.[53] The Roman state relied

heavily on coinage for these payments.[54] Because of this connection, it is not

unwarranted to draw conclusions about Mid Republican Rome's construction industry

from its monetary system, as has been done before for other periods of the Republic,

most notably by Coarelli for Gracchan Rome.[55]

Source Material: The Literary Evidence

We have no primary evidence for the period concerned, although we do have significant

ancient sources.[56] The dilemma of how to employ the writing of ancient historians in

reconstructing Rome's early history has exercised scholars at least since the mid-19th

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[52] Polyb. 6.13.3.
[53] Duncan-Jones 1994: 41-42, 45 tb. 3.7.
[54] Hollander 2007: 99-100.
[55] Coarelli 1977.
[56] The only exception of which I am aware is the description of the city found in the choragus' speech in Plautus' *Curculio* 462-86, see Moore 1991. From the period shortly after the Second Punic War, this gives us an eyewitness account, the names of some buildings then extant, and some of the more devious activities that were accustomed to take place at those buildings.

century and very much has been said.[57] Rather than hoping to add to this sizeable

discussion, I want to focus on what the literary sources can tell us about the physical

history of the Roman city, how reliable this information is, and how it may best be put to

use. There are reasons to be optimistic about information in the ancient written record,

although it proves to be of a limited utility.

Any attempt to use the literary sources must contend with a twofold problem: the

first is the basic problem of transmission that plagues all ancient literature, the second is a

more complicated problem of the substance of those sources that do survive. Livy gives

our best narrative of the period's domestic history, and he exhibits by far the greatest

interest in the topography of the ancient city. In the first decade (Books 1-10), we

possess his continuous narrative from the foundation of Rome down to the year 293 B.C.;

his full text does not reappear until 218 B.C. with the first book of the third decade, Book

21, continuing then uninterrupted until 167 B.C. Complementing Livy's work are several

Greek authors, who show far less interest in the city's monuments but whose texts are

nonetheless important. Polybius starts his coverage in 265 B.C. Dionysius of

Halicarnassus' *Roman Antiquities* extended from the origins of the Roman people down

to the beginning of the First Punic War; the opening of the Republican period comes at

the start of Book 5 and continues intact to the end of Book 11, taking us down to the year

440, before the manuscripts become fragmentary for the last nine books. Diodorus

Siculus' universal history often focuses on Roman subject matter, giving a relatively full

account of the Gallic sack (14.113-17), for example. Unfortunately, Books 21-31, which

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[57] Good introductions to this topic can be found in Ogilvie's article for *CAH* VII 2[2] 1-29, and, with
particular regard to Livy who forms our best source, in Oakley 1997: 21-108. On the whole topic of
authenticity and ancient historiography, see Gabba 1981.

covered Rome's expansion from the Punic Wars through the Macedonian Wars, are only transmitted in fragments.

Beyond the problem of loss, however, is a second problem usually considered more insidious: the first Roman historian, Fabius Pictor, wrote in the years around 200 B.C., and thus there never was any native historiography for later authors to draw from in the first place for over half of the period concerned.[58] How did later authors reconstruct this pre-historical history? First of all, there were oral traditions of various forms circulating prior to written historiography. Wiseman, who in general is very skeptical of the authenticity of those accounts in later writers, has pointed to dramatic performances at *ludi* as a place for the re-enactment and even creation of the traditions for Roman historical events.[59] Oral culture also took the form of family legends or communal memory. Livy, while discussing the confusing continuity of the *dictator clavi figendi causa*, refers to Romans consulting the *memoria seniorum* (7.3.3).

However, it is not the transition from oral material to written tradition that concerns this particular project as much as the nature of the documentary tradition that also supported these ancient inquiries into earlier Roman history. This is because evidence about public construction that appears most frequently in Livy is composed of dates, responsible parties, and locations of various buildings. As Stephen Oakley argues,

> When literary embellishments have been swept away from L. and other late annalistic accounts, we are left with a series of magistrates, treaties, triumphs, battles, laws, and elections. It is not very likely that such material derives primarily from oral tradition, nor has anyone suggested a mechanism by which such a tradition could have transmitted this material.[60]

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[58] I exclude non-Roman sources such as Timaeus at this point because they show less interest in the details of Rome's urban character.
[59] E.g. Bruun 2000; Wiseman 2008a: 236-39.
[60] 1997, 24.

That is, the supporting core of these sorts of lists was documentary, and the validity of

such evidence rests on our judgment concerning that documentary material.

There is no reason to doubt that there was material reaching back at least to the

early fourth century and giving coverage to the period. Livy himself claims that much

material was destroyed in the Gallic sack, and his documentary evidence only starts in

full after 390 B.C.[61] His claim is difficult to accept not only because of the thin evidence

for an actual *incendium Gallicum*, but because no notable difference in historical tone

between pre- and post- sack narratives is detectable even in Livy's own text.[62] Diodorus

of Halicarnassos offers an interesting counterpoint in his citation of the family records of

the censors from two years before the Gallic sack (1.74.5):

> Δηλοῦται δὲ ἐξ ἄλλων τε πολλῶν καὶ τῶν καλουμένων τιμητικῶν ὑπομνημάτων,
> ἃ διαδέχεται παῖς παρὰ πατρὸς καὶ περὶ πολλοῦ ποιεῖται τοῖς μεθ᾽ ἑαυτὸν
> ἐσομένοις ὥσπερ ἱερὰ πατρῷα παραδιδόναι...ἐν οἷς εὑρίσκω δευτέρωι πρότερον
> ἔτει τῆς ἁλώσεως τίμησιν τοῦ Ῥωμαίων δήμου γενομένην...

> This is clear from many other things and also from the so-called records of the censors,
> which are passed to children by a father and very much effort is made to transmit (them)
> to his posterity, like family rites...in these, I find in the second year before the sack
> (393/2 B.C.) that a census occurred in the city of Rome.

The population figures that come from these records have been doubted, but numbers are

especially subject to textual corruption and this is no reason to dismiss the contents of

these records entirely.[63] Other actions of the censors, and in particular building projects,

could have derived from this same documentary basis, and this material existed from the

period *before* the Gallic sack.[64] This would be the source of notices for censorial

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[61] Liv. 6.1.3.

[62] Cornell in *CAH* VII 2[2] p. 311; *pace* Ogilvie in *CAH* VII 2[2] p. 16, who would like to see some rough truth to this statement, although absent Livy's disastrous loss of pre-Gallic sack material.

[63] Beloch 1926, 77-86; Brunt 1971a.

[64] Oakley 1997: 48. *Contra* Brunt 1971a: 26 who holds that this particular passage of Dionysius which mentions *cognomina* and chronological datum has "obviously…been worked on by an annalist" and thus shows that Dionysius has no public records from the period, and that none therefore existed. I hardly think

building beginning with the censorships of 318, 312, and 307 recorded in Livy. Once

Livy's text returns in the later third century, and the financial difficulties of the Second

Punic War abate, descriptions of censorial building again appear detailed. The contents of

these notices in Livy are often compact to the point of confusion, preserving an

abbreviated, shorthand form. [65] This compact style may support a documentary basis, but

it also shows the limits of the information contained within those documents.

Along with the censorial accounts, Livy takes great care to mention the various

stages in the foundations of triumphal temples, and he expresses dismay in those rare

cases that such information is absent in his sources.[66] This would suggest that the

documentary material was good for this subject from which Livy or, more likely, his

sources were drawing.[67] We know very little about the pontifical tables that supported

annalist historiography.[68] However, this is precisely the sort of information that we

would expect the priests to be tabulating because of an importance to ritual practice.[69]

The foundation dates of temples mattered to Roman society; the foundation of the

Temple of Jupiter Optimus Maximus, for example, was regularly used as a calendric

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that the consular date quoted in full by Dionysius warrants much more than the postulation of some intermediary copyist between the original and Dionysius (Ὑπατεύοντος Λευκίου Οὐαλερίου Ποτίτου καὶ Τίτου Μαλλίου Καπιτωλίνου μετὰ τὴν ἐκβολὴν τῶν βασιλέων ἑνὸς δέοντι εἰκοστῶι καὶ ἑκατοστῶι ἔτει), and I am unsure, *pace* Brunt, why this would be grounds for the rejection of the authenticity of the entire passage as well as other records of this date in general.

[65] See, for example, Liv. 40.51, a complex passage on the efforts of the censors of 179 B.C.; for my parsing of this passage, see specific buildings under entries for that year in the catalog. On similar grounds, documentary material probably also supported the records of aedilician building, as see similarly reported passages in Livy, e.g. 35.10.12.

[66] See Livy's concern over gaps in his sources concerning the vowing of the Temple of Quirinus, 10.46.7.

[67] Direct consultation of the documentary material was more likely his sources than Livy himself. Livy makes his method of inquiry clear at the above mentioned instance of the Temple of Quirinus, 10.46.7, when he complains that he fails to find mention of the temple's vow among, presumably, those earlier annalist authors whom he was consulting.

[68] Frier 1979.

[69] Oakley 1997: 61.

starting date by Republican authors.[70] Like the censorial books, archival material relating

to temples was apt to be confined to those details that were important to transmit: dates,

responsible magistrates, military campaigns in which temples were vowed.

Complementing this documentary material were literary works that were not

necessarily historiographical. There was a genre of descriptive writing about the city

with a pedigree at Rome almost as old as historiography itself.[71] However, the

information that it supported was of a certain type, descriptive rather than technical. The

early historian Cincius Alimentus, praetor in Sicily in 209 B.C., wrote a work entitled the

Mystagogica.[72] Jacques Heurgon argued rather charmingly that this work was *le*

Baedeker du temps, and that it was named after the *mystagogi*, guides of sacred places for

travelers in the ancient world.[73] Cincius' guidebook seems to have been occupied with

descriptions of paintings, sculptures, and other precious objects in Rome's temples; it

helped to fix and then to transmit details about the identification and contents of Rome's

temples to later authors.[74] Such interest was only amplified by later antiquarian authors:

Varro's *De Lingua Latina* is full of topographic and esoteric information about Rome's

buildings, and among his lost works were titles such as *De Locis* and *De Rebus*

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[70] Feeney 2007: 141.

[71] The following paragraph details a topic that has otherwise had almost no attention, and this material would make a good separate study.

[72] The work is cited at Paul. Fest. 498L.

[73] Heurgon 1964: 434-35. Cf. Cic. *Verr.* 2.4.132, "Those who are accustom to lead visitors to those things that are worth seeing and to show them each thing, they call them *mystagogi*." *ii qui hospites ad ea quae visenda sunt solent ducere et unum quidque ostendere, quos illi mystagogos vocant.*

[74] Cicero described the topic matter that concerned these *mystagogi* in the negative: after Verres had pillaged the temples of Syracuse of all of their treasures, the Syracusan *mystagogi* explained to travelers what was taken from everywhere, rather than showing them what was everywhere as before, *nam ut ante demonstrabant quid ubique esset, item nunc quid undique ablatum sit ostendunt* (*Verr.* 2.4.132).

Urbanis.[75] Cicero praised Varro's work for opening his own eyes to the places and

institutions of his native city.[76]

There can be no doubt that a significant corpus of topographic or descriptive

material existed at Rome since the period of the Punic Wars to complement the bare-

boned archival material; all of this supported a tradition of writing about monuments that

remains for us to read in Livy and others. For our interests, however, this literature

contained very little *technical* information. This is made clear by Vitruvius, who could

state confidently that there were many good Roman architects before him, but that they

had left almost no written trace. He opposed this situation to the technical tradition of the

builders of Hellenistic Greece.[77] All of this is to say that the shape of the literary

evidence, even if deemed in places authentic, is not very likely on its own to answer the

sorts of questions posed in this dissertation.

It is fair to ask why this was, and I do not think we must search far for an answer.

In the Augustan age, Vitruvius worked very hard to imbue technical writing with the

same esteem in which it was held among the Hellenistic intellectual circles inhabited by

his Greek sources. Before that, the attitude of Roman Republican authors and the Roman

elite towards various professions, architects included, can best be summarized in the

well-known opening lines of Cato's *De Agricultura*: a good farmer (*bonus agricola*) was

a good Roman, and investment in land remained the chosen occupation of the elite. For

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[75] *De locis* is named in Jerome's catalog of Varronian works (Ritschl 1848), and *de rebus urbanis* is cited by Charisius I p. 133 K. = Peter *HRR* vol. 2 p. 24 fr. 1. Both may be truncated sections of the *Antiquitates*; the latter may instead have been a pendent work to the *Res Rusticae*.
[76] Cic. *Acad.* 1.9.
[77] Vitr. 7.pr.18, "While, therefore, even our predecessors may be found to have been great architects no less than the Greeks and a sufficient many of them in our own time, few of them published their methods," *cum ergo et antiqui nostri inveniantur non minus quam Graeci fuisse magni architecti et nostra memoria satis multi, et ex his pauci praecepta edidissent*.

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this reason, it was mostly agriculture that merited technical discourse at Republican Rome. A corpus of technical writing on architecture existed and may have influenced Roman builders, but it was almost entirely not Roman, and it was not of much interest to historians such as Livy whose works we do possess.[78] Even the planning and financial decisions that preceded construction projects are very rarely preserved for us.[79]

A twofold conclusion emerges on the value of the literary evidence: on the one hand, what information we possess about building dates, temple identifications, and censorial projects may at times derive from archival source material, and a balanced historical investigation must consider each case individually for its possible merits. Once any literary embellishments has been removed, some pieces of literary evidence remain helpful to this project. On the other hand, even the authentic evidence preserved in our authors represents the authorial interests of Roman historians, and as such it has very little value in the realm of technical matters relating to construction techniques, labor, contractual terms, etc.

Source Material: The Archaeological Evidence

Because of the nature of our literary sources, study of the material culture becomes very much necessary. The catalog accompanying this dissertation summarizes all relevant archaeological reports, but I want to introduce this corpus and the ways in which it may inform this dissertation. With little exception, scholarly interest in the material culture of

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[78] E.g. in the next chapter, it is argued that architectural treatises from the court of Dionysios I of Syracuse may have influenced the construction of the Roman circuit wall built in 378 B.C. However, the Syracusan engineers left a literary record, not than those active at Rome.

[79] Some record of these sorts of deliberations preliminary to building projects may have existed, as we do, however, know of a speech of Cato entitled *ut basilica aedificetur*, likely in reference to the decision to build the Basilica Sempronia (Catalog No. 116), cf. Strong 1994: 188.

the Republican city was unsupported by much archaeological data until the Fascist

period.[80] Mussolini's regime provided the impetus to reveal the earlier and especially

Republican layers of the city, often with little regard for modern overburden. The

creation of the Via del Mare, now the Via del Teatro Marcello, and office buildings along

its route from the southern Capitoline into the Forum Boarium, revealed the important

Republican temples underneath Sant' Omobono, and further exposed portions of the

Forum Holitorium temples beneath San Nicola in Carcere. In this same project, the

Temple of Portunus was freed by the demolition of adjacent modern structures. In 1926,

the modern city block containing the medieval church of S. Nicola in Calcarario that had

stood at Largo Argentina was all destroyed in order to excavate more fully the series of

Republican temples underneath.[81] The focus on Republican Rome, rather than Imperial

Rome, was as ideological as it was intentional; witness the florid remarks of Antonio

Muñoz, who was tasked with the systemization of the uncovered remains at Largo

Argentina (which he calls here a *foro*) in 1929:

> If today's man who rushes quickly through his affairs, through his business, will pause a
> moment along the streets that flank this new forum, heedless of his cares, and cast a
> glance towards these sacred remains, he will feel arise from them a breath of refreshing
> poetry, a solemn admonishing voice…These glorious ruins speak in the language of
> history; they carry us to the origins of our city, to the centuries in which were seen
> benevolent, austere, and simple men who prepared the future generations of the
> conquerors of the world. Not the Imperial Rome of triumphs, of banquets and
> bacchanals, but the primitive city enclosed within its ancient circuit, inhabited by men
> whose frugality, whose severity of dress, whose dedication to the Fatherland was
> proverbial, this is recalled for us from these temples which seem to represent with their
> sturdy cornices the strong moral features of our ancient fathers. [82]

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[80] The exceptional monument is a private monument, the Tomb of Scipios, explored since the 17th century.
Beyond this, a handful of choice objects such as the *lupa capitolina,* the Brutus, and the Ficoroni cista
stood for Mid-Republican material culture. In terms of architectural study prior to the Fascist period,
Richard Delbrück's *Hellenistische Bauten in Latium* (1907) deserves mention, although his focus is later
than the period here concerned.

[81] Summary of dates of excavations there by Sisani in *LTUR* Suppl. II.1 s.v. "Il Campo Marzio: Gli scavi
dell'area sacra di Largo Argentina," pp. 62-63

[82] I am grateful to Elizabeth Fentress for bringing this quotation to my attention. Muñoz 1929: 170-71: *Se
l'uomo di oggi che corre rapido per i suoi affari, pei suoi commerci, lungo le strade che fiancheggiano il*

In this zeal to uncover pre-Imperial Rome, excavation was often rapid and poorly

recorded, in spite of (or, rather, because of) the fact that so much material came to light in

these years. The post-war period saw more careful consideration and documentation of

the material that had emerged, and in many cases continuing excavation. Less

Republican material was uncovered, but some finds were still impressive; for example, a

4th century chamber tomb on the Caelian with six stone sarcophagi and impressive

funerary objects was published in 1969.[83] In the late 1960s scholarly interests in the

period began to rise: Coarelli wrote his first of many major studies on Mid-Republican

topography, an article on the identification of the Temple of Bellona.[84] Jean-Paul Morel

first published on black gloss ceramics by the *Petites Estampilles* workshop, whose

distribution would demonstrate Rome's place as a production center on a Mediterranean

scale.[85]

    The watershed moment for Mid-Republican Rome's archaeology came in 1973

with a show, held at the Antiquario Comunale on the Caelian, entitled *Roma medio*

repubblicana: aspetti culturali di Roma e del Lazio nei secoli IV e III a.C. The

homonymous catalog collected all evidence from the city then known. For the first time,

the authors hoped to present a treatment of the material culture of the Mid-Republican

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nuovo foro, si arresterà un istante, dimentico delle sue cure, per riposare lo sguardo su questi sacri resti,
sentirà salire da essi un alito di refrigerante poesia, una solenne voce ammonitrice…Quei ruderi gloriosi
parlano nel grande linguaggio della storia; ci riportano alle origini della nostra città, ai secoli in cui
vissero gli uomini generosi, austeri e semplici che preparavano le generazioni future dei conquistatori del
mondo. Non la Roma Imperiale dei trionfi, dei festini, dei baccanali, ma la città primitiva racchiusa entro
la sua cerchia antica, abitata da uomini di cui era proverbiale la frugalità, la severità dei costumi, la
dedizione alla Patria, ci è rievocata da questi templi che con le loro robuste sagome sembrano
rappresentarci i forti lineamenti morali dei nostri antichi padri.
[83] Santa Maria Scrinari 1969.
[84] Coarelli 1967-68.
[85] Morel 1969.

city to fill out a review that had normally limited itself to the occasional stand-alone object such as the Brutus or the Ficoroni Cista. The show also resulted in two subsequent volumes: an uneven collection of conference proceedings edited by Itala Dondero and Patrizio Pensabene on Republican Rome from 509 until 270, and a useful volume by Marina Torelli collecting all known sources for the years 293-265 B.C., between the end of Livy's first decade and the beginning of Polybius' historical narrative.

The show marked a point of return to the archaeology of Mid-Republican Rome for the remainder of the 20th century in further excavation work and publications. To name just a few important subsequent projects: In 1977, the University of Rome La Sapienza began excavation of the important Republican temples on the southwest Palatine under the direction of Patrizio Pensabene.[86] Largo Argentina's architecture was finally studied synthetically and published along with the inscriptions and brick stamps by Coarelli in 1981.[87] Also in that year, Livia Crozzoli Aite published a detailed architectural study of the three Republican temples in the Forum Holitorium underneath S. Nicola in Carcere.[88]

Roman archaeology hardly ever pauses. A project under the direction of Nicola Terrenato and Paolo Brocato to restudy the temples underneath Sant' Omobono is ongoing and will add much needed clarity to this complex but important site. Work at the Imperial Fora, started in preparation for the jubilee year and still continuing under the direction of the Soprintendenza comunale, also continues to pay close attention to those

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[86] A synthesis of this work in Pensabene 1998.
[87] Coarelli's synthetic work in that decade also must be mentioned in this context: two monographs, one on the Forum Boarium (1988), the other on the Forum Romanum (1983), that would set the study of Rome's earlier development in those regions on a new foundation.
[88] Crozzoli Aite 1981.

earlier layers of the city. For example, a major destruction context underneath the Forum of Caesar at the foot of the Capitoline is in the process of publication but may relate to evidence for the Gallic destruction of the fourth century B.C. Even if there has been less interested in the Mid-Republic, it is also worth noting in this vein a resurgence of interest in Roman construction from a technical and social point of view with the work of Janet DeLaine or Lynne Lancaster for the Empire, or that of Gabriele Cifani for the Archaic period.[89]

Notwithstanding all of this, the situation as concerns the archaeology of Mid-Republican Rome is by no means straightforward. Rome is a long-inhabited and well-stratified city where most excavations reaching a certain depth will encounter some material from the Mid-Republican period. By the same process, however, much if not all of the archaeological material is overbuilt and can only be viewed in fragments. These fragments seem reliably dated by building technique, material, or associated finds, but they cannot always be restored to their full architectural context. Reconstructing the Mid-Republican city from archaeology cannot be achieved in the same manner even as the Imperial city, for which we have much better evidence even despite millennia of loss.

The fragmentary shape of the archaeological evidence guides my approach away from some recently productive methods. One noteworthy example of this is born from the fact that there is no surviving evidence at Rome itself for a temple's superstructure other than terra cotta elements. This means that we cannot gain a clear picture of the elevation of buildings for most of the period. We don't know the dimensions or position of a single wooden rafter; we can say very little about the production of the mud-brick

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[89] DeLaine 1997, 2001; Lancaster 2005b; Cifani 2008.

that probably (again, we cannot be sure!) made up the cella walls of dozens of buildings. Without knowledge of more than half of most buildings, tabulating labor costs or elucidating complex work schedules is usually impossible. To my mind, this means that DeLaine's impressive use of complex quantifications of labor cannot be of much help in this period.[90]

What *can* the archaeological material help with? In most places, because we encounter structures in fragmentary form, the evidence speaks better of construction technologies and quantities than of single sites. Rather than focus on individual monuments, this analysis focuses on what can be viewed: over two dozen examples of *opus quadratum*, Roman ashlar masonry of coursed, dry-set, square stone blocks, normally from the lower and subterranean portions of buildings. Patterns emerge in terms of the types of building materials and the "judicious" manner in which they come to be used.[91] The evidence for Mid-Republican building stones has not been systematized since Tenney Frank's study in the 1920s, although recent geological work has completely revised our knowledge of stone types.[92] This focus is beneficial for the purposes of this project: the strategies behind choices of material represent the development of a technological knowledge and shows the circulation of that know-how in the workforce.[93]

Beyond material typologies, ashlar construction also benefits a labor-based analysis because of the simple fact that individual stone blocks were heavy. Large

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[90] I will, however, present such calculations in the case of the circuit wall, whose simple ashlar construction may plausibly be extrapolated from the standing remains.
[91] Jackson, Marra, Hay, Cawood, and Winkler 2005.
[92] Frank 1924; foundational new work found in Jackson and Marra 2006.
[93] Jackson and Marra 2006.

components of stone used in construction in later periods of Roman architecture never fail to impress, and have merited much scholarship concerning the technologies and labor forces involved in supplying and building in heavy stone from quarry to construction site.[94] Earlier architecture, too, can yield to similar analyses: a block of the first stone used in Roman architecture, the local *tufo del Palatino*, cut into its typical module weighed on the order of 230 kg.[95] By focusing on building material and lifting technology, the archaeological evidence steers the analysis towards the building process. Little work has been done in this regard, but in terms of archaeology, this project will show that if the correct questions are posed, the material is forthcoming with answers.

As the foregoing discussion of the literary, documentary, and material evidence has hopefully made clear, the reconstruction of Mid-Republican Roman history is a disparate, fragmentary, and often problematic edifice. Perhaps the history of the period is not as stricken as that of Archaic Rome, which has occasioned so much recent debate and criticism,[96] but the Mid-Republic is still more often than not approached indirectly (literature), or without the possibility of being viewed in its entirety (archaeology). This does not make the job of the historian impossible, for there *is* evidence, only it is recognizably of a certain type. In fact, in my view, many interesting things remain to be said about the city of Mid-Republican Rome based upon the evidence that does exist.

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[94] The work of Lynne Lancaster is exemplary in this regard as see, for example, her study of the construction of Trajan's Column, Lancaster 1999. Also noteworthy are full length studies of marble such as Maischberger 1997; the excavation work at Mons Claudianus granite quarries such as Maxfield and Peacock 1997; work at Rome determining the unloading and pre-site working (Haselberger 1994) and then the site-working of granite and marble (Wilson Jones 2000) for major urban structures. This is only the beginning of a very productive avenue of current research.
[95] This figure results in calculations detailed in the following chapter.
[96] The key current players are Wiseman and Carandini, and many representative works are found in the bibliography by both. For an extremely critical view of the ability to reconstruct the Archaic period's history, see Forsythe 2006; for much more optimism, Cornell 1995.

Still, one important *caveat* must be given: often in the following work, it will be clear that I am following the lead of historians such as Moses Finley or Keith Hopkins in describing a model that appears to my reading of the available historical evidence most probable or plausible, rather than presenting a reconstruction of *wie es eigentlich gewesen*.[97]

Such model-building has the tendency towards both simplification and expansion; whether these are merits or a faults is to be decided. On the one hand, to move from a single, often small piece of evidence to a more broad conclusion necessarily requires absorbing certain complexities, many of which perhaps cannot otherwise be detected.[98] On the other hand, such work more comfortably admits of the sort of uneven data which distinguishes this period of Roman history. The latter tendency has another merit, and that is in the readiness of a model to interact with comparative historical approaches, something of which this dissertation will make use. Considering that my method touches on various subspecialties of the study of Classical Antiquity, from socioeconomic history, to a history of technology, to a study of architecture, the facility with which a model-building approach permits such interdisplinary interaction is welcome.

The Structure of the Dissertation

The dissertation is split into two distinct parts: a series of four analytical chapters and an accompanying catalog. The catalog is ordered chronologically and details all building

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[97] The German, of course, is the famous *mot* of von Ranke. Hopkins 2002: esp. 191-93 and 224 forms one of the greatest defense of this approach to the history of the Roman world of which I know.

[98] Of course, should such complexities be detected, they should then change any responsible model, and often some of the best research into Greco-Roman antiquity is directed into proving such complexities in order to refute a historical model. I think this can fairly be said to describe the last several decades of work into the ancient economy arising from objections to Moses Finley's static view of the *Ancient Economy*, and see my own Ch. 3.

projects known in the literary and archaeological records between 390 and 168 B.C. Here, technical issues of topography and dating are considered, but I have also included discussion of the procedural evidence for the creation of the structure as well as archaeological data, including my own field observations, where applicable. In the introduction to the catalog is a short essay detailing some statistical observations.

The analytical section of the dissertation begins with a first chapter, which presents a case study for the thesis of this dissertation by focusing on the construction of a defensive circuit wall beginning in 378 B.C. The 11 km wall was the largest single monument of the Republic, and its fragments still form the most visible remains from the period. From physical evidence for the building process, I argue that the wall continued Archaic Roman labor arrangement practices in its use of corvée labor. Based on comparative material and on DeLaine's methodology, I model the labor cost of the wall, and I suggest that the non-remunerative corvée was disastrous to Roman society, exacerbating debt problems. I read this into Livy's narrative: the wall's size, cost, and manner of labor arrangement, rather than the Gallic sack, were responsible for the social problems at Rome in the mid-fourth century.

Following the crisis presented by the wall, Rome's building industry slowed considerably until the very late fourth century. The second chapter details this recession and eventual recovery, arguing that the innovation of large-scale contracting buoyed by the early use of coinage helped the turnaround. The context for these developments is seen in early censorial building programs under C. Maenius (318 B.C.) and Ap. Claudius Caecus (312 B.C.).

With contracting and coinage in place, the means to a full-scale recovery in Rome's building industry appeared. The third chapter details the building boom of the third century. Despite lacunose sources, we know of an abundance of projects begun and completed from the early third century onwards. Behind this expansion, I argue, lay the forces of a labor market. This chapter presents a comparative historical approach, but the argument is also supported by previously unremarked-upon technical innovations at this time in building materials and in lifting technologies. I also discuss the development of Roman coinage, its relationship at this point to construction, and the essential nature of contracts and wages to the circulation of state-minted cash to the urban consumer.

The fourth chapter moves from supply-side concerns to consider the role of demand. This raises the much-discussed subject of the Roman triumph, but less for political or religious aspects, and more for how it shaped demand for certain types of monuments in certain locations. Rising competition both among triumphators and censors promoted clustering rather than expansion into new zones of the city, and also supported innovative secular architecture to fit within the rubric of censorial upkeep or to connote triumphal display.

Each of the four chapters has a distinct theme—i) the wall; ii) the formation of contractual public construction; iii) the emergence of labor market forces; iv) the demand side of the building industry. But each chapter is also presented chronologically, as these four themes follow a roughly temporal progression. The historical narrative they present as a collective is that of the developing city from 390 to 168, and, in the conclusion, I take the opportunity to discuss the shape of the Mid-Republican city in its established

form, in the middle of the second century at the cusp of those changes that would soon

follow.

CHAPTER ONE
Rome after the Gallic Sack: The City Wall, its Labor Cost, and its Consequences

By far the largest construction project of the Middle Republican period was a full circuit wall built around Rome in the early fourth century B.C. As the literary tradition reports it, the wall was not an isolated project but the culmination of a decade of intensive rebuilding at Rome following the sack of the city by Gallic raiders in 387.[99] According to this same tradition, the urban fabric of Republican Rome was born in these decades; the chaotic street-plan of Livy's contemporary city derived from the frenzied and uncoordinated effort to reconstruct the destroyed city.

This narrative, however, finds little support in the material evidence. Instead, the wall appears to have been a more isolated but no less ambitious project, and its construction raises important questions about the relationship of building to Roman society of the Middle Republic. What scale of social cost was involved in such a massive undertaking; how was that cost managed, and how many Romans were involved; and what result did the building process have? A careful examination of the wall's archaeological remains allows us to quantify on an order of magnitude the labor cost of the wall's construction. In Rome's society that had been up to that point predominantly

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[99] Livy gives the date as 390; see discussion below.

agrarian, constructing the wall meant that those involved in the construction required

their normal activities of agrarian production to be in some way replaced or compensated.

This point is all the more vital because the wall was likely built by means of corvée labor,

i.e., labor distrained as a tax on the Roman population. Thereby, the wall's cost directly

impacted Romans' capacity to provide for themselves at a most basic level.

How costly was the fourth century circuit wall? A conservative estimate

presented here suggests that the project required around five months of labor *per capita*

from the eligible adult male population, and it is argued that this building cost formed a

major catalyst for the social disruption and crisis that marked the half-century following

the Gallic sack. I will suggest that the decision to build a circuit wall, rather than the

Gallic sack, was the greatest disruption to the early fourth century Roman society. It is

not new to take a revisionist stance towards the annalists' reconstruction of the Gallic

sack and its consequences: skepticism was already expressed by Niebuhr.[100] What I do

intend this chapter to offer, however, is a means of accounting for both the available

archaeological data and a critical reading of our extant source material, something that

has previously been difficult. In order to do this, the chapter departs after a historical

(and historiographical) overview into a technical discussion of the archaeology of the

circuit wall and the arrangement of its construction, before returning to consider its

impact.

The Roman Situation 400-387 B.C.: Opportunity and Disaster

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[100] Niehbur 1827 II 267.

Italy at the start of the fourth century entered into a period of transition.[101] In the

south, the kingdom of Syracuse stabilized and consolidated its hold on Sicily before

turning towards expansionist designs on mainland Italy during the long reign of

Dionysios I (406-367). His imperialist policies brought much of the southern peninsula

to arms, and his military influence was felt in central Italy and the area of Rome itself

when he raided the port city of Pyrgi in 384.[102] Meanwhile, in the north of the peninsula,

incursions of tribes of Alpine Gauls began to displace Etruscan settlements in the Po

Valley; Polybius notes the suddenness of their incursion into what was the northern

region of Etruria.[103] For reasons that are still not entirely understood, Etruscan society in

between both of these expansions had been waning for several generations: one recent

study suggests that deeper environmental factors may have been at play.[104]

Geographically in the middle of these global events, Rome found itself with room

to expand. In 396, a protracted siege brought down the Etruscan stronghold of Veii, and

with it the *ager Veientanus*, a territory of some 560 km^2, came into Roman control.[105]

The conquest of Veii marked a real turning point in Rome's history that is recognizable

even in the much elaborated version transmitted by our later sources.[106] The lengthy

siege seems to have helped to trigger a transition in Roman society from an agrarian

community engaged in seasonal-conflict to a more complex economy with a permanent

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[101] See *infra alia* Purcell in *CAH* VI.
[102] Diod. Sic. 15.14.3-4. Sordi goes so far as to suggest that it was in preparation for this attack that Dionysios I invoked the Gauls against Rome, 1960: 62-72.
[103] Polyb. 2.17.3: παραδόξως, but Livy's narrative (5.34) gives a more gradual picture of their migrations.
[104] Harrison, Catani, and Turfa 2010 have demonstrated the presence of heavy metal poisoning in late Etruscan skeletal remains and have raised the interesting possibility that Etruscan mining activity, often undertaken in close proximity to settlements, may have contributed greatly to the society's demise. I am thankful to J. Turfa for sharing her work and for discussing this point with me.
[105] 562 km^2, Beloch 1926: 620.
[106] The length of the siege, for example, was held to have been 10 years, in imitation of the Trojan War.

army whom it was now necessary to pay.[107] Surplus production became essential, and

the *ager Veientanus* was distributed not only to *patres familias* but also to their adult sons

in an effort to step up Rome's production by increasing the landed members of Roman

society.[108] This mix of a rapid increase in landholding and landholders with the

enslavement of the population of Veii must have had a markedly positive impact on

Rome's productive capacity.

Yet the success at Veii was short term. Despite the power vacuum in central Italy

in the first decades of the fourth century, Rome lagged until the latter half of the century:

militarily, it was only then that Rome dissolved the Latin League and emerged as a

singular Italian power; economically, it was only then that Roman society reached a level

of complexity that demanded, for example, the production of coinage. Instead, the full

narrative of Livy records minor and not always successful campaigns abroad and massive

social disruptions at home including a ten-year anarchic period from 376-67. Central to

this history is the portrayal of the bitter struggle over the agricultural debt and

enfranchisement of the plebeian class. As the next chapter reviews in closer detail, the

situation in the city itself mirrored this picture. The mid-fourth century saw a long lull in

public building activity at Rome: the wall in the first half of the century was an anomaly

in an otherwise quiet period for the city's construction industry.

According to our literary sources, the most immediate cause of this retarded

development was the Gallic sack. In the summer of 387,[109] a group of the same Gallic

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[107] On the watershed economic impact of the Veian conquest, see Lo Cascio 2009: 19-20.
[108] Liv. 5.30.8-9.
[109] Livy places the sack in the consular year of Valerius Potitus and Manlius Capitolinus and thus in 390
(5.31.2); Diodorus correlates Allia with Dionysios I of Syracuse's siege of Rhegium in 387, and Polybius
connects the siege of Rhegium with the sack. As we know that the Greek world knew of the sack of Rome

tribes that had displaced the Etruscans in the Po Valley crossed the Apennines and moved into central Italy. An advance Roman army was routed at the Allia on July 18th of that year, a day that would perpetually remain a *dies ater* in the Roman calendar.[110] The remnants of the Roman army fled to Veii; the most able commander at the time, M. Furius Camillus, was then exiled in Ardea. Their path open, the Gauls moved on Rome itself, captured and razed the entire city except the Capitol, and withdrew either after being paid a ransom or with the heroic return of Camillus with an army.[111]

This is the bare-boned outline of one of the most important, but also one of the most historiographically confused, events of Roman history.[112] It is accepted as fact that it happened, but many of the details of the Gallic sack are distorted beyond recovery. For our purposes, it is worth highlighting the importance that the Gallic sack was purported to have had on the urban fabric of Rome.

The Impact of the Sack on the City of Rome According to the Literary Sources

By the time that Plutarch was writing, the Gallic destruction was seen as having totally destroyed Rome, and the Greek author could describe the air full of vast quantities of ash from the smoldering city.[113] This remained accepted fact for centuries, and one

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almost instantly, the decision of some source common to Diodorus and Polybius to peg the Roman event to external Greek chronology is encouraging. Williams 2001: 107-8 follows a similar line of reasoning.

[110] Liv. 6.1.11.

[111] Yet another explanation is given by Polyb. 2.18.3, who suggests that the invasion of the Veneti into the Gallic territory in the Po Valley caused the raiders to return home. Walbank *comm. ad loc.* suggests that this belongs to an even early strata of historical explanation than the creation of the Camillus story.

[112] The literature on the complexities of the historiographic traditions on the sack is vast. An entry can be gained in handbooks such as Cornell in *CAH* VII.2²; beyond that I would signal a short article by Skutsch (1953) which demonstrates how much variation there was already when the story was recorded by Ennius.

[113] Plut. *Cam.* 22.6, 28.1. The notion of air filled with ashes is found earlier in Liv. 5.48.2.

Byzantine historian speaks plainly of *Galli qui Romam incenderant*.[114] But, this is not

how our earliest preserved source saw it: over two centuries prior to Plutarch, Polybius

tersely noted only that the Gauls had "occupied Rome itself except the Capitoline hill,"

κατέσχον αὐτὴν τὴν Ῥώμην πλὴν τοῦ Καπετωλίου (2.18.2). Polybius had contact

with some of those Greek sources who knew almost immediately of the sack, and his

choice of the verb κατέχω has the force of seizure and possession, not sacking and

burning.[115]

By the time of Augustus, however, the notion that some, if not all, of the city had

burned had gained traction with the Annalists.[116] Livy himself shows signs of this

transition as he seems to transmit two separate versions of the Gallic sack. In one

version, the author expresses surprise that the destruction was unusually contained in a

conquered city: Livy had himself lived through the devastations seen in the recent fall of

Mutina or the Perusine War.[117] In another version a chapter later, however, nothing

remains of the whole city beneath the Capitoline except ruins: *inter incendia ac ruinas

captae urbis nihil superesse*.[118]

If the total *incendium* is a later invention, it was added for a purpose, as various

etiologies hinge on the story of a destructive Gallic fire. One such etiology is the detail

that private citizens were afforded freer access to building materials in order to aid the

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[114] Just. 20.5.4: *legati Gallorum qui ante menses Romam incenderant*.
[115] S.v. *LSJ* "κατέχω." As discussed below, two generations after Polybius, Quadrigarius already knew the tradition of the destructive *incendium Gallicum*, cf. Plut. *Num.* 1.2. The most famous Greek source to know at an early date of the sack was Aristotle, but this does not entail some sort of privileged authoritative position, as see Momigliano 1942: 113, "Greek legends of the Gauls…are almost contemporary with facts."
[116] The *Fasti Praenestini* (Valerius Flaccus) refer to *ruina* (*Insc.Ital.* XIII fasc. II n. 17 p. 122). Dion. Hal. relates the simple Polybian version (13.6), but then also implies fire on the Palatine (14.2); Diod. Sic. does not specifically mention fire during the sack, but he picks up on the notion of rebuilding after fire at 14.116.8.
[117] 5.42.2: *nequaquam perinde atque in capta urbe primo die aut passim aut late vagatus est ignis*.
[118] 5.43.1.

reconstruction effort. Livy tells us that the right to quarry stone and timber from anywhere was extended, and that tiles were for the first time provided at public expense, *tegula publice praebita est* (5.55.3). Diodorus notes this same detail of publically provisioned tiles known as πολιτικαὶ, which originated at this moment, and which he claims still existed in his time (14.116.8). Aside from these two references, these public bricks are otherwise unknown.[119]

There was, however, a much larger etiology assigned to the Gallic sack, this one meant to explain the urban character of Rome itself as it was known to both Livy and Diodorus. According to both authors, the desired effect on the part of the state's new dispensation of building materials is achieved, and the Roman public build with an unprecedented energy. Within a year, Livy reports, a new Rome was standing (6.4.6), but the result was chaotic:

> *Festinatio curam exemit vicos dirigendi, dum omisso sui alienique discrimine in vacuo aedificant. Ea est causa ut veteres cloacae, primo per publicum ductae, nunc privata passim subeant tecta, formaque urbis sit occupatae magis quam divisae similis.* (5.55.4-5).

> Haste removed their care for arranging the streets, while, after any discretion had been set aside for what was their own or belonged to another, they built up the open spaces. This is the reason that the old sewers that once ran through public space now here and there run under private houses, and the form of the city resembles one occupied rather than distributed.

The city of Rome is an *urbs occupata magis quam divisa*. *Divisa* would remind us of the orderly partitioning of the Vitruvian city or Polyibus' depiction of the Roman legionary camp. *Occupata*, on the other hand, can easily mean "invaded," and Livy implies here

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[119] Cf. Ogilvie Comm ad Liv. 5.55.3

that Rome's urban footprint is evidence of a completely captured city.[120] Diodorus

relates the same reason behind the still narrow and cramped streets of Rome (14.116.9).

At this point, Diodorus turns away from Roman affairs; Livy, of course,

continues, and the theme of construction remains present. At 6.1.6, we read:

> *Cum civitas in opere ac labore assiduo reficiendae urbis teneretur, interim Q. Fabio, simul primum magistratu abiit, ab Cn. Marcio tribuno plebis dicta dies est, quod legatus in Gallos, ad quos missus erat orator, contra ius gentium pugnasset.*

> While the citizen body was engaged in the constant work and effort of rebuilding the city, Q. Fabius, as soon as he abdicated his office, was indicted by the Tribune of the Plebs Cn. Marcius, as having fought against the Gauls, to whom he had been sent as an envoy, contrary to the *ius gentium*.

In the coupling of two seemingly unrelated events, the building activity takes on the

quality of distracting the plebs from the prosecution of Fabius, something in which this

activity played no direct part. [121] Political machinations elude their attentions, which

were busied instead with the effort of construction. A similar juxtaposition, only this

time less oblique, occurs at 6.5 when the tribunes attempt to restart land-reform

legislation, but the plebs are said to be exhausted by their efforts and for that reason less

concerned for their agrarian situation (*propter aedificandi curam…exhaustam…eoque*

agri immemorem).

The construction efforts of the plebs continue to gain traction: Livy's sixth book

shows by far the highest concentration of mentions of public construction, rather than of

public monuments, in his entire first decade; otherwise, he restricts himself to vows or

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[120] Cf. *OLD* "*occupare*" defn. II.B. See esp. Cic. *Agr.* 2.28.75, where *occupare* is what follows *obsidere*, that is, it is a word that describes the result of a successful siege. Rodriguez Almeida 2002: 13 focuses on Livy's use of the phrase *forma urbis* here to suggest that this is evidence of a map of Mid-Republican Rome, which displayed relevant "urbanistic data" to the Augustan historian. I would not agree as I am not sure there is reason to treat the use of *forma* here so literally. Secondly, I am not aware of any Roman map that physically presented the lines of *cloaca,* which seems to be Livy's key piece of visual evidence. And finally, the Livy's point seems to be explaining the shape of the city in *his* day, rather than in the past, and suggesting that its origins lay in past historical changes.
[121] Oakley Comm. *ad* Liv. *loc. cit.* notes that *cum…interim* is a common Livian tool for linking two otherwise unrelated events.

dedications of monuments. At 6.11, however, the theme has turned sinister: the citizens are burdened with a huge amount of debt from all the construction expenditures. "And there had been amassed a huge burden of debt, because of a thing most pernicious even to the wealthy, namely, construction," *Et erat aeris alieni magna vis re damnosissima etiam divitibus, aedificando, contracta*. The result of this, Livy suggests, is that the *plebs* are susceptible to the treachery of Manlius Capitolinus' bid for tyranny. Construction emerges once more in the capacity of provoking debt (and consequent social collapse) at 6.32 with the cost for the construction of the circuit wall. This last passage will be discussed in great length shortly, but for the time being it is worthwhile to point out its place within Livy's narrative; the wall is built in the intervening years between the Gallic sack in 390 and the anarchic years leading up to the Licinio-Sextian laws in 367, during which the issue of plebeian debt brought the political machinery of Rome to a standstill, and the election of magistrates and all public business was halted from 375-71.

We can now summarize the sequence of Livy's narrative of the Gallic sack and its aftermath as follows:

1. City completely destroyed by Gallic fire (5.41.9-5.43.1; 5.48.2; 5.53.9 [*oratio recta* of Camillus])
2. Rebuilding activity promoted by state legislation concerning building materials (5.55.3; cf. Diod. Sic. 14.116.8)
3. Rebuilding activity commences (5.55.4); plebs respond with abandon, and the city is quickly rebuilt, however in the chaotic fashion evident in Livy's time (5.55.5).
4. Rebuilding first busies the plebs (6.1.6; 6.5) and ultimately leads to large amounts of debt (6.11.9; 6.32.1-2).
5. The mounting problem of debt from building costs allows the plebs to be manipulated (the Manlius Capitolinus episode, background given at 6.11.2-10 and in particular 6.11.9) and provokes social collapse (the Licinio-Sextian rogations and anarchy until their passage, beginning at 6.35).

When we take into account that most of the intervening narrative treats foreign events,

we see the dominance that the construction narrative had on Livy's Roman domestic

history in the first half of the fourth century. The sequence of events becomes a teleology

set in motion by the destruction wrought by the *incendium Gallicum*. If we follow Livy's

reconstruction, a counter-factual approach might suggest that, had the Gauls *not* in fact

destroyed the city, the social problems of the mid-fourth century would have been

avoidable.[122]

The Incendium *in the Archaeological Record*

As important as the *incendium Gallicum* becomes to the framework of Livy's

history of the fourth century, it goes up in smoke when confronted with the evidence on

the ground. On a larger level, the notion of the city's complex plan dating back to a

single moment post-destruction is problematic: the hectic streets that Diodorus, Livy, and

other authors knew were the result of a slow agglomeration of residences and other

structures throughout the city's long history.[123] More often than not, in Roman towns

built *ex novo*, the construction process no matter how frenetic results in order rather than

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[122] We see the broader importance of the *incendium* to Livy's historical conception in regard to his opinion on available source material, where he makes the claim in the opening of Book 6 that all archival sources prior to the sack were destroyed when the city was sacked and burned (*incensa urba pleraeque interiere*, 6.1.2). This sentiment finds parallel in earlier annalist opinion, and the employment of a destructive *incendium Gallicum* as primary catalyst for post-390 history was not Livy's own invention. In particular, the same sentiment is found in Plut. *Num.* 1.2 regarding an annalist named "Clodius" normally identified as Q. Claudius Quadrigarius. But as Oakley and others have pointed out (Oakley 1997: 382; see also Frier 1979: 119-26.), Livy's own narrative—his first decade being almost completely preserved—betrays his claim. A binary concept of destroyed sources prior to the fire and plentifully available sources afterwards cannot be accepted; rather, "There is no clear point at which authentic records begin."

[123] We also now know that some degree of urban planning, if it can be called that, (terracing work on the Capitoline) had begun on the hills of Rome already as far back as the bronze age: Lugli and Rosa 2001.

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disorder.[124] Settlement continuity, rather than any abrupt discontinuity, is responsible for Rome's urban plan.

On a more detailed level, while there are now some limited archaeological indications of burning, the idea of total destruction appears false. Einar Gjerstad's synthesis of Archaic Rome attempted to assemble a variety of different points of evidence into a single, contemporary destruction horizon, but this theory along with much of his chronology have been abandoned in the intervening half century since the publication of *Early Rome*. While the *Fasti Praenestini* specifically refer to the *ruina Palati / [i]ncensi a Gallis*,[125] excavations in the last quarter century on the SW corner of the Palatine in the precinct of Magna Mater note significant work in the early fourth century but without relation to a preceding destruction.[126] On the other side of the Palatine, that emptying onto the upper *Sacra Via* where a more complete stratigraphy exists from the very earliest city to the Augustan period, excavators have found difficulty in aligning evidence on the ground with the historiographic record.[127]

With regard to the Forum and in particular to the Comitium, Gjerstad's theory has been flatly rejected by Coarelli owing to his reexamination of the stratigraphy of the NW Forum in a number of publications.[128] Perhaps the strongest remaining evidence of a

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[124] This is true even in the mid-Republican period: witness the original *castrum* of Ostia, dated to the third century.

[125] *Insc.Ital.* XIII fasc. II, n. 17, pp. 122.

[126] Pensabene 1998: 150; see 24-25 with reference to Gjerstad, but it is not clear if Pensabene himself continues to accept Gjerstad's ideas on the sack.

[127] See Carafa on phase 9 of *domus* 3 in Carandini and Carafa 1995: 253-54, "Tuttavia la precisa indicazione cronologica basata sui materiali ceramici che datano la fase in questione non si accorda con le indicazioni della tradizione…non è stato possibile individuare segni di distruzioni violente dell'edificio." Although, when Gualandi returns to the same house in the second volume (Carandini and Papi 1999: 18), reference is given without remark to restorations following the *incendium Gallicum* of 390.

[128] This would be the fourth phase of the Comitium, discussed at further length in the following chapter; this is owed to the work of Coarelli 1977: 197 ff; 1979: 229-30; 1983: 129-130; all reprised with no mention of the sack at all in *LTUR* I "Comitium" 309-14.

destructive fire is a thick ash layer found in recent excavations under the Forum of Caesar at the foot of the Capitoline. Excavated between 2004 and 2006, this find has received only the most summary publication at this date and still awaits proper study.[129] As fire in this area, at the foot of the citadel in which Romans reputedly took refuge, did not reach the nearby Comitium, its extent must have been limited. There is no reason to reject entirely some damage from the Gallic sack, but there is also little reason to think that the consequent fire and destruction was total. As a point of comparison, the fire of 64 CE that destroyed much of the upper Sacra Via and the houses in the valley between the Caelian and Oppian (the present site of the Colosseum) is easily detectable in the stratigraphy as a widespread destruction horizon.[130] This fire during Nero's reign was large enough to allow for the wholesale restructuring of the area into the *Domus Aurea* complex. In the archaeological record, a fire that devastating is hard to miss.

Perhaps we need to shift our thinking on the impact of the *incendium Gallicum* from physical destruction to the implied threat of physical destruction. In Roman society of the 380s, the memory of their own recent sacking of Veii 16 years prior remained vivid: the destruction of the major Etruscan city, the mass enslavement of the population, and the transferring of the city's deities to Rome all represented how Romans themselves dealt with conquered peoples, even if the invading Gauls did not act in a similar fashion. But the fact that a foreign army was able to enter the city meant that the possibility of such destruction existed. For this reason, fear of the Gauls, what has been called *metus*

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[129] Meneghini and Santangeli Valenzani 2007: 27, "uno spesso strato di detriti carbonizzati prodotti da un grande incendio che potrebbe essere indentificato con quello causato dal saccheggio gallico del 390 a.C." Meneghini 2009: 31 without reference to the sack in the text but see n. 75, which remains cautious. The pre-Caesarian area is currently being studied by A. Delfino.
[130] See Gualandi in Carandini and Papi 1995: 175-76; similarly but less explicitly, Hurst and Cirone 2003: 61-62 with specific reference to strata US-28 and US-29.

Gallicus by modern historians, continued to have an almost institutionalized effect on Romans for centuries in the Republic.[131] The approach of Gauls, *tumultus Gallicus*, was viewed at Rome as an extraordinary menace, and on three occasions in 228, 216, and 114 B.C., the Romans resorted to human sacrifice in order to invoke divine protection from such a threat.[132]

Rome's inability to defend itself from the Gallic sack exposed its weakness and above all created the need for a more updated system of defense. In short, the real impact of the Gallic sack was not any immediate destruction, rather it was the consequent decision to stave off such destruction in the future. The direct response to the sack was the creation at Rome for the first time of a massive circuit wall around the city, and it was built with disregard to any consequence of its expense. In his account of 378 B.C., Livy tells us the following (6.32.1-2):

> *Parvo intervallo ad respirandum debitoribus dato postquam quietae res ab hostibus erant, celebrari de integro iuris dictio, et tantum abesse spes veteris levandi fenoris, ut tributo novum fenus contraheretur in murum a censoribus locatum saxo quadrato faciundum. Cui succumbere oneri coacta plebes, quia quem dilectum impedirent non habebant tribuni plebis.*

> Although there was a brief space to breathe given to the debtors, after there was quiet from the enemies, legal proceedings were again frequent and hope of alleviating existing debt was so absent that new debt was accumulated from an assessment for a wall contracted by the censors to be built in *opus quadratum*; to which burden the plebs were compelled to submit, because the tribunes had no levy to obstruct.

Even if Rome was not actually burnt down in 390, the citizens were motivated to do everything in their power to defend their city from such threats in the future.

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[131] *Metus Gallicus*: Bellen 1985; Williams 2001: 171.

[132] Liv. 10.26.13, *Gallici tumultus praecipuus timor civitatem tenuit*. Sources for human sacrifice in the face of a Gallic enemy found in Wiseman 1995: 118-19, where the author proposes a fourth such occurrence. On the history of Rome's almost uninterrupted conflict with the Gauls beginning in this period until the late third century, see Polyb. 2.18.6-2.19 with Walbank's commentary for the difficulties in Polybius' chronology.

The Fourth Century Wall: The Archaeological Evidence

The wall to which Livy refers has been identified at several points around the modern city of Rome. The relevant archaeology is discussed in Appendix 1, but a few preliminary comments are necessary. First, the wall matches Livy's masonry description: it is in ashlar masonry of squared stones (*saxum quadratum*), and it is probable that Livy himself saw stretches of the selfsame monument as he was composing his histories.[133] Second, Tenney Frank first noted that long stretches of the wall were made almost exclusively from blocks of *tufo giallo della via Tiberina* ("Grotta Oscura" tuff), which was supplied from quarries on the west bank of the Tiber in the old territory of Veii.[134] Especially in such high quantities as were required for the wall, the stone cannot have been used at Rome prior to the acquisition of the *ager Veientanus*, and thus the sections of the wall predominantly of *tufo giallo* must postdate the sack of Veii (396 B.C.).[135] From here onwards, the chapter now turns to a technical evaluation of the wall, the generative and construction processes, and the labor calculation before returning to consider the monument's social impact.

Our assumption up to this point has been that Rome was badly defended during the Gallic sack and was only afterwards equipped with a circuit wall; this is an idea first suggested by J.B. Carter in 1909. Recent scholarship, however, has raised the possibility

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[133] The wall in the Augustan period, that is, the period of Livy's writing career, had been dismantled in places and had seen its gates refurbished in other places, but it had clearly by that time lost its function as a defensive structure and had become more closely integrated into the city's urban fabric. There is thus an interesting notion of Augustan Rome as a city without a real functioning wall, as has been explored in part by Haselberger 2007: 230-31. For a wonderful view of the *agger*'s urban character over the passage of time during the late Republic and empire, see Wiseman 1998.

[134] Frank 1918: 181-83.

[135] Blake 1947: 27-29; the inscribed cippus of the *Lapis Niger* forms the only datable exception.

of an earlier circuit wall along the lines of the Republican wall.[136] In fact, the pendulum

regarding this issue has swung both ways: until the work of Carter, and then of Frank and

Säflund in the early twentieth century, the notion derived from literary sources of a wall

built under the kings was unquestioned, hence the name "Servian" that still circulates in

modern scholarship.[137]   Since 1987, and under the influence of Carandini's discovery of

an eighth-century wall in cyclopean masonry at the northern foot of the Palatine hill, the

idea of a full city wall in the Regal period has regained currency.[138] Carandini's wall,

however, encircled at most only the Palatine hill, and probably several of the other hills

had their own defensive fortificatons in the city's earliest phase. Whether these defenses

were combined prior to the fourth century is a more difficult question. Cifani especially

has presented detailed arguments in favor of a sixth century defensive circuit, and his

reassessment has gained some following. [139]

It would be difficult to envisage the city unified around all Rome's hills prior to

the creation of the central Forum area as a viable public space, a dredging and leveling

project that occurred sometime in the 6th century B.C.[140] Thus, we are arguing about the

nature of the city's defenses towards the end of the Regal period. There was to some

extent a similar debate in antiquity: the notion of Rome without a wall was, as Cornell

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[136] Coarelli 1995; Cifani 1998

[137] For earlier scholarship—Lanciani, for example, uncritically referred to Servius' wall—see Cifani 1998: 359-62; Andreussi in *LTUR* III "'Murus Servii Tullii'; Mura repubblicane" p. 319. Both authors call the scholarship of Frank and Säflund "ipercritica."

[138] This is the explicit rationale given by Cifani 1998: 361 for raising the issue of a sixth century circuit wall.

[139] Cifani restates his case in 2008; the arguments of Coarelli 1995 and Cifani 1998 are now found either explicitly or not in other discussions on the wall (*LTUR* III s.v. M. Andreussi "'Murus Servii Tullii';" Barbera 2008; Fabbri 2008) as well as more general discussions on Roman topography, fortifications, and urbanism of the period (Becker 2007, 159-61; Torelli 2008, 270). Furthermore, see the opinion of the two most recent academic guidebooks to Rome, Coarelli 2007, 11 and Claridge 2010, 6, albeit the former is written by one of the first proponents of this new theory, and the latter admits some caution.

[140] Ammerman 1990.

has pointed out, too radical to ancient sources to be admitted, and discussion focused instead over which king was responsible for each hill's addition to the city's circuit of defenses.[141] From the point of view of the ancient sources, the narrative of the Gallic sack is orchestrated to emphasize the unpreparedness of the city to direct assault.[142] The consistent detail in all reports that the Capitol alone withstood the siege suggests that the Romans were prepared to defend individual hilltop citadels rather than the nucleus of a fortified city.[143]

An archaeological perspective also fails to provide clear and positive evidence of an earlier circuit. Comparanda from several cities in Latium with *aggeres* and walls have been suggested both for[144] and against[145] an early wall at Rome. Important cities such as Ficana, Ardea, Satricum, and Lavinium all had defense works of some sort from an early period. But we do not need to suggest that Rome completely lacked a wall; rather, we should question whether it had an 11 km wall that unified all seven (in reality, more) hills. The Latial cities were hilltop settlements with circuits around their individual hills; they were also nowhere near the size of Rome's urban space. Instead, both the inclusion

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[141] Cornell 1995: 200-2; e.g. Ancus connected the entire city including the Janiculum (Liv. 1.33.6; Str. 5.3.7), but Tarquin then was the first to do so in stone (Liv. 1.36.1). Often the same source attributed different stretches to different kings, e.g. the Aventine according to Dionysios was walled by Romulus (2.37) and Ancus (3.43).

[142] Cornell 1995: 200, 320.

[143] I find it hard to agree with Sordi 1984 that the defense of the Capitol was entirely an invention of Fabius Pictor to bring the Roman story into alignment with Herodotus' narrative of the Persian siege of the Athenian Acropolis. The fact that the defense of the Capitol appears, for example, outside of the Gallic narrative in the speech of L. Lentulus at the Caudine Forks (Liv. 9.4) suggests that the account was not only reliant on Pictor, but also had some basis in various family traditions and has, thus, some kernel of truth however expanded it may have become. See Williams 2001: 150-57. Livy's description of the Gallic route into the city as moving from the *Porta Collina* to the Forum is probably fiction (5.41.4): recognizing that the Gauls were moving from their victory at the Allia, Livy simply presumed that they entered the city along the course of the Via Salaria, and thus into the *Porta Collina*.

[144] Cifani 1998.

[145] Cornell 1994.

of varied terrain and the circuit length make the Roman project a near *unicum* in

Republican Latium; these facts were long ago emphasized by Castagnoli.[146]
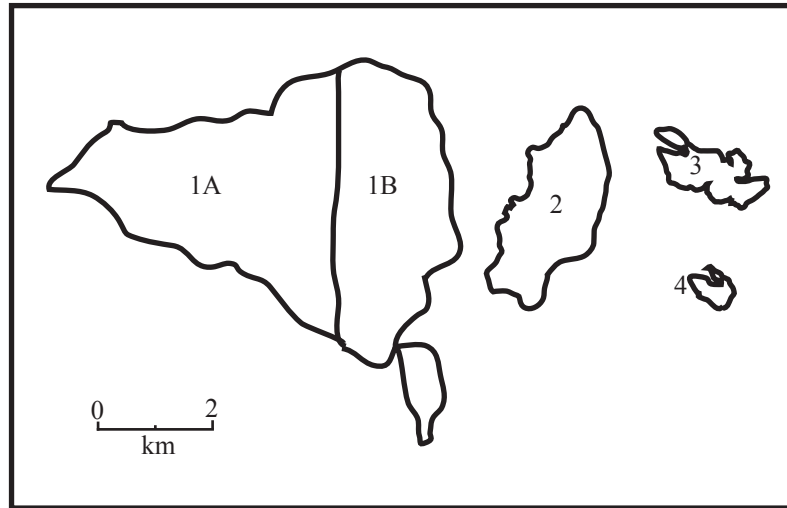
Figure 1.1 Scaled comparison of city fortifications. 1 – Syracuse (1A – Additions to Syracusan fortifications of Dionysius I, 1B – Classical period fortifications); 2 – Rome's fourth century wall; 3 – Ardea; 4 – Lavinium.[147]

In reality, only a significant capital city such as Syracuse in Sicily could boast of a full

ashlar wall of that length and over that varied topography (figure 1.1). It is heuristically

flawed to argue that archaic Rome had a wall on comparative evidence from nearby

cities, but then also had a wall that dwarfed the fortifications of those other cities: we

would have our cake and eat it, too.

Material evidence from the wall at Rome itself has similar difficulty proving the

existence of Archaic wall beyond the shadow of a doubt. Stratigraphic material is scarce

due to the era of much excavation, although some chamber tombs containing Genucilian

ware (fourth/third century) on the southern Quirinal and *within* the wall have not been

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[146] Castagnoli 1974: 427-28, see Cornell 1994, although otherwise there is still too little acknowledgement of these details among those who would prefer to search for Latial comparanda as a way of proving the date of the Roman wall.
[147] Ardea and Lavinium are represented by the suggested urbanized space as their city wall circuits have not been traced around the entire city: in fact, Ardea had three concentric circles, each being significantly smaller than this representation. Based on Guaitoli 1977.

fully taken into account by advocates of an Archaic circuit.[148] A single and often

mentioned small fragment of red-figure ceramic found in the *agger* and dated to 490-470

cannot, as Cornell points out, "be made to bear the weight that some scholars have tried

to place on it."[149]

Similarly, the older theory that the wall's use of both *tufo del Palatino* and *tufo*

giallo della via Tiberina represent two distinct phases, one older one newer,[150] needs to

be abandoned in light of the fact that both materials are found at places used at once.

Evidence that is indisputable to my mind to the combined use of both materials in a

single phase is laid out in Appendix 4. And moreover, in the catalog, I discuss more than

one site from the second century B.C. where *tufo del palatino* continued to be used.[151] In

one particular stretch of the circuit excavated in the nineteenth century, Lanciani's sketch

of a now-destroyed section of wall suggests that *tufo del Palatino*, normally identified as

part of the older phase, was in this case used as a revetment on the softer *tufo giallo*

(figure 1.2).[152] More troubling is a long stretch of wall

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[148] Pinza 1912: 68-87 examined some intramural burials on the Capitoline-facing slope of the Quirinal where Via Nazionale meets Largo Magnanapoli, uphill from the remains of the Porta Sanqualis, and he concluded that finds in them that could not have antedated the 4th century. Holloway 1996 extended Pinza's argument and pointed to one intramural chamber tomb in particular (Pinza's Tomb LXI), which he argued contained Genucilian class pots, the open-formed ceramics common in Mid-Republican contexts.

[149] 1995: 199, but see without any sign of a debate the opinion of Cifani 1998: 363. The fragment is discussed at further length in Appendix 4. In brief, as the *agger* is redeposited fill, a single sherd can only give a loose *terminus post quem*, nothing more. The idea that this nondescript piece of a red-figure Attic vase dated the *agger* to the late sixth century is that of Gjerstad 1953, and 1954, but see the criticism of Momigliano 1963. Appendix 4 furthermore seeks to demonstrate that the construction techniques of the *agger* are suggestive of the fact that the entire construction is of a fourth century date.

[150] E.g. Van Deman 1912: 241-43.

[151] Cf. catalog nos. 84 (Temple of Juno in the Forum Holitorium), 91 (the *Lacus Curtius*) and 98 (the Temple of Hercules and the Muses).

[152] Cf. discussion in Appendix 1 "**Section 2.**" See also the discussion of the construction of the *agger* in Appendix 4, which may indicate the same mixing of material. Though this fact has been largely overlooked, mixing tuff within a single construction phase was not uncommon in early and middle Republican architecture (see, ee.g. the podium beneath the earlier Temple of Apollo Medicus or that of Temple C at Largo Argentina. The Largo Argentina temples show a high degree of mixing in tuff with,

all in *tufo del Palatino* on Via Carducci: presented as one of the finer stretches of the

archaic wall, instead this wall sits on nearly three meters of cement.[153] How this

foundation of cement came to underpin an ashlar wall still has not been sufficiently
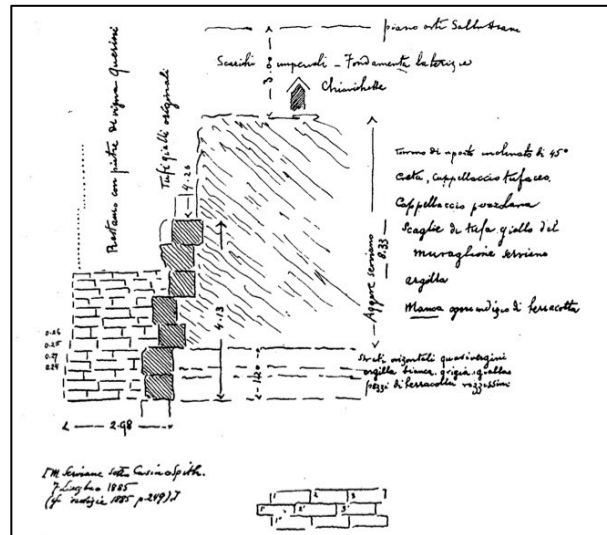
Figure 1.2 Excavation of the Republican wall on the Quirinal. A sketch from Lanciani's notebooks showing a cross section of the wall and *agger* at **Section 2**. Note that the smaller blocks from "Vigna Querini" [*tufo del Palatino*][154] abut the larger blocks of "*tufo giallo*" [della via Tiberina]. Lanciani labels the *tufo del Palatino* work a *restauro*, implying that it represents a later phase. Published by Säflund 1932: 81 fig. 35.

explained by those who argue for its archaic date.[155] All of this is not to argue against the

fact that the local *tufo del Palatino* was the preferred building material of Rome's earliest

ashlar masonry. However, the use of *tufo del Palatino* does not automatically confer an

Archaic date upon a structure, and Cifani's idea that the sections of *tufo del Palatino*

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e.g., some stairs in front of Temple C being in *tufo lionato* and others in *tufo giallo* despite the clear color difference).

[153] Archaic wall: Quilici in Cristofani 1990: 40; Cifani 1998: 368, 2008: 70-71.

[154] The granular tuff from the Vigna Querini quarries is part of the same geological formation as the Palatine quarries, but if Lanciani's identification is correct, the stone was cut in quarries 2 km east of the Porta Esquilina, as see Cifani 2008: 229. The stone is commonly found in archaic architecture and is part of the larger classification of what is otherwise commonly called *cappellaccio* or *tufo granulare grigio*, as see also Cifani *op. cit.* 221.

[155] Cifani 1998: 368 and 2008: 70-71 give the same two citations, a brief but unspecific passage in an older guidebook by Coarelli, and another passage of Coarelli 1995: 18-20, where the concrete is treated without much discussion as later repair. See my discussion of the workmanship on the blocks in the appendix to this chapter: because of their finish, it would be difficult to claim that these blocks represent an exact reuse of an archaic portion of the wall. Säflund's date of the Sullan period, discussed in Appendix 1, is preferable.

around the city can be collected into a unified, single Archaic circuit wall is problematic. Furthermore, details concerning the module or local provenance of the stone, two characteristics that did not change over the long timespan of its use, have little bearing on the argument of the date and phase of Rome's pre-Imperial circuit walls.

More importantly, whatever shape the Archaic wall took, its existence does not seem to have diminished the significance of the Republican circuit. The masons building the wall in the fourth century took a highly variable approach to any pre-existing defenses. There are areas where a pre-existing wall in *tufo del Palatino* does appear to have been restructured in the fourth century circuit: the *Porta Esquilina* is one such case; the northern Quirinal is probably another.[156] Underneath S. Sabina on the Aventine, excavated and studied by Quoniam, *tufo giallo della via Tiberina* blocks were placed directly on top of *tufo del Palatino* courses, and this approach may have been paralleled elsewhere on the Aventine, as well as by a now-destroyed section of wall on the Capitoline.[157] Elsewhere, we find two distinct courses of wall: a double-circuit, one wall in *tufo giallo* and one in *tufo del Palatino* also has been discovered on the SW slope of the Capitoline, though the phasing here is much more complicated.[158] And finally, in some recent excavations underneath Termini Station, it appears that an earlier fortification system was completely demolished to make room for the Republican wall.[159] All of this variable approach to the incorporation of earlier fortification systems suggests

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[156] See discussion in Appendix 1 of the wall at San Vito between **Section 9** and **Section 10**.

[157] Quoniam 1947 for S. Sabina. The other relevant section on the Aventine with *tufo del Palatino* blocks superimposed by those of *tufo giallo* is more debated, but start with Säflund 1932: 28-31; Gjerstad 1954: 62; Quoniam 1947: 59-62; Coarelli 1995: 16; Cifani 1998: 373. The Capitoline section of the wall allegedly built in a similar fashion was near S. Rita, which was moved from the foot of the hill in 1928; cf. Säflund 1932: 99-100.

[158] Cf. Appendix 1, **Sections 13-14.**

[159] This excavation underneath Termini platform 24 (formerly 22) is discussed by Menghi 2008 and here in Appendix 4.

to my mind that the walls of Rome prior to the Republican wall were variable themselves. And, if anything, all of this meant that the fourth century circuit was a more labor-intensive process that started from the ground up even in places where there was already some means of defense.

There is also nothing that forces us to connect the scattered dots of older walls into a unified circuit around the entire city. Most importantly, no secure traces of the wall in *tufo del Palatino* can be found between the hills in the lower lying areas of the city.[160] *Tufo del palatino* walls are found instead on the ridges of the Capitoline (**Sections 13-14**) and the Quirinal, where they would have aided the natural topography and supported fortifications for individual circuits. This arrangement is equally apparent on the Palatine, where no less than five walls can be traced around a hill whose edges never formed part of the later circuit.[161]

To conclude this discussion, Rome had some means of enhancing its natural defenses prior to 390; nothing in particular suggests that such defenses connected into a full, unfied circuit, rather than concentrating on isolated hilltops in the tradition of settlements in Latium. During the sack, Romans took refuge within those hilltop

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[160] The important connection between the Quirinal and Capitoline was once thought to exist, but recent excavation has shown those remains in Salita del Grillo do not belong to the wall, as see discussion in Appendix 1 on the "Capitoline to Quirinal Area" and Meneghini and Santangeli Valenzani 2007: 22-24. Similarly, in the Forum Boarium floodplain, the *tufo del Palatino* blocks on via del Teatro Marcello are in secondary use, whereas the best section of wall excavated in the area is a section on the Vicus Iugarius in *tufo giallo*, see Ruggiero 1990 as well as discussion in Appendix 1. Alternatively, the low-lying area between the Minor and Major Aventine (along modern Viale Aventino) has no *tufo del Palatino* remains; the *Porta Capena* within the valley between the Aventine and Caelian is listed as *tufo lionato*; and for the *agger* with both stones but with large amounts of *tufo giallo*, see the discussion in Appendix 4.
[161] On the Palatine, see Säflund 1932: 3-17; Carandini and Carafa, eds. 1995: 139-84, although I am hesitant to follow the suggestion that the stones consisting of the so-called *murus-Romuli* were part of a circuit that followed the whole hill; Terrenato in *LTUR* III "'Murus Romuli'" 315-17.

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settlements. After the Gallic sack, Romans realized the need to unify their urban core within a single defensive wall.

The Construction Process I: Building Techniques and Processes

1. The Masonry Technique

The wall of the fourth century was built, as Livy suggests, in *opus quadratum*: dry masonry of squared ashlar blocks. The blocks were coarsely dressed; anathyrosis is sometimes observed but is only minor, and more well-preserved *tufo giallo della via Tiberina* blocks often still show axe marks from the quarry.[162] Blocks were laid with courses either entirely in headers or in stretchers. Though a variation on the solid isodomic wall, bonded with in-facing *diatonoi*, which Vitruvius describes as a Greek technique, this manner of building is common in coeval Italian architecture, and Lugli cites almost a dozen examples of the technique solely in Italy and Latium.[163] In the Roman wall, header- and stretcher-courses do not neatly alternate, rather courses are formed in a more random manner; this is unlike many examples, e.g., the walls of Nepi, where attention has been paid to alternate courses of headers and stretchers.[164]

To give the structure stability, part of the wall was sunk underground, and a foundation trenche was excavated to allow for such subterranean work: the signs of this are both in the upward-tapering cross-section of the wall at several points (e.g. **Section 12**) as well as in a differentiated finish in some sections (e.g. **Section 12**, **Section 5c**) between the lower and upper courses. A well-preserved section of the wall unsupported

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[162] Interesting finish is seen on **Section 1**, cf. Appendix 1.
[163] Lugli 1957: 181-83; also Säflund 1932: 119, and Castagnoli 1974: 431-32. See Vitr. 2.8.7.
[164] E.g. at Piazza dei Cinquecento, the sequence from the bottom at one point is S(tretcher)/H(eader)/S/S/S/H/S/H/S/H/S/S/S/S/S, fifteen courses in total. Nepi: Lugli 1957: 182 fig. 21.

by the *agger* on Via di S. Anselmo (**Section 12**) shows a roughness on the lowest five courses from the virgin earth, suggesting that five courses (c. 3 m) were normally laid underground.

2. The Material

As has been discussed, the primary stone used in the fourth century wall is *tufo giallo della via Tiberina* from those quarries on the west bank of the Tiber at Grotta Oscura in the *ager Veientanus*. It was imported to Rome for the project and thus represents the first building stone brought from abroad in such quantity.[165] Geologically, the stone is a welded ash tuff, the product of the eruption of the Monte Sabatini volcano, and the stratum from which it derives stretches on the west bank of the Tiber just north of Rome from Civita Castellana to Prima Porta. The stone is porous and grayish yellow, and it becomes friable once exposed to air.[166] Vitruvius noted this quality and recommended that the quarried stone be cured two years to prove its quality; he classes the stone among the softest tuffs.[167] It weighs 1,520 kg/m^3; larger blocks cut at the quarry were probably about .60 x .60 x 1.20 m = 657 kg.[168]

Second to the *tufo giallo*, the most commonly found material in the wall is *tufo del Palatino*. Commonly called *cappellaccio*, this was quarried within the central area of Rome itself, from outcrops at the base of the Palatine and Capitoline hills. It derives

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[165] Only trace amounts of *tufo giallo della via Tiberina* are known in Roman architecture prior to this point, e.g. the archaic *stele* in the Lapis Niger monument in the Forum.
[166] More geological detail in Jackson and Marra 2006: 414, and Panei and Dell'Orso 2008: 104.
[167] Vitr. 2.7.5, *lapis pallens*, see Jackson and Marra 2006: 410-11 for the identification.
[168] Here and elsewhere, tuff weights are based on reported specific gravities in Jackson *et al.* 2005: tb. 4. This block measurement is based on blocks being about 2 feet (at .30 cm each, see below for discussion of the module). Block lengths are especially variable, so I have chosen to calculate an ideal block of 1:1:2 dimensions (H:W:L), but many blocks were 1.50 m long and weighed 821 kg.

from the same basic volcanic process (welded ash), but comes from the eruption of the

Alban hills rather than the Monte Sabatini. It contains less glass and more lithic material

than the *tufo giallo* and as a result is somewhat stronger.[169] Unsurprisingly for its source,

this is the material of Rome's earliest stone public architecture: e.g., the podium of the

Capitoline, the early Cloaca Maxima, and the early podium of the Temple of the Castores

in the Forum, although as has already been discussed, it continued to be used well into

the Mid-Republic. *Tufo del Palatino* weighs 1,890 kg/m^3; it is in fact one of the heavier

tuffs, and this may explain the smaller module. Block sizes in the wall approach a size of

.27 x .55 x .82 m = .12 m^3, and thus individual blocks of this stone weigh on average 230

kg.[170]

Beyond this, several other tuffs are visible at various places in the wall, in

particular those *tufi lionati* from the Monteverde and Anio regions. However, as is

detailed in the archaeological dossier appended to this chapter (Appendix 1), most of this

stone can be attributed to later phases of the wall from the Second Punic War or even

during Sulla's invasions of the city in the early first century B.C. For the most part, we

will be concerned with the two primary materials, the *tufo giallo* and the *tufo del

Palatino*.

3. The form of the wall: gates, towers, and ramparts

Most gates are known only through textual reference, and though they can largely be

located on the map of the city, few have been fully excavated. A list of Rome's gates in

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[169] Jackson and Marra 2006.
[170] The module for these blocks approaches a ratio of Height:Weight:Length = 1:2:4 based on the Italic-Oscan foot of 27.5 cm (see discussion below of the module).

order given in Varro's *De Lingua Latina* is unfortunately lacunose.[171] Säflund compiled

extensive literary references for 17 gates that can be attributed to the course of the fourth

century wall.[172] To his list should be added *Porta Catularia*[173] and the *Porta*

Rautumenna,[174] bringing the number to 19 attested gates.[175] We probably still lack the

names of a few more: in a notably difficult passage to interpret, Pliny states that there

were 37 gates in total in his day (3.66).

Excavations of the *Porta Sanqualis* and the *Porta Collina* have demonstrated the

layout of a typical city gate as two bastions on either side of a transversal corridor leading

into the wall (see Appendix 1). This is paralleled in other circuit walls of the mid-

Republican period such as those of Cosa.[176] Furthermore, the *Collina* and probably also

the *Sanqualis* were supported by an earthen *agger*; in the case of the *Collina*, a thin

interior wall contained this *agger* at a distance of 6 m from the wall of the gate, and the

Sanqualis also may have had something similar.[177]

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[171] 5.163: ******ligionem Porcius designat cum de Ennio scribens dicit eum coluisse Tutilinae. Sequitur porta Naevia, quod in nemoribus Naeviis: etenim loca, ubi ea, sic dicta. Deinde Rauduscula, quod aerata fuit. Aes raudus dictum; ex eo veteribus in mancipiis scriptum: Raudusculo libram ferito. Hinc Lavernalis ab ara Lavernae*…[He then proceeds to describe those gates *intra muros* on the Palatine].

[172] *Carmentalis*, *Flumentalis, Trigemina, Lavernalis, Raudusculana, Naevia, Capena, Querquetulana, Caelemontana, Esquilina, Conlatina, Viminalis, Collina, Quirinalis, Salutaris, Sanqualis, Fontinalis.*
Several other gates are testified for the Palatine circuit including the *Mugonia* and the *Scalae Caci*; the controversial *Porta Triumphalis* should be excluded from this list; see most recently the salutary comments of Wiseman's review of Beard 2007 in *JRA* 2008.2. The *Conlatina* is often called the *Collatina*, but see the comments of Thein in Haselberger *et al.* 2002, "Porta Conlatina" p. 195.

[173] Thein in Haselberger *et al.* 2002, "Porta Catularia" p. 194.

[174] Thein in Haselberger *et al.* 2002, "Porta Ratumenna" p. 198; cf. Säflund 1932: 167.

[175] There may have been a few more; the "XII Portae" mentioned as a gate by Julius Obsequens (*Prodig.* 70) may or may not pertain and it is found in the regionary catalogs. The *Porta Pandana* probably does not, as Filippi 1998 puts it near the Temple of Saturn, accepted by Thein in Haselberger *et al.* 2002 p. 275.

[176] Cf. Lugli 1957: 112-13, fig. 10.

[177] Fogagnolo 1998: 385-86 for the Collina; the interior wall at the Sanqualis is harder to interpret: Cifani 1998: 365-66 suggests that an L-shaped wall within the gate represents the Archaic gate, but this would run up against the fact that this is precisely where Pinza 1912: 68-87 identified a tomb containing Genucilian pottery within the course of the wall.

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The bastions on either side of the wall were in all likelihood part of a larger series of towers that complemented the circuit itself. The formulaic reference in literary sources to *muri turresque* is evidence in itself, but there is otherwise only very limited archaeological data. [178] The semi-circular line of blocks extending to the interior of the wall at Piazza Manfredo Fanti (**Section 6**) seem not to have supported a tower, although their function is unclear.[179] Without much evidence for towers themselves, how commonly any towers were included in the longer stretch of the wall is an open question. Säflund argued for a limited number only, and noted that the artillery arch found in the wall at Piazza Albania is within the thickness of the wall itself rather than the practice of

Figure 1.3. A relief of a wall with tower and crenellations from the Capitoline. Published by Muñoz 1930 fig. 55, the current whereabouts of this relief and more information regarding its find spot, beyond the general area of the Capitoline Hill, are unknown.

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[178] E.g. Liv. 7.20.9, 22.8.6, 25.7.5, etc.
[179] Volpe and Caruso 1995, and Volpe, *pers. comm.*

artillery platforms in self-standing towers seen at Pompeii or in advanced Greek walls of the fourth century such as Messene.[180]   Ramparts are, however, possible: a crenel appears on the structure depicted in the famous Esquiline tomb painting showing scenes from the Samnite wars.[181]   An intriguing fragment of sculptural relief presumably found on the Capitoline similarly shows a wall with a tower and crenellations (fig. 1.3),[182] and walls are commonly depicted with such features in sculpture from the Augustan period onwards.[183]

4. The *Agger* and *Fossa*

In labor terms, one of the most costly features of the new wall was the construction of a massive earthen *agger* and *fossa* system along the city's eastern flank, which was otherwise poorly defended by the natural topography of the gradual slopes of the eastern Esquiline, Viminal, and Quirinal hills. Archaeology has revealed traces of a large earthwork mound in the area of the *Porta Collina* at the city's northeast corner, down to the *Porta Esquilina*, now the Arch of Gallerius. Other sections, especially the southern Aventine, probably were also enhanced with a similar compound type of defense. The full defensive schematic, at least as seen on the eastern Esquiline, comprised two parallel walls encasing an artificial earthen mound; to the wall's exterior, after a short apron of land, a large trench was excavated to increase the difficulty of any assault on the wall's exterior. Dionysios described the system fully as follows:

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[180] 1932: 266-67.

[181] *RMR* 202-3, fig. 15.

[182] A photograph of the frieze is published in Muñoz 1930: fig. 55, but not discussed, however its inclusion in that volume suggests that the object derives from the Capitoline. Säflund 1932: fig. 72b includes a line-drawing but no further discussion. The current whereabouts of this object as well as any further details are unknown.

[183] E.g. on the gate of the wall-building scene in the Basilica Aemilia reliefs.

ἕν δὲ χωρίον, ὃ τῆς πόλεως ἐπιμαχώματόν ἐστιν, ἀπὸ τῶν Ἰσκυλίνων
καλουμένων πυλῶν μέχρι τῶν Κολλίνων, χειροποιήτων ἐστὶν ἐχυρόν. τάφρος τε
γὰρ ὀρώρυκται πρὸ αὐτοῦ πλάτον ᾗ βραχυτάτη μείζων ἑκατὸν ποδῶν, καὶ
βάθος ἐστὶν αὐτῆς τριακοντάπουν. τεῖχος δ' ὑπερανέστηκε τὴν τάφρου χώματι
προσεχόμενον ἔνδοθεν ὑψηλῷ καὶ πλατεῖ, οἷον μήτε κριοῖς κατασεισθῆναι μήτε
ὑπορυττομένων τῶν θεμελίων ἀνατραπῆναι. τοῦτο τὸ χωρίον ἑπτὰ μέν ἐστι
μάλιστα μῆκος σταδίων, πεντήκοντα δὲ ποδῶν ἐπὶ πλάτος.

One section, which is the most vulnerable part of the city, extending from the Esquiline
Gate, as it is called, to the Colline, is strengthened artificially. For there is a ditch
excavated in front of it more than one hundred feet in breadth where it is narrowest, and
thirty in depth; and above this rises a wall supported on the inside by an earthen rampart
so high and broad that it can neither be shaken by battering rams nor thrown down by
undermining the foundations. This section is about seven stades in length and fifty feet in
breadth.[184]

All of these features are archaeologically attested, but with slightly varying

measurements. The *agger* itself seems to have run beyond the *Porta Collina* to the W on

the Quirinal, where it is detectable at Largo Santa Susanna; it was also detected at the

Horti Maecenatis to the south of the *Porta Esquilina*.[185] In the area of Stazione Termini,

the excavated width of the *fossa* was 36 m at the top, tapering down to 8 m at the base. A

curtain of 8 m stood between the *fossa* and the exterior wall where a *vicus subaggerem*

ran parallel to the wall. Behind this, the two stone walls of the *agger* enclosed an earthen

mound 42 m across.[186]

5. The Units of Measurement

Säflund first suggested that the wall in *tufo giallo della via Tiberina* showed a basic unit

of what he termed the "Attico-Eubeo-Siciliano" foot of c. .30 m; Lugli calls the foot

Ptolemaic or Classical Attic, but the difference is semantic as he retains its Syracusan

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[184] 9.68.3, Loeb trans. (Cary).
[185] Thein in Haselberger *et al.* 2002: "Agger"
[186] Aurigemma 1963-64: 21.

origin.[187] Some recent study has attempted to discuss the foot of the blocks themselves

down to the millimeter, but because the tuff is highly friable, this exercise seems

pointless. Such accuracy was beyond the scope of the Republican quarrymen.[188] More

profitable is Säflund's own approach, which sought to extract the module from distances

in plan rather than from unitary blocks.[189] He calculated that the 36 m distance between

two masonry seams in **Section 5c** at Piazza dei Cinquecento equalled 120 Sicilian feet,

exactly one *actus*. The Oscan-Italic foot, slightly smaller at c. 27.5 cm, results in slightly

more than 130 feet. Again, using the same measurement, the width of the *agger* from the

wall in *tufo giallo* to the wall in *tufo del Palatino* is recorded by Aurigemma as 42.00 m,

hence 140 Sicilian feet, but 152.73 Oscan-Italic feet. I would add that once we move

beyond the *agger*, the entrance vestibule of the *Porta Sanqualis* on the Quirinal, also in

tufo giallo (**Section 15**), was recorded at the moment of excavation as 15 m long,

suggesting that the portal was originally 50 Syracusan feet; the Oscan-Italic foot does not

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[187] Säflund 1932: 232ff.; Lugli 1957: 193. At .295 m, it was slightly smaller than the true Attic foot of Periklean builders according to Hültsch was .3083 m, 1882: 66-67.

[188] Cifani 1998: 363, but see already the caution of Säflund 1932: 233. I am more pessimistic about such an ability, and generally this method produces some confusion. For example, Cifani notes that the *tufo del Palatino* blocks from the Archaic phase of the Temple of Castor and Pollux in the forum show a transition already in the fifth century to the Attic foot of .295 m, and he makes much of this appearance of that foot presumably a century before the Republican wall. However, the excavators of the Temple of Castor and Pollux give a rounded block size of .30 x .60 x .90 m with a deviation of .05 m, easily encompassing both possible units of measurement (Nielsen and Poulson 1991: 61). Furthermore, they give a foot of .296 m, but the temple width was 27.50 m, which accords perfectly instead with a .275 m foot (Nielsen and Poulsen 1991: 75). This becomes a pedantic exercise, but it does serve to indicate the wide range of interpretations applicable even in a single monument making use of cut-stone masonry of volcanic tuff. The larger issue is the fact that the *tufo del Palatino* is normally cut on a Height:Width:Length ratio of 1:2:3 whereas the *tufo giallo della via Tiberina* conforms to 2:2:4, making the blocks much larger and heavier. This double width-to-thickness is true for the wall as it is true for the blocks in the Temple of the Castores (Nielsen and Poulsen *loc, cit.*) and the Capitoline. This is a fundamental and noticeable shift and relates in my mind to changes in building technologies. The change in foot from .272 to .296 is more easily read into its larger extension, and thus there is more profit to my mind in trying to read metrology into building plans rather than into the variable size of individual blocks.

[189] This seems implicitly based on the approach of Hültsch 1882, which is also to extrapolate metrology from entire building plans rather than individual blocks. Course heights and block lengths have too much margin of error around their average to attempt any such analysis from the stones themselves.

work smoothly.[190] The appearance of a foot of Syracusan rather than Italian origin in the planning of the *agger* and the gates suggests the participation of Syracusan masons active at Rome in the engineering of the design of those more complex parts of the wall.[191]

6. Masons' Marks and Work-Units

Masons' marks were reported frequently on the *tufo giallo della via Tiberina* of the wall, always on the block's header surface, and facing the interior of the wall. Weathering and early attempts at conservation have rendered almost all of these marks illegible today: a recent consolidation campaign on the stretch outside of Piazza dei Cinquecento noted no more than two or three remaining, whereas Säflund's plan, published in 1932, showed dozens.[192] Lazzarini describes them as alphabetic: whereas in other Greco-Roman cultures we might see masons marks resembling stars or double-axes, here most of the marks conform to a letter type.[193] Unsurprisingly, then, earlier scholarship has focused on the linguistic origin of the masons' marks, with scholars tending to see in the marks the language of the culture they argued was otherwise responsible for the wall's construction.[194] While no examples have yet been found in the Grotta Oscura quarries, it

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[190] For the length, see Säflund 1932: 93. Since this section is presumably complete corner-to-corner, I use its dimensions here.

[191] Coarelli 1995: 23-24 mistakenly relates this to Diod. Sic. 14.18.5, which mentions Dionysios' configuration of work teams on Syracuse's wall into *plethra*, but a *plethron* is 100, not 120 feet.

[192] Bandini and Pennino 2008: 119, compare Säflund 1932: tb. 25.

[193] In *RMR* 14.

[194] Thus, Frank speculated that the language might be Faliscan in relation to the Veian quarries from which these blocks derived, 1924; Säflund tried to relate the form of the B to that found at Selinunte and Syracuse, 1932: 237; Castagnoli 1974: 431-32, who was intent on describing a more diffuse Greek influence filtered through Latin cities, pointed to evidence from Etruscan monuments.

is assumed that the marks, only found on blocks interior to the wall, were inscribed at the quarries and relate to the system of supply.[195]

I want to suggest a new way of understanding these marks. Beyond the question of language, the question of material supply proves more fruitful: if the marks are interpreted as evidence of the supply system and organization of work in a rough parallel to later brickstamps, what can we tell about their disposition? Specific marks seem to concentrate on specific sections of the wall; for example, the apse structure on the stretch at Piazza Manfredo Fanti (**Section 6**) shows 19 marks, 15 of them being an "E" form. Most interesting to this regard is a 36 m section of wall within the 94 m stretch at Piazza dei Cinquecento (**Section 5c**). As Säflund recognized, this stretch is unitary, with its courses on either end not corresponding to the continuing courses of the wall to the south and north but rather forming two seams in the masonry. That is, the wall here has "pigs" or gaps that show breaks in the organization of labor, and this central 36 m, not bonded to the wall either south or north, was built as a single unit. On what we might call a panel of wall, 36 m long, numerous mason marks were found. In the lowest eight courses, and judging from Säflund's drawings as most of these marks are no longer legible, marks are dominated by 5 "H" and 16 "T" letters, making up 21/26 visible marks. On the upper eight courses, however, no "T" and only one "H" marks are found, but here instead we find predominantly a "Π" appearing in 23 instances (of 25 total). On the panels of wall north and south of this central 36 m stretch, however, these three marks are extremely rare with the north part showing a predominance of "(" marks, and the south part showing well over a dozen "↑" marks.

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[195] The marks face inwards and thus are unlikely to have an apotropaic effect in comparison to the Samnite walls of Pompeii, where this has been suggested.

There is no variance in quality between the stone in the 36 m panel and outside of it, rather the marks speak in a larger way to the supply chain in practice. One previously overlooked detail from our extant technical literary sources may aid us here: both Vitruvius and the Elder Pliny (perhaps following Vitruvius) discuss the need to cure soft tuff building stone before employing it in construction, and both advise specifically that *tufo giallo della via Tiberina* be left to cure for two years.[196] Since both authors relay technical knowledge about material that was infrequently used in their own time, it stands to reason that they represent older techniques in handling stone from those quarries in the Tiber Valley.[197] No masons' marks have been found at the quarries themselves, though they are not infrequent in later Roman architecture in *tufo giallo della via Tiberina*. These marks may have been inscribed at some intermediate holding destination where the quarried material was cured before being sent to the building sites, and they may represent a mark of quality. They may indicate that a block of stone met the test: "What [stone] is injured in this process, should be applied more usefully to subterranean construction; what remains intact, this is otherwise safe to expose to the elements," *quae ex eo laeso fuerint, subterraneae structurae aptentur utilius; quae restiterint, tutum est vel caelo committere* (Plin, *HN* 36.170). Once held to cure and then distributed on to building sites, the concentration of the same marks on a single section of wall may suggest a level of coordination between the intermediate stone yards and the sites of single construction units.

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[196] Vitr. 2.7.5 *Lapis Pallens*; Plin. *HN* 36.170 *Lapis Pallidus*, for the geological identification see Jackon and Marra 2006.

[197] In Ch. 3, it is argued that such received knowledge of tuff construction expressed in Vitruvius is a product of the movement of local craftsmen to the city of Rome with each specific geological material; in this case, the technical know-how for handling *tufo giallo della via Tiberina* may very well date to the beginnings of the use of that material in the city of Rome.

7. Lifting mechanisms

The *tufo del Palatino* blocks show no signs whatsoever of any mechanisms for attaching ropes from cranes; it is not impossible, though impossible to prove, that blocks were maneuvered with rope-cradles suspended from cranes, but it seems more likely that they were mostly placed by means of the aid of earthen ramps, a technique paralleled in Roman architecture from the Archaic period.[198] The *tufo giallo della via Tiberina* blocks, however, preserve the earliest extant evidence of lifting machines in Roman architecture in the form of small indentations for lifting tongs on the lateral sides of the blocks. These tongs are called *ferrei forfices* by Vitruvius.[199] Early examples of holes for *ferrei forfices* are found in Etruscan architecture in Umbria; it may be that the technology was brought to the city by Etruscan engineers assisting (or enslaved) in the quarries or in the transfer of building materials to Rome.[200]

However, the evidence of these lifting tongs, and thereby the use of cranes in the construction of the wall, is not straightforward. In several sections, the wall shows blocks with indentations for lifting tongs on the lower side of the block-face. This is not only true at the lower courses but also at the upper courses of the wall (**Section 5c** at the 14th course of 17). It would be impossible to place a block into a wall solely using *ferrei forfices* in such a manner: the holes are normally cut towards the upper margin of the block-face so that the suspended weight upon the ends of the tongs controls the movement of the block. If a crane attempted to move a suspended block from its lower

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[198] Ioppolo 1989: 31 on the archaic temple at S. Omobono.
[199] Vitr. 10.2.2: *ad rechamum autem imum ferrei forfices religantur, quorum dentes in saxa forata accommodantur.*
[200] Colonna 1986: 430, 448.

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margin, the weight of the block would swivel and bring the load below the tongs and into

its regular position. Instead, those blocks commonly found with lifting tong holes at their

lower margin were placed in another manner into the actual courses of the wall. The

alternative seems to be the traditional means of employing earthen ramps.

That being the case, how do we continue to read the evidence of lifting tong

holes? To my mind, the answer is a compound system of lifting representative of the fact

that this is an early stage in the use of lifting machines in Roman architecture. Cranes

were used in a limited fashion and most likely at the port: this *tufo giallo* was the first

building material imported into Rome and, since it derived from the Tiber valley,

probably made use of the waterway. Loading stone onto boats at the quarries as well as

the unloading operation at the Tiber port were liable to be the most awkward steps and

were probably assisted with cranes. Once offloaded, however, the stones could be

maneuvered manually around the city and placed into the actual wall using earthen

ramps.

The Construction Process II: Work-Arrangement and Logistics

1. **Total Project Duration: Evidence and Hypotheses**

The length of the building project for the circuit wall is not stated in our sources,

but many scholars have taken it as lasting over 25 years, beginning with Livy's notice at

6.32.1 concerning the year 378 and continuing down to 353, following another Livian

passage at 7.20.9.[201] Both start and end date must be reconsidered. In his narrative for

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[201] Cornell 1995: 462 n. 11;

388, Livy records a project to reinforce the Capitoline citadel, probably owing to damage

there during the Gallic sack; aforementioned fire in the upper area of the Forum of Caesar

lends credence to this.[202] As has been discussed, the practice of curing quarried tuff for

long periods of time to test its strength meant that some lag was to be expected between

the start of activity in the quarries and the start of building. If Livy's suggestion that the

commencement of work in 378 immediately impacted the economic situation of the

plebs, then he preserves evidence of the start of actual construction, not of the entire

generative process. For this reason, material was probably already being cut in the Veian

quarries in 380, if not earlier, in preparation for the wall. The conception of the project

and its preparatory stages, including quarrying activity, are not unlikely to have begun

shortly after the withdrawal of the Gauls: the initial activity on the Capitoline therefore

becomes all the more important, although full-scale construction may not have

commenced at Rome until 378.[203]

The end date given as 353 is incorrect, at least according to our sources: at 7.20.9,

Livy refers to repairs, not ongoing construction ("with the legions returned to Rome, the

remainder of the year was spent in the repair of the wall and towers," *legionibusque*

Romam reductis reliquum anni muris turribusque reficiendis consumptum). This

provides rather a *terminus ante quem*. Another only slightly earlier *terminus ante quem*

can probably be read into an episode in 357/6 when an invading army of Etruscans is

reported to have advanced as far as *Salinae*, in the Forum Boarium area, which may

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[202] Liv. 6.4.12: *Capitolium quoque saxo quadrato substructum est*. Livy seems to have seen these same works in mind as he continues, *opus vel in hac magnificentia urbis conspiciendum*.
[203] To my mind, this also raises a very important question that I'm not sure the evidence equips us to answer: If we consider that the project may have started with the fortification of the Capitoline in 388, it is fair to ask how large of a wall Rome intended to build in 388. That is, was the wall conceived from the inception of its construction as a full circuit wall?

indicate that they were stalled there due to a defensive circuit in the lowlying region at the foot of the Aventine.[204]

In between the start of construction, according to Livy, in 378, and these later events in 357-53, we are at a loss to define the term of the construction project. Several scenarios are possible:

- Perhaps construction, in planning stages since the build-up of the Capitoline in 388, proceeded rapidly after 378 and thus immediately caused the debt problem, which Licinius and Sextius attempted to address with their *rogationes* in 375.[205]

- On the other hand, it is also not impossible that the consequent political wrangling during the divisive repeated tribuneships of Licinius and Sextius delayed or slowed the project along with other public business; thus building gained momentum only in 367 when the *leges Liciniae Sextiae* were finally passed.

All of these scenarios—a compressed building period (378-76?), a delayed building period (367-357?), and a long and uneven building period (378-57)—need to be kept in consideration.

2. Stone quarrying and supply

The initial phases of construction involving the extraction and preparation of material were carried out in the territory of Veii along the west bank of the Tiber river. It is not unlikely that large amounts of slave labor were involved at this point in the process, as we know from the tradition that Romans enslaved the population of Veii following the

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[204] For the position of *Salinae,* see Coarelli 1988: 109-13. For this historical episode, see Liv. 7.17
[205] Cf. Liv. 6.35.1.

capture of the city.[206] Quarries were a frequent destination for slave labor in antiquity.[207]

The *tufo giallo della via Tiberina* derived from extensive quarries cut as chambers and

corridors into the hillside, where the stone was removed, blocked off, and then

transported to boats for the downstream voyage to Rome. The material was then cured,

as has been mentioned, for a period as long as two years, and then sorted into usable and

unusable stone before being transported to the construction site: whether this proofing

process happened at Rome or before shipment is impossible to tell.

Once in Rome, the material was offloaded at the Tiber port along the flat bank in

the Forum Boarium area—until the late 3rd or early 2nd century, the bank here ran directly

into the river facilitating landing and offloading of the stone, but this area remained an

important point for the entry of heavy materials into the city throughout late antiquity and

beyond.[208] The material was then maneuvered around the city either using animal-drawn

carts, rollers, or sleds. There is no direct evidence either way, but we might prefer the

use of rollers and sleds as some blocks of the *tufo giallo della via Tiberina* approached 1

ton in weight and would have taxed a single-axle cart.[209] The complications of loading

and offloading material from carts could have been alleviated with the use of a simple

sled roped to a team of draught animals and assisted by two or more men with wooden

levers.

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[206] Liv. 5.22.1 *libera corpora dictator sub corona vendidit*; see the comments of Harris 1990: 498-99.
[207] Numerous ancient references attest to this, among them the famous example of the defeated Athenians
at Syracuse. Roman examples include, Fest. 104 L (*Lautumias*); Varr. *DLL* 5.151; Origo *Rom. Chron*. I p.
145.1 (Tarquin); Isid. *Orig.* V.27.23 (Tarquin).
[208] For the Republican organization of the Forum Boarium port area, see Coarelli 1988: 113-26. For the
continued use of the Tiber port, Proc. *Goth.* 5.26.10-12.
[209] For one ton being somewhere near the upper capacity for single-axled carts, see Wright 2005 II., p. 41;
Van Tilburg 2007: 81; DeLaine 1997: 99 is more optimistic based on comparative evidence.

The longest distance that the supply chain of material had to navigate within the city was from the Tiber port to the *Porta Collina* on the northern Quirinal. This was a little over 2 km as the crow flies, but it would have been more logical to observe the natural topography and draw the material across the flat and undeveloped Campus Martius and then up and through the valley between the Quirinal and the Pincian. This meant that material would have needed to be hauled 2.5-3 km before reaching the construction site.[210] Similar routes were probably used in other places: the distance from the port to the very steep western face of the Aventine was short (c. 200 m), but it would have been preferable to approach the hill from the gentle valley that cuts through its two peaks.[211] To the best of our knowledge, there was as yet no paved route up any of the hills to assist in the delivery of heavy material: the need to transform "steep cliffs" into "useful roads" may have presented itself on the occasion of supplying stone to the wall, as we first hear of such activity in the early third century.[212] There must, however, have been established routes in part dictated by earlier monumental construction projects on each of the hills.[213]

3. The social arrangement of the workforce

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[210] Because the wall's construction included gates that aligned to the natural routes of the city, I don't think that building one section of the wall would have made the delivery of material harder to another section. For this reason, it is hard to draw conclusions about the sequencing of the wall's construction from one sector of the city to another from the supply routes, as the delivery of material along the city's streets was probably not hindered by the ongoing construction project.

[211] This was the later route of the heaviest material entering Rome by land, as see Amm. Marc. 17.4.14 on the route taken by the obelisk brought to Rome by Constantius II.

[212] Ov. *Fast.* 5.293-94, *qui tunc erat rupes / utile nunc iter est* on the Clivus Publicius: with the Clivus Publicius built in the 2nd half of the 3rd century by the curule aediles L. and M. Publicius Malleolus, see catalog no. 52 for further discussion.

[213] This was also true of the earlier individual circuit walls on each hill, which presumably required similar transport systems established from those quarries on the Capitoline and Palatine.

All of the labor for the construction of various phases of the wall was in some

way coordinated by the Roman state, as the wall was a public undertaking.[214] Livy

6.32.1-2, cited in full above, forms the crucial evidence, but his meaning is not entirely

clear and, in fact, reveals his own confusion. He gives the following details for the actual

arrangement: the plebs were compelled to accept the burden for the wall's cost

(*succumbere oneri coacta plebes*); they had no means of disputing such an obligation in

the absence of the *dilectus* that year, which could otherwise be manipulated by the

tribunes (*quem dilectum impedirent non habebant tribuni plebis*); the wall was thus

contracted for by the censors (*locatum a censoribus*); and by the resulting tax (*tributo*),

debts increased massively. The conglomeration of tax, coercion, and debt on the one

hand would suggest that Livy refers here to a corvée, to a form of compulsory labor

obligation distrained directly on citizens in the form of a tax. The detail about censorial

contracting, though, is odd because we know from later evidence that the result of state-

let contracts was remuneration, not citizen debt.[215] At the same time, however, the

process of a censorial contract, well known in Livy's day, would have been infeasible

three centuries prior when the Roman economy was still thoroughly unmonetized (cf. Ch.

2). We need to underline this point: without symbolic currency, large-scale contracts that

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[214] There is no reason to think that large amounts of slave labor were involved in the wall's construction at Rome. Not only is there nothing to speak in favor of such an idea, the passage of Livy discussed here would argue against such a thing. Moreover, there is plenty of evidence of widespread use of free labor in public works in the contemporary Greek world, see Epstein 2008.

[215] In particular, see the *Lex Iulia de municipalibus*, but also Polyb. 6.13.3 that censorial contracts for building and upkeep formed by far the greatest domestic *expense* of the Roman senate, by far the greatest of that part of the budget not controlled by the consuls. A high public expense is not likely to cause private debt, but rather the exact opposite.

It should be noted here that corvée and wages were not always mutually exclusive formations, as some later evidence attests to: Pope Hadrian repaired Rome's walls with a large labor force in AD 774 (*LP* 97.52 and 94.92) conscripted labor from Tuscany and Campania, but paid the workers in gold coinage as well as in food. On this, see Goodson 2010: 68, Coates Stephens 1998: 168. However, in the Mid-Republican case, not only the fact that the wall was built before Roman coinage began, but also Livy's record of debt would strongly suggest that Romans were not remunerated for their work on the circuit wall.

extend both in cost and duration beyond a single agrarian cycle are difficult to imagine.

The period in which Livy wrote was accustomed to such building contracts, but there is

no reason to think that the contractual process for building was fully formed already in

the early fourth century.[216] On the other hand, the idea of large-scale compulsory labor

must have seemed more foreign to Livy,[217] and the fact that this detail survived in the

narrative up to his time suggests its merit as a sort of *lectio difficilior*.

The idea of a labor corvée for the wall is also believable because that sort of

arrangement has parallels in the historiography of earliest Rome.[218] The mechanics of a

possible corvée in 378 remain difficult to assess; again, Livy is our only source. The

author seems to imply that a tax for the wall was the responsibility of the censors, and

thus fell outside the power of the tribunician *intercessio*, whereas the tribunes would have

recourse to their veto if the arrangement was carried out as a levy under the powers of

imperium.[219] Livy adheres to his own familiar conception of Roman constitutional

practice and censorial oversight,[220] and there are difficulties with his interpretation, not

least of all the fact that *tributum* was a property tax, and its applicability to those Romans

already in serious debt (and therefore with property liens, or even no longer landed) is

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[216] Here, I am at odds with the opinion of Badian 1972: 15-17 (see Anderson 1997: 79ff, who follows Badian) that contracting in all sectors of Roman state expenses began as a *deus ex machina* in the early Republic. Arguments against the scanty evidence for building contracts prior to this point are laid out in the next chapter.

[217] I do not know of the existence of large-scale labor corvée for building in Augustan Rome; I doubt Livy did either.

[218] The social memory of the period of the kings is full of mentions of compulsory labor, often brutal, in the service of public construction, e.g. Dion. Hal. 4.44.1-2; Livy 1.56, 1.59.9; Plin. *HN* 36.107-8. These mentions are clearly meant to prove a point—in these cases, the wickedness of the Tarquins—but there is no reason to doubt that such a labor arrangement did exist in archaic Rome.

[219] Mommsen *St.R*. II.1 290-97, esp. 296 where magistrate action fell squarely under the jurisdiction of the *intercessio*.

[220] *Tributum*, suspended in 167, was assessed again following Caesar's death when it was met with violent protest, cf. Brunt 1971a: 641 for discussion and sources. It is from these events within his own lifetime that Livy is working.

questionable.[221] A form of labor-tax, however, makes far more sense with an indirect but

no less substantial impact on agrarian debt. We have parallels for the use of *imperium* to

obtain non-military, manual labor, as well as for soldiers working on repairing the

wall.[222] Despite Livy's specific insistence otherwise, something parallel to the *dilectus*

would have been appropriate.[223] The way in which, as detailed by Polybius, all *iuniores*

assembled in Rome and were selected into legions would work both for mustering

population and then for breaking them into various necessary work units,[224] and the

practice during the *dilectus* of calling the *assidui* by name and then having them respond

by name or face penalties would appear tailor-made for the organization of a large labor

force by corvée.[225] That being the case, however, the question of why there was no

specific action by the tribunes against such a labor-tax remains.[226] The actual

relationship between the assessors and those assessed for the wall's construction seems

irrecoverable, but those details concerning compulsory labor are most plausible.

The cost of the circuit wall

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[221] This already troubled Niebuhr 1827 I 296-97, who assumed that the *tributum* could be assessed on property not owned but owed and still in one's possession. Brunt dismissed the entire early Republican history of the *tributum* as an annalist invention, 1971a: 76 n.3 and 641.

[222] As for example with L. Postumius Megellus in the early third century; this evidence discussed at greater length in the following chapter. Also relevant here is the fact that elsewhere the army appears capable of building wall-and-*agger* on campaign, e.g. 8.16.8 at the siege of Cales.

[223] The *dilectus* was very closely attached to issues of debt in the annalist history of the 5th and 4th centuries, see the analysis of Gabrielli 2003a: 68-69.

[224] Polyb. 6.19.21; cf. Brunt 1971: App. 20, who suggests this was impractical in Polybius day and records instead an earlier method of recruitment.

[225] Calling by name, Liv. 5.19.4: *citari nominatim*; answer in turn, Liv. 3.11.1: *ad nomina respondere*; penalties, Brunt 1971: 629 n. 1. A wonderful parallel is provided from Cononian Athens where the long walls are repaired using the naval rowers, Diod. Sic. 14.85.3.

[226] The *dilectus* was initiated by *Senatus Consultum*, as Brunt 1971: 628, but this was applicable to *intercessio*, as see Mommsen *St.R*. II.1 294-95.

The responsibility for arranging for the wall's labor needs was in some way negotiated between the state (the senate, the magistrates) and Rome's population. To determine the scale of that cost, we can make a quantitative estimate of the wall's labor requirement. The full rationale for the model as well as calculations are given in Appendices 2 and 3. In all, the model presented here purposefully trends where possible towards the minimal estimate as a means of checking the overarching thesis of this chapter. The point is less to provide some precise figure then to suggest an order of magnitude from which to start a discussion on the impact of a construction process on a human scale.[227] The methodology used is that developed for the Greco-Roman world by J. DeLaine, who first applied figures from 19th century construction estimating manuals to the Roman building industry.[228] Shortly, we will also attempt to check our estimate made through this method using extant ancient evidence.

In forming an estimate for the wall, certain elements are excluded: as quarrying may have relied primarily on slave labor, the cost of the material extraction is ignored, and instead focus is solely given to the actual labor cost for the wall's construction once

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[227] Trigger 1990.

[228] DeLaine 1997. Her primary source is the publication of an Italian railroad engineer, G. Pegoretti, published at the cusp of the industrial revolution in Italy and thus still including estimating formulae for various less mechanized building techniques. I was able to examine the only copy of Pegoretti's work available, to the best of my knowledge, in Rome, the second edition of 1865 in the library of the Facoltà di Ingegneria at Università di Roma, La Sapienza. This is the same edition used by DeLaine.
DeLaine 1997: 104-7 gives certain caveats to her model that all continue to seem reasonable and discussion of her method can be found in most of her subsequent publications. Three pertinent assumptions in such a model are as follows:
  i) The average output of a man at work at a given task with given tools has essentially been constant from antiquity until the industrial revolution.
  ii) The average workday is assumed to be 12 hours with 2 hours of breaks, thus 10 working hours, and she marshals ancient evidence to this effect.
  iii) The worker is assumed to have been male and adult, and the working capacity is assumed constant disregarding personal status (i.e. slave v. free).

the requisite stone had arrived in Rome.[229] Planning and layout were time-consumptive

activities, but we are mostly concerned with the unspecialized work that could have been

carried out by Roman citizens and slaves. There were further hidden costs: wood for

tools, cranes, wheelbarrows, and carts is not taken into account, nor is feed for animals or

iron for shovels, picks, etc. All of these omissions will only have the effect of reducing

the resulting figure, and thus the streamlined model presented here is in keeping with a

generally conservative reconstruction. Total cost for construction of the wall based on

calculations in the appendices was as follows:

Table 1.1: Cost in man-days for the construction of the fourth century circuit wall

Construction Project	Man-days
Ashlar masonry walls including interior wall of the *agger* complex	1,197,791
Excavations of foundations and *fossa*	308,893
Creation of *agger*	37,558
Aggregate cost:	1,544,242

       We are fortunate in this case to have the rare means to check these numbers from

ancient evidence. A remarkable and important notice is furnished by a passage of

Diodorus Siculus describing the construction of a wall by Dionysios I around Syracuse

and its fortress, the Epipolae, in 401 B.C.:[230]

> διόπερ τοὺς ἀρχιτέκτονας παραλαβών, ἀπὸ τῆς τούτων γνώμης ἔκρινε δεῖν
> τειχίσαι τὰς Ἐπιπολάς…βουλόμενος οὖν ταχεῖαν τὴν κατασκευὴν τῶν τειχῶν
> γίνεσθαι, τὸν ἀπὸ τῆς χώρας ὄχλον ἤθροισεν, ἐξ οὗ τοὺς εὐθέτους ἄνδρας
> ἐπιλέξας εἰς ἑξακισμυρίους ἐπιδιεῖλε τούτοις τὸν τειχιζόμενον τόπον. καθ᾽
> ἕκαστον μὲν οὖν στάδιον ἀρχιτέκτονας ἐπέστησε, κατὰ δὲ πλέθρον ἐπέτακεν
> οἰκόμους, καὶ τοὺς τούτοις ὑπηρετήσαντας ἐκ τῶν ἰδιωτῶν εἰς ἕκαστον πλέθρον
> διακοσίους. χωρὶς δὲ τούτων ἕτεροι παμπληθεῖς τὸν ἀριθμὸν ἔτεμνον τὸν
> ἀνέργαστον λίθον, ἑξακισχίλια δὲ ζεύγη βοῶν ἐπὶ τὸν οἰκεῖον τόπον
> παρεκόμιζεν… ἐν ἡμέραις εἴκοσι τέλος ἔσχε τὸ τεῖχος, τὸ μὲν μῆκος
> κατασκευασθὲν ἐπὶ σταδίους τριάκοντα, τὸ δὲ ὕψος σύμμετρον…τοῖς γὰρ
> πύργοις διείληπτο πυκνοῖς καὶ ὑψηλοῖς, ἔκ τε λίθων ᾠκοδόμητο τετραπέδων
> φιλοτίμως συνειγρασμένων.

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[229] Of course, slaves in the quarries had to be fed at least subsistence, and so some spike in surplus
production is implied even in this arrangement.
[230] 14.18.3-8 *passim*; I give the Loeb [Oldfather] translation.

> Sending, therefore, for his master-builders, in accord with their advice, he decided that he must fortify Epipolae…Wishing to complete the building of the walls rapidly, he gathered the peasants from the countryside, from whom he selected some 60,000 capable men and parceled out to them the space to be walled. For each stade he appointed a master-builder and for each plethron a mason, and the laborers from the common people assigned to the task numbered two hundred for each plethron. Besides these, other workers, a multitude in number, quarried out the rough stone, and six thousand yoke of oxen brought it to the appointed place...The wall was brought to completion in twenty days. It was thirty stades in length and of corresponding height…there were lofty towers at frequent intervals and it was constructed of stones four feet long and carefully joined.

As has been noted in discussing metrology, Syracusan architects can be detected behind some of the planning aspects of the wall, and they may have influenced the labor arrangements at Rome as well. The stones of Dionysios' wall were four-feet long, equivalent to the ideal length of those *tufo giallo della via Tiberina* stones in the Roman wall (= 4 x c. .30 m = 1.20 m).

Diodorus here follows the writings of Philistos, a contemporary and courtier of Dionysios I who had the advantage of being an eye-witness, but the disadvantage, at least as far as we are concerned, of being a court historian.[231] The treatment of the tyrant of Syracuse is, as a consequence, wholly positive, and a whole sentence in this same passage is devoted to the gifts that Dionysios offered his builders and to the fact that he even lent a hand to the work (14.18.6). This latter fact is hardly believable, and the coordinating of so many (60,000) people and the completion of the project so rapidly (20 days) may likewise be exaggerated figures, as both numbers are meant to impress, although neither πάνδημος labor forces[232] nor incredibly short time spans is unattested in the construction of walls in the Greco-Roman world of all time periods.[233] Moreover,

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[231] On Philistos, Jacoby *FrGH* IIIB pp. 496-502; Marsden 1969: 48-49; for his attachment to the court of Dionysius, see Nep. *Dion* 3.2; Plut. *Dion.* 11; Cic. *De Or.* 2.57.

[232] For the employment of entire populations on the construction of walls, see multiple examples from Classical Greek historians cited by Epstein 2008: 111-12.

[233] Fortifications are often pressing concerns in the face of invading armies, and therefore provide some examples of our faster building projects in antiquity. Besides the aforementioned project of Dionysios I of

the total cost, according to Diodorus, was the equivalent of 1,200,000 man-days for the

Syracusan wall, whereas an estimate based on a modern-comparative method arrives at c.

1,500,000 for Rome's wall.[234] When we consider that the Roman wall also included the

eastern *agger*, which was not paralleled at Syracuse, our estimate does not seem wildly

out of order.

In the year 399, Dionysios' Syracuse was home to the best and brightest engineers

of his time.[235] Within the echelons of the court, Philistos had access to technological

knowledge and probably to written treatises in circulation. In this case his technical

details less susceptible to political flattery are as accurate as we can reasonably expect

from the period. In particular, the reported ratio of 1 master-builder: 6 masons: 200

unskilled workers, 207 total, per stade (185 m) of wall probably had some basis in the

reality of Syracusan engineering practice.[236]

This dominance of unskilled labor, furthermore, in the Syracusan figures has

some continuation in my estimate of the Roman wall that makes little allowance for the

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Syracuse, I can offer two well-documented examples from vastly different periods at Constantinople: the
repair of a major portion of the city's fortification circuit including 57/96 towers took only 60 days after an
earthquake in 447 AD (Müller-Wiener 1977: 287-88); and the construction of the imposing fortress of
Rumeli Hisari, the "throat-cutter" or Bogazkesen, that aided Mehmet's siege of the city by closing the
Bosphorus, which was built by 3000 men in about four months time in the autumn of 1452 (Müller-Wiener
1977: 335-36). I am indebted here to Robert Ousterhout for bibliography and discussion. From Rome
itself, another example can be had in Belisarius' refortification of almost a third of the Aurelian walls of
Rome in the Spring of 547, testified to by Proc. *Bell.* 3.24 with discussion in Richmond 1930: 41-42.
[234] The Roman wall was 11 km, as has been mentioned. The Dionysian construction did not include the
entire 22 km of the circuit, but only the extension of the older walls around the core of the city up to the
Epipolae fortress and back, a significant distance nonetheless. I am not aware of a full study of these walls
separating out phasing and giving distances for different projects, but as figure 1 in this chapter shows, the
Dionysian extension was already somewhat larger than the Roman wall.
[235] Dionysius had lured engineers to Syracuse with wages and prizes, cf. Diod. 14.42; the entire city was
turned into an arsenal (*isd.* 14.4.6) as part of Dionysius' ambitions to gain a technological advantage over
the Carthaginians, see Marsden 1969: 48ff.
[236] For the length of an Attic stade, 185 m, see Hültsch 1882: 69. Though I am not sure how significant this
is, I do note that a very different ratio was involved for defensive works in 16th century England, where
Woodward 1995: 99 describes fortifications at Hull requiring a force comprised of 300 unskilled laborers
and 200 skilled workers.

skill level of workers involved in the project. One of the few skilled tasks, finishing the

surfaces of the blocks to the state in which they are found in the wall, took only an

estimated total of 91,119 mdays, or 28% of the total cost of the ashlar construction and

14% of the cost of the entire wall. In the Syracusan figures, by comparison, skilled labor

come out to 3% of the total cost.[237] Obviously, 60,000 people, skilled or unskilled, could

not work on the same wall all at once. According to the Syracusan scheme of 200

unskilled workers per *stade* (185 m), the Roman wall of c. 59 stades could see the

simultaneous effort of almost 12,000 workmen.[238] When we consider the breakdown of

the wall's cost based on modern comparative material, fully 85% of the labor cost of the

ashlar masonry was expended in transporting stone from the Tiber port to the worksite.[239]

The project to build the Republican wall appears to have been such that it could absorb

large amounts of unskilled labor. Judging from the archaeology itself, as well as the

comparative evidence furnished by Diodorus, it is plausible then to think that mass

recruitment was an appropriate means to arrange for the wall's labor force. Most of the

workers needed only to be present and physically able.

The cost per capita and the work schedule

If the wall's unskilled labor was arranged by means of a tax, then the labor pool

relates in a close way to Rome's taxable citizen population. The subject of an aggregate

population at any time in the Republic remains an unresolved (and most recently even

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[237] DeLaine 2001 commonly uses a multiplier of 0.1 mdays skilled per 1 mday unskilled in oversight,
somewhere in between these two arrangements.
[238] The discrepancy in the *per stadion* figure with the notion of a workforce of some 60,000 is accounted
for Diodorus in the Syracusan example by suggesting that the remaining workers in the preparation and
transport of material, and this is perfectly reasonable.
[239] Cf. Appendix 3.

divisive) subject, and the census data here seem unreliable,[240] but let us suggest a range

of 50-70,000 people,[241] out of which men of military age (17 - 45) numbered roughly 10-

15,000[242] with some correspondence between that number to the viable labor pool

especially if the *dilectus* was the mechanism of labor recruitment. The entire

construction of the wall entailed some 100-150 days of work on every taxable Roman,

and, as discussed, on Syracusan parallel up to 12,000 unskilled workers could be engaged

at once on the project. The thought that a Roman wall could have been built by a massive

force at once is not impossible. 100-150 days of work, however, while significant in the

short-term, would have been less so if amortized over a building period of 20 years.

Looking at the scale of the project and its effects, and returning to the question of which

scenario pertained for the length of the project, it is more likely that the wall was built

rapidly, in the course of 2-3 years, and drew from all available labor.[243]

Within the shorter time frame, the annual schedule of work comes into play.

Seasonality was a factor in the building process: stone was traditionally quarried in

winter and then cured.[244] The parts of the project requiring excavation, a large unskilled

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[240] The census figure for 392 is given by Pliny (*NH* 33.16) as 152,573, with the implication that here he represents all men, women, and children, as Cornell 1995: 208. The figure is far higher than the previous and next figures (see Liv. 3.24.10 for 459 and Euseb. *Ol.* 110.1 for 340/39). Brunt dismisses these as annalist fabrications, 1971: 26-33.

[241] Splitting the difference, Frank guessed 100,000 in the fourth century, *ESAR* I 34; Beloch gives the low count of 20-25,000, *RG* 209. The range of 50-70,000 represents the middle of these two estimates, though probably the lower is to be preferred, as see Ampolo 1980: 29-30 for a comparative estimate of the aggregate population of early Republican Rome at 20-30,000.

[242] Reconstructing the proportion of the military recruitment out of the total population is no less difficult, but I here approach the problem along the lines of Hin 2008: 198-99. Based on the model life table in Coale and Demeny 1983[2] West level 3 (0% growth), men 17-45 = 43.51% of the adult male population, so then the multiplier from that group to the aggregate population is 200/43.51 = 4.6.

[243] Cornell guessed that the wall took 8,000,000 man-hours (800,000 man-days), and in this way could have continued 20 years later, 1995: 462 n. 11. His figures are very rough, but even that being the case, the amortized cost was still fairly manageable. As I point out at n. 219, however, a twenty-year long project to build a fortification wall is unlike the normal arrangement in much of pre-modern society.

[244] Vitr. 2.7.5. A similar sentiment regarding concrete is expressed by Frontinus, *De Aq.* 123.

labor component, would have avoided the rainy winter months, when Rome's climate would have made the movement of waterlogged soil unnecessarily difficult.[245] Rainy periods could conceivably be dedicated to the supply of material. We have so far treated the quarrying process as mostly attributable to non-Roman and probably non-free labor, but it is worth noting that those quarries at Grotta Oscura producing the *tufo giallo della via Tiberina* were gallery-quarries, and work could have continued inside of them during the winter or inclement weather. In Rome itself, stone could be moved from port to site or to intermediary stations for curing the tuff, but the major project of the *agger* and *fossa* as well as the substantial foundation trench for the wall were confined to the drier season.

In this case, the cycle of building and the burden of up to five months' worth of labor *per capita* solely for the building phases of the wall's construction within the dry months of the year has to be considered with regard to other cyclical labor costs in Republican society, in particular agriculture and military campaigns. Before we do so, however, it is instructive to consider some comparative evidence relating to the interaction between building corvées and pre-industrial societies dependent on agricultural production.

Comparative evidence for corvée in agrarian societies

Corvée was a common means of arranging building labor in the pre-industrial world: references have already been cited towards the presence of such a system in the Rome of the Tarquins. Non-contractual kin- or client-based connections could still be

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[245] Rome's climate, though temperate, becomes wet during the rainy season in the late fall; in recent history, rainfall has averaged as high as 12 cm/month in October and then does not fall below 8 cm until January. In contrast, July usually sees <2 cm, and from April to the end of August <5 cm of rainfall/month. See Bencivenga, di Loreto, and Liperi 1995: 125-71, 148, fig. 9.

called upon to mobilize labor with great effect well after the putative creation of the

Republican state.[246] Moreover, Mid-Republican Rome existed as part of a larger world

where arrangement of construction labor by corvée was not at all uncommon. This is not

only true for Sicily and the court of Syracuse, whose links with Rome at this period have

already been discussed.[247] Early in the next century, this also included a strong Roman

ally, Ptolemaic Egypt, where the royal court's frequent use of requisitioned labor is well-

attested.[248]

We have no direct manner of reconstructing the specifics of the corvée system in

Mid-Republican Rome. The closest we can come is in the description of *munitiones* in

two municipal charters, the earliest being a Flavian-era inscription from Urso (modern

Osuna, in the southern province of Seville) preserving the text of a Caesarian-era

document, the *Lex Iulia coloniae genetivae*:

> *XCVIII. Quamcumque munitionem decuriones huius-*
> *ce coloniae decreuerint, si m(aior) p(ars) [[..]] decurionum*
> *atfuerit, cum e(a) r(es) consuletur, eam munitionem*
> *fieri liceto, dum ne amplius in annos sing(ulos) in-*
> *que homines singulos puberes operas quinas et*
> *in iumenta plaustraria iuga sing(ula) operas ter-*
> *nas decernant. eique munitioni aed(iles) qui tum*
> *erunt ex d(ecurionum) d(ecreto) praesunto. uti decurion(es) censu-*
> *erint, ita muniendum curanto, dum ne in-*
> *vito eius opera exigatur, qui minor annor(um) (quattuordecim)*
> *aut maior annor(um) (sexaginta) natus erit.*

> Whatever construction works the decurions of this colony will have decreed, if the
> greater part of the decurions shall have been present when that matter shall be discussed,
> it is permitted for the construction work to take place, so long as they decree individual

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[246] Famous examples of the power of client- or kinship in the early Republic include the dedication of the
sodales of Publicola from the *lapis Satricanus*, or the private armies of Coriolanus or the Fabii at Cremera.
Coercive forms of debt-payment such as *nexum* also persisted; see discussion of these and of the episode of
L. Postumius Megellus in the following chapter.

[247] Connections between Rome and Syracuse: Sordi 1960: 62-72; Gabrielli 2003: 33-56.

[248] Certainly including construction, as irrigation projects are well-attested. See *PSI* 440, which refers to
leitorgiai producing bricks. Lewis 1968 is a bare-boned catalog, but see now the discussion of von Reden
2007: ch. 6. Outside of the political agreements begun in 270 (cf. Liv. *Per.* 14.6), the connection between
Roman and Ptolemaic economic systems in the third century was strong, including links in coinage
discussed in chapter 4.

adult men no more than five *operae* and, concerning draught animals, each yoke no more than three *operae* in each year. For this public work, the aediles who then are in office by decree of the decurions, let them be present. As the decurions have decided, let them monitor that the work be done, so long as work not be exacted unwillingly from him who is less than 14 years or more than 60 years of age.[249]

Confirmation that this clause in the Urso text derived from a more widely circulated standard is given by its reappearance in the *Lex irnitana*, a similar *Lex municipalis* of Flavian date found in 1981 outside of Seville. There, a passage of similar content appears only with very minor changes—the maximum draught animal corvée has been raised from three to five *operae*, and fines are detailed for abuse.[250] That the text in both cases may ultimately be based on legal models developed at Rome and then propagated outwards seems proven by the discussion of Frederiksen.[251] Still, it is hard to tell how far the arrangements seen here extended backwards in time, and how applicable they might be to Mid-Republican circumstances.[252]

Even so, these municipal charters demonstrate the general feasibility of corvée labor on free citizens within a Roman context, and they help to demonstrate an awareness of the need to limit the severity of the corvée on a person and his animals. They do not, however, give much detail as to the precise nature of the corvée system, and, in this regard, the extant Roman evidence is not otherwise obliging.[253] We do have more detailed information for much of Chinese history on labor corvées for public works

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[249] Text is that of Crawford and Green in *RS* I no. 25.

[250] In Ch. 83 of the *Lex Irnitana*; cf. Crawford and Gonzalez 1986, 175.

[251] Frederiksen 1965; accepted at *RS* I p. 397.

[252] Brunt 1980: 82 notes after De Ruggiero that better evidence comes from much later, not earlier, legal texts; but what earlier legal documents of this nature do we still possess? Moreover, I am unconvinced as he is, that the fact that, since the "document is in part tralatician…we cannot tell if the requirement was commonly, if ever, enforced." Rather, the other way around, the fact that it was received and transmitted in more than one text suggests that it was in operation sometime, somewhere.

[253] Cf. Mommsen *St.R.* 478 n. 2. Also see *CIL* XIV 4259, a fascinating inscribed base from Tivoli which records that the father of the individual gave 200,000 sestertii to the dedication of an amphitheater *ET OPERAS N CC*. The date is 2nd century AD; the amphitheater was found shortly after the Second World War.

extending both to their systemization and, in some cases, to their aftermath.[254]

Documentary evidence from the T'ang dynasty (618-907 C.E.) allow us to recreate a complex system of corvée regularized into an annual tax consisting of a regular labor tax (*cheng-i*) consisting of twenty days *per annum* of service, which could be avoided by remittance instead of a payment in cloth and kind.[255] It is worth noting in this way that the system existed entirely outside of the monetized economy despite the existence and circulation of coinage from before the T'ang dynasty. Documents from the Chin dynasty (1115-1234 C.E.), where great corvées were used rapidly to build the new imperial capital of Kaifeng, show that emperors paid close attention to adapt their labor regimes to the seasonality of the agricultural calendar. Requiring corvée labor at the wrong time of year could interfere with agriculture and lead to the outbreak of famine, or to debt.[256]

In the Chinese evidence explicitly, we see the fragile equilibrium in mostly-agrarian societies between labor requirements and productive capacity.[257] *Mutatis mutandis*, Nathan Rosenstein has recently investigated how households in Republican Rome balanced requirements for military service with those for agricultural labor. One important result of his work is his demonstration that prolonged Roman military campaigns dated back into the earlier Republican period.[258] Roman households even in the fourth century B.C. must have sought to balance extended absence for campaigning with the requirements of seasonable agriculture. The dry summer months—those more

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[254] Cho-yün 1965: esp. Chs. 3,6; Chan 1992.
[255] Chan 1992: 614-15.
[256] Chan 1992: 638, although conscientious of this relationship, very few emperors seem to have observed it, with devastating effect.
[257] A similar codependency of agrarian and non-agrarian labor factors is recorded by Woodward 1995: 100, 138 for early-modern England, where construction laborers demand higher wages during the harvest season, realizing the scarcity in the labor supply.
[258] See the review by L. de Ligt in *CR* 2007: 168-70, esp. 169ff. for critique of Rosenstein's position.

appropriate for construction—were dedicated to harvest and then straw-making, and manual reaping was labor intensive.[259] The removal of up to five months' worth of labor *per capita* for work on the wall in this sense may have been devastating. The loss of labor capacity in seasonal conflict with agricultural necessities decimated the productive capacity of the population in the *ager Romanus*, and now the debt crisis in the 370s described by Livy becomes plainly comprehensible.

Conclusions

According to the scenario presented in this chapter, the construction of the wall would have been sufficient to derail the productive capacity of Rome's population at the time. That being the case, the decision to build the wall, rather than the Gallic sack, may have been the destructive event that derailed Roman society in the early fourth century. In Livy's conception, the act of building the wall, which he anachronistically suggests was arranged by censorial contract, had an impact on the structure of private debt, but as Augustan building in his day probably had a net positive impact on employment,[260] it was hard for him to parse the exact relationship between wall and debt.

Now returning to the larger historical narrative, the importance of the fourth century wall and of the manpower necessary for its construction becomes plain. Rome had defeated Veii and for the most part could handle its neighbors, but the Gallic raid of Rome had profoundly shocked the city. The incursion of Dionysius I into Pyrgi in 384

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[259] Spurr 1986: 66-67 with ancient citations.
[260] Though this fact seems inarguable considering the huge amount of building in the Augustan age, I do not know of any close economic study of Augustan urban construction, and this is a *desideratum*. See the comments of DeLaine 1997: 223-24 on Severan building, which give real substance to the theories of Brunt 1981 or Skydsgaard 1983. This situation was undoubtedly pertinent to the Augustan city, which was in effect one massive construction site.

only underscored the continuing menace of foreign attacks in the region; he was perhaps himself aligned with the remaining Gauls.[261] This threat provoked Roman society to take the unprecedented step of fortifying its entire urban area.[262] But Rome's Archaic economic system, lacking coined money and still largely reliant on debt structures born of personal relationships (e.g. *nexum*, clientship), was unprepared for a construction project of such magnitude. To some extent, large public construction projects had already appeared in Rome in preceding centuries, but these had been the products of a strongly hierarchic society where coercive forms of labor in the service of the kings were not unusual. Rome in the fourth century was changing, however, and such an imposition without any form of compensation and of such a size was no longer tenable. In the year following the wall's construction, we hear that circumstances had grown so dire that Roman society was prepared to take on radical changes to its structure (Liv. 6.35.1: *occasio videbatur rerum novandarum propter ingentem vim aeris alieni*).[263] While it is hard to go as far as our sources in suggesting that the next several years saw a complete collapse of Roman government with no magistrates and no public business, we can at

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[261] Justin. 20.5.4-8 records a treaty between the Gauls and Dionysius I shortly after the sack of Rome, cf. Sordi 1960: 62-64. Sordi finds merit in the story, but the fact that Justin's account of Gallic legates arriving in the Syracusan court shortly after the sack of Rome is unparalleled elsewhere in the relatively full tradition does raise some doubts on its authenticity.

[262] Sewell 2010: 52 wants to see vague peer-polity circumstances behind Rome's fortifications; these historical details give a more concrete context.

[263] This is said in relation to the Licinio-Sextian rogations, and while it represents Livian editorializing, it represents to my mind that author's astute summary of the actual situation. It is interesting that the direct etiology for the Licinio-Sextian rogations in Livy's narrative is the complaint of one of the Fabiae (two Fabiae are married to Serv. Sulpicius and the other to C. Licinius Stolo) that her husband was of lesser rank. That such a story of personal insult rather than something deeper was the causative impulse behind the laws of 367 is part of a larger trajectory of major social changes in early Rome being linked by annalists to social sleights that seem minute in comparison: the story of Lucretia and the end of the tyranny or of the rape case that brings about the *Lex Poetelia* are two other examples of a phenomenon that has not received enough attention in the construction of early Republican history. In our case, Livy's version falls apart as easily as the story of Lucretia and Brutus (see the brilliant analysis of Wiseman 1998) as the other major player, L. Sextius, seems to appear as a *deus ex machina* only because of his ambitiousness (see Liv. 6.34.11, which appears as a sort of *non sequitur*) but otherwise with no direct relationship to the story of Fabia and Licinius Stolo.

least feel confident that the decade starting in 376 saw real crisis of some sort.[264] The

following chapter traces these reaction and consequent changes to Rome's economic and

financial apparatus over the next half-century.

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[264] Cornell, who is normally accommodating to Livy's narrative, rejects most of the ten-year anarchic period from 376-67, even though he affirms that our knowledge of political history at this period is reasonably secure (1995: 333-334). Livy fills most of 6.32-35 with the collapse lasting until 367, whereas Diodorus (15.75) shortens the anarchic period to a single year; but the story may even have made its way into the Capitoline *Fasti* of Augustan date: the text on the stone is missing for those years, but there is a visible gap at the top of the block before the year 371, which ends …]*actus est* (cf. DeGrassi *Insc.Ital.* XIII fasc. I pp. 32-33 with pp. 396-97 and commentary p. 103). On this question, Mommsen had restored in the stone at the top of the year 371, [*per annos quinque nullus curulis magistratus f*]*actus est*, which is paralleled in the *Fasti Hydatiani* by *postea ann. IV nemo curulis magistratus fuit* (cf. DeGrassi, who offers another restoration based on the Chronographer of 354). The issue remains problematic, but there is no reason to privilege the epigraphic evidence in this case over the literary, and so it is probably in the end moot. The emergence of Furius Camillus, of all people, in Livy 6.35-42 to resolve the situation shows how corrupted the narrative of this anarchic period had become: Camillus, the hero of Veii and the vanquisher of Brennus, would have been well into his seventies. To the annalists, Camillus acted as a fixed point for the shifting events of history over a forty year period; a noteworthy study to this regard is that of Bruun 2000.

CHAPTER TWO
From the Circuit Wall to the Building Program of Appius Claudius: Monetization
and the Birth of the Building Contract

If the foregoing chapter showed a crisis, the goal of this chapter is to demonstrate

a recession and the beginnings of a response. The disastrous debt problems that resulted

from the wall's construction may have made Romans reticent to attempt to build on such

a grand scale again: few building projects, none as ambitious as the wall, are recorded in

the middle decades of the fourth century. Not until the censorial construction projects of

C. Maenius (318) and Appius Claudius (312) does the Roman building industry pick

up.[265] However, unlike the wall, these later building projects do not seem attached by

our sources to problems of debt and social disruption.

Some scholars have suggested that the entire Early Republic saw a stagnant

economy, and they have pointed as causation to the slowing influx of war spoils into

Rome for the first two centuries after the fall of the kings.[266] By this logic, the conquest

of Veii followed by successes in the Latin War and the Samnite Wars began to revitalize

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[265] Or perhaps in 318 under C. Maenias, as discussed below.

[266] Crawford 1985: 22, "not conspicuously successful warfare." Drummond in *CAH* VII.2[2] 132 suggests a similar downturn affected surrounding Latin and south Etruscan cities, and he attributes the downturn to the slowing influx of war spoils during the period. First of all, this Italian downturn may have happened in the early third century not necessarily before; I review the evidence at the end of this chapter. Second, this seems methodologically flawed: if Rome was fighting Italian enemies in this period, and *everyone* was losing, then where was the wealth of the Regal period going?

the Roman economy by the second half of the fourth century.[267] As an indicator of

economic health, however, the building record paints a more complex picture. First,

recent archaeological excavation suggest more impressive architecture in the fifth century

than was previously recognized.[268] Second, the chronology of Rome's military success

abroad does not correspond to the production of monumental architecture at home. The

annalist sources tell us that, already by 338, Rome's military fortunes seemed to be

turning: the dissolution of the Latin League and the subsequent expansion of power into

Campania were followed by a wave of Roman colonization beginning with Cales in 334

(cf. tb. 4.2). Rome's urban environment, however, did not reflect these events. The

lacuna in public construction following the building of the circuit wall lasted fifty or sixty

years—a timespan of two generations. It is only with the ambitious work of the censors

Maenius or Appius Claudius in the last quarter of the century that we can recognize an

urban economy returning to health, as these projects began a period of sustained public

construction that lasted well into the third century. But it is not so easy to align these

censorial building programs with any major Roman military victories.[269]

This pattern requires explanation: if not merely military success, what else had

changed by the late fourth century that allowed for a sustained expansion of the building

industry at Rome that had not been in place a half-century prior? This is the fundamental

question of this chapter. To answer it, I will focus not on income from military

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[267] Cornell 1995: 345.

[268] In particular, this is the case with the publication of the Nordic excavations at the Temple of the Castores in the Forum (Nielsen and Poulson 1992), but see also, e.g., the publication of the excavations at the Temple of Apollo Medicus (Ciancio Rossetto 1997-98). Impressive structures in the early fifth century were already noted by Ziolkowski 1992: 107.

[269] The defeats at the Caudine Forks (321 B.C.) and at Lautulae (315 B.C.) appear reasonably close to these censorships to suggest that Rome's military success in the 310s was mixed, although there was moderate success against the Samnites by the later part of that decade and before the entrance of the Etruscans into the conflict in 311.

conquests, but on the institutional structures that allowed for the allocation of that
income. Can we observe changes in the way Romans were paying for public
construction? Can we detect advances in the realms of finance, money, credit and debt?

Coinage and the early evidence for Roman building contracts

This chapter focuses on two changes: the greatest development in the Roman
economy in the late fourth century was the appearance for the first time of coinage. In
turn, I also pursue the thesis that this first period of monetization saw the birth of the
contract as applied large-scale to public construction. The earliest epigraphic evidence of
contracts from the Roman building industry only appears later, around the start of the 1st
century B.C., when we can count three inscriptions: two Sullan-era building contracts
relating to the construction of roads around the city (*CIL* I^2 808, 809), and the well-
known *Lex parieti faciundo* from Puteoli (*CIL* X 1781).[270]   All three documents testify to
the sorts of large-scale building contracts that were employed by that point in time.
These Late Republican texts represent a change from the Archaic situation, where corvée
was the favored means of organizing labor for Rome's public works, as has been detailed
in the previous chapter. Of course, corvée did not disappear completely in Roman
society, and it would continue to serve a limited role in the Roman economy until the end

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[270] The road inscriptions are difficult to date with more precision. Mommsen provides the dating for both
in *CIL* after Hülsen had corrected his previous reading; this has been unchallenged: *CIL* I^2 808 is dated
after 117 by the fact that it represents the repair of a road built in that year; Guidobaldi challenges the
original date of the road, but not the date of the repairs attested by the inscription, 1999. A *terminus post
quem* for *CIL* I^2 809 is given by the latest identifiable toponym, the *aedificia C. Numitori*, which Palmer
suggests was named after a figure killed in 87 B.C. by Marians (cf. Münzer *RE* XVI Numitorius 1), 1976-
77: 155.   The *Lex puteolana* is dated in the 9th year from the foundation of the colony, thus 105 B.C.

of the Empire.[271] However, a much wider corpus of evidence from the Late Republic

both epigraphic (e.g. the *Lex Iulia municipalis* = *CIL* I[2] 593) and literary (e.g. the

descriptions of contracting in Cicero *Verr.* 2.1.130ff.) attests to the fact that contracting

was preferred over corvée as a means of organizing and paying for state building.

When did the practice of arranging for public construction through contract take

over for the older practice of corvée? Some have assumed that the traditional changeover

in 509 B.C. from monarchy to Republic entailed a change of practice, and that

contractual-based construction appears from the very earliest phase of the Republic.[272]

Ernst Badian argued most cogently that the start of construction on contract beginning

shortly after the end of the Roman monarchy.[273] To my mind, however, the evidence he

presents is thin: he cites three projects, all reported by Livy, prior to the censorship of

Appius Claudius Caecus. The earliest is the Villa Publica (435), which Livy says that the

censors *probaverunt* (4.22.7); however, as the Villa was at that point little more than a

public park, this project would have involved little actual construction.[274] The next

example is Camillus' Temple of Juno Regina (396); Livy records that Camillus

performed the *locatio* of the temple on the Aventine (5.23.7: *in Aventino locavit*). Surely,

if this is not another case of Livian anachronism, *locatio* here has the older sense of the

word, the ritual procedure of designating a site for a manubial temple, rather than a

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[271] De Ruggiero 1925: 170; Brunt 1980: 82 expresses doubts as to its widespread use, in particular in the city of Rome.

[272] Badian 1983 [1972]: 15-16; Anderson 1997: 79-80; cf. also Du Plessis 2004: 290. Strong 1994: 187 seems to ignore the earlier evidence and begins his discussion with the censorial *locatio* of the circuit wall.

[273] "Livy, in describing the arrangements for the building of early temples uses language that seems to show him as conceiving of its being carried out by contractors, as in later days" 1983 [1972]: 15-16. This is the mark of anachronism rather than of continuity.

[274] Richardson 1976a: eventually some auxiliary buildings were added such as the hut where triumphal generals spent the night before their procession probably shown on a denarius of 55 (*RRC* 429/2), but even in the late Republic, as Varro's *Res Rusticae* suggests, the Villa Publica was mostly a park and garden.

reference to the letting of a contract: this finds support in the fact that Camillus was then serving as dictator, not censor.[275] The final example is the circuit wall (378), but the previous chapter has detailed the corvée labor that likely supported the wall's construction: the language of contracting in Livy's account conflicts with other details in the same passage (6.32.1-2), and Livy appears to be speaking in the language of his era, not in that of the early fourth century.

Between the corvée to build the wall (378) and our epigraphic evidence from the Late Republic (c. 100), when did contracting become standard practice? To answer this question, we must focus on the development of Roman coinage, for coinage is the assumed medium of payment in all of our evidence of Roman building contracts. First, some discussion as to the nature of contracts, and the nature of Roman building contracts is in order. Coinage is not a necessary ingredient in every form of contract—contractual obligations such as leases or rents could be expressed in non-monetary terms: rent on land paid in annual produce was not uncommon.[276]

Nor was coinage necessary to pay for any construction contract, as payments formulated upon daily wage labor could very well be met in kind. There are essentially three ways of structuring building contracts for monumental construction: as Sir Christopher Wren put it to the Bishop of Oxford, "There are three ways of working: by the Day, by Measure, or by Great."[277] That is, payment could be made for a set amount of time, for an agreed upon portion of a whole project, or for the entirety of the project itself. In Wren's early-modern England, day-labor, or a combination of skilled laborers

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[275] On the changing definition of *locare*, see Ziolkwoski 1992: 203-4.
[276] For the persistence of rents paid in kind in a monetized society, see the discussion of von Reden 2007: 122-29 on Ptolemaic Egypt.
[277] Quoted in Airs 1976: 46.

contracted by measure along with day-labor, were the preferred methods of employing a building work force. It would not have been impossible to arrange for work by day-laborers by payment in kind.

However, such non-monetized payment for day-labor does not appear in our extant epigraphic evidence of building contracts from the Greco-Roman world. In the copious inscriptional record for Greek building contracts, we find the predominance of building arranged by measure, with a record of workers contracted to perform a variety of single tasks that contributed to the larger construction project.[278] In the Roman world, contracts between the state and a building contractor tended towards arrangement "by Measure, or by Great." There is very little evidence of the state employing laborers directly. Instead, piecemeal and wholesale contracts are seen in our earliest inscriptions: *CIL* I² 809 refers to contracts for a road let out by the foot (*in pedes singulos*); the *Lex parieti faciundo* gives only a single price for the entire project. Between these two categories, it seems that wholesale contracting for an entire building project was more common.[279] An interest in recording aggregate cost is notable in our Roman sources, where we find several quotations of the price, as in, the *total* price, of a public monument.

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[278] Cf. the evidence discussed in Burford 1969: 91ff. Some 4th century B.C. building inscriptions from Epidauros appear to include a reckoning of the total cost (λόγος δαπάνας πάσας, cf. e.g. *IG* IV² I 108 l. 158), but in this case the figure appears *after* the list of the individual components, and suggests more of an attached sum than the fact that the contract was initially envisioned wholesale.

[279] Epigraphic records of building projects from Roman Italy often give a single figure to stand for the sum cost of the project; examples from Dessau *ILS* Ch. 13 include nos. 5327, 5367, 5374, 5377, 5400, 5402, 5406, 5415, 5422a. Literary sources similarly usually describe building costs with a single figure. All of this to my mind suggests that documentary evidence for aggregate cost of building projects existed, and that evidence was likely to be contracts.

This is not to say that day-labor did not exist; of course it did.[280] Responsibilities for arranging day-labor, slave or free, could have rested with Roman contractors, *conductores*, who bought contracts for public construction directly from the censors or aediles. In the later record of a Roman law of contracts, this practice of selling state contracts to *conductores* (contractors) was expressed as *locatio operis*, the letting of a work, whereas the actual arrangement of labor was left to the discretion of the contractor.[281] This meant sub-contracting, and this practice in turn entailed that when the Roman state (the censors or aediles) let building contracts, it did so as a single, large transaction conceptualized in one cash amount.

One explanation advanced for this tendency in the Roman world to use large-scale contracts is the fact that the censors, who oversaw the letting of public contracts, were limited by their 18 month terms.[282] This may not have sufficed to see through every detail of a lengthy construction project. Thus, our sources connect some of the more ambitious censorial building projects to the attempts to extend the responsible censor's administrative office, by legal or not-so-legal measures.[283] The tendency to contract public works "by Great" may have allowed the censor to front-load his responsibility for the building, thus letting the contractors take care of the details but giving the censor the

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[280] A better source for day-labor in the Mid-Republic may be Roman comedy, rather than Roman contracts. The hiring of day-laborers under sub-contract does appear frequently in Egypt's papyrological evidence (von Reden 2007: 144-50), and this trend in the Roman evidence may in part be due to the fact that we have such a limited evidentiary corpus by comparison. Still, all signs point to the fact that contracting labor and paying daily wages was the responsibility of contractors, not the state; I suspect that even if evidence were to emerge of daily wages at Rome, it would describe relationships between two private parties.

[281] Du Plessis 2004.

[282] Strong 1994: 188-89; Taylor 2003: 7-8; Du Plessis 2004: 295.

[283] Appius Claudius seems to have extended his censorship by trickery in order to complete his public works, cf. catalog nos. 17-18. After his censorship, M'. Curius Dentatus' was made a *IIvir* in order to complete the Anio Vetus, although he died before he could see the task to completion and the *gloria perductae pertinuit ad Fulvium*, Dentatus' duumviral colleague (Front. *De Aq.* 6.1-4).

ability to claim responsibility for the work. Of course, attributing Roman public contracting practice to the limits of the censors' term ignores the fact that the annually elected aediles also oversaw the letting of public construction contracts, so there is some difficulty in this hypothesis.[284]

Whatever the driving motivation behind the practice, Roman public works projects were most often expressed by a single figure of a massive amount of cash. The price of the Aqua Marcia, for example, was reportedly 180 million HS in 146 B.C., and the project took over four years to complete.[285] Even those contracts let out by measure could be large: contracts for individual sections of repairwork on the Via Caecilia recorded in *CIL* I[2] 808 (early 1st century B.C.) reach prices of 150,000 to as many as 600,000 HS.[286] It is difficult to see how such amounts could have been conceived in an economy that viewed value mainly in terms of immovable property, livestock, and agricultural produce. It is less important that Romans actually paid for the day-to-day construction of the Aqua Marcia and other expensive public works projects in coin—we have no way of ascertaining whether they did or not, though they probably did not entirely.[287] What is more important is that contracts in the Roman world seem to have gone hand in hand with an ability to conceive of the sum cost of a building, often a massive amount, in coinage.

Roman money before coinage

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[284] As Du Plessis 2004: 295 recognizes.

[285] Front. *De Aq.* 7.4 citing Fenestella.

[286] Guidobaldi 1999 restores 600,000 for the longest section, though the price is lost in a lacuna on the stone; it must at least be larger than 150,000 recorded for one of the smaller sections.

[287] Certainly, nobody would argue that any Roman magistrate or contractor involved with the Aqua Marcia ever possessed at one time 180 million HS, which weighed 180,000,000 x 3.86 g = 694,800 kg. For ways around this, see Harris 2006 and 2008.

Coins first appears in the Roman world bearing the title PΩMAIΩN, and then ROMANO, in the second half of the fourth century B.C.; hoard evidence supports this date, and the argument for such a chronology will be expanded later in this chapter. Now, however, it is worth briefly discussing the pre-monetary Roman economy, and how the lack of coinage may have inhibited Rome's ability to think through large-scale building contracts. There is no doubt in my mind that coinage was the mark of a dramatic change in the Roman economy. Romans were latecomers to the use of coined money; the Greek world had already made use of coins since the late seventh century. Ancient authors thought that Servius Tullius in the sixth century had started Roman coinage and fixed the standard weight unit of the pound, and Pliny famously records that "King Servius first minted bronze, previously Timaeus reports that raw bronze was used at Rome" (*HN* 33.43: *Servius rex primus signavit aes, antea rudi usos Romae Timaeus tradit*).[288] This is problematic, because money in coined form cannot without exception be identified in the archaeological record of Central Italy until the fourth century. A hoard of votive material found at the sanctuary at Bitalemi, near Gela in Sicily, dated to 570-540 B.C. contained a fragment of *ramo secco*, a bronze ingots marked with a motif of a dry branch attested elsewhere in central Italy, along with 72 pieces of unformed bronze (*aes rude*) and various metal objects. The publication of this hoard provoked excitement as a possible confirmation of the Servian dates to a changeover from *aes rude*

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[288] Thomsen *ERC* I 25-28 catalogues ancient sources other than Pliny for this opinion; showing how little the ancients actually knew about the topic, Varro even credited Servius with the invention of silver coinage (Varr. *apud* Charisius *Inst.Gramm.* I p. 105 [Keil])! Ampolo 1974 is more optimistic about the monetary use of pre-coinage bronze than Crawford 1985: 5-6.

to *aes signatum* in the form of *ramo secco*.[289] However, the ritual context of this hoard

and the absence of a consistent weight unit among the bronze pieces, among other

difficulties, make it impossible to imagine these pieces of *ramo secco* circulating in the

function of coinage.[290]

Rome used bronze in the Archaic period as a unit of weight, to help evaluate

value in asymmetrical transactions.[291] This is neither unusual nor surprising considering

that barter-based societies often used metal bullion in this manner; the economy of the

Ancient Near East used silver as money (i.e., to hold and to transfer wealth) a millennium

before the appearance of coinage in the Greek East.[292] The appearance of coinage at

Rome in the fourth century, however, represented a different manner of viewing money,

in that the earliest coin strikes corresponded loosely to weight standards common in

South Italy and appear intended to be circulated themselves. Once coinage became

transacted itself, its value could expand beyond the commodities that it previously had

represented. Coinage therefore gave Romans the vocabulary with which to express the

transaction of high amounts of value, and it was of fundamental importance to the

formation of contracts of the size and term necessary for major public construction.

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[289] First published by Orlandini 1965-67; some, such as Breglia 1965-67: 271 and Peruzzi 1985: 225, support a link with Servius; Ampolo 1974: 387 calls the hoard *prova indiretta* of Pliny's assertion; this is all roundly rejected by Crawford 1985: 5-6 esp. n. 4, "It is wearisome to the soul to have to go on saying that Pliny *NH* xxxiii, 43…refers to the striking of coinage and that the Bitalemi find has nothing whatever to do with this particular fantasy of Pliny;" Humm 2005: 310-11.

[290] Catalli 2001: 13; Humm 2005: 310-11.

[291] For example, the Twelve Tables assess fines in *asses*, which seem to have been weighed out (*pendere poenas*), text in Crawford *RS* II 579 nos. 1.14-16. This early phase of payment relying on bronze as a unit of account is well represented in the Latin language (cf. Thomsen *ERC* III 200-1), e.g. the procedure for property sale being *per aes et libram*, or the root *pendere* (to weigh) in many payment words such as *stipendia*, *expensa*, *dependere*, *inpendia*, etc. Cf. Thomsen *ERC* I: 23, the *Lex Aternia Tarpeia* 455 or the *Lex Menenia Sestia* 452, dealing with a metallic standard in barter and fines, also point to a similar trend in the fifth century.

[292] Von Reden 2010: 22-23.

This chapter sets out to describe the developments in Rome's economic mentality that allowed for such a conceptualization of money. First, I will present the evidence of the building industry from the circuit wall project begun in 378 to the censorship of Gaius Maenius in 318. Then, I turn to financial developments in the same time period that speak to innovations in finance, before returning to the subject of construction's role in this history with a discussion of the censorship of Appius Claudius Caecus in 312. All of this represents the context to the appearance of Roman coinage, and I will close by considering how the background of public construction in the city may have affected, or may have been affected by, monetization.

Roman construction from 378 to 318 B.C.

In examining the scope of public construction during the central decades of the fourth century, it is important to keep in mind some observations made in the first chapter: for the decades after the wall (i.e. post 378), historical inquiry is supported by the continuous narrative of Livy down to the year 293. Recalling as well that Livy's interest in public monuments may have been supported by various forms of archival material, the fullness of this historical record only serves to accentuate the paucity of public building in the period. Only six public works projects are attested in the 60 year span from the circuit wall of 378 to the censorship of Gaius Maenius: the Temple of Apollo Medicus (353), repairs to the circuit wall (353), the Temple of Juno Moneta (344), the adorning of the rostra with ship prows (338), and the construction of starting gates (*carceres*) in the Circus Maximus (329). Of these, only the Temple of Juno Moneta seems to have been built *ex novo*. Others had little impact on the city or on its workforce:

the *carceres* of the circus, for example, were wooden and were not even painted for a century, nor is there any material evidence from this phase.[293]

Similarly, the projects of 353 had little urban impact. At the close of that year, Livy reports: "When the legions were led back to Rome, the remainder of the year was spent fixing walls and towers, and the Temple of Apollo was dedicated."[294] The first notice, the repair of the wall, has been treated in the previous chapter and serves as a *terminus ante quem* for the completion of the construction project twenty three years after its inception.[295] Within the intervening twenty years, there was little development in material sourcing or masonry techniques; it is impossible to demonstrate a distinct phasing related to this notice in the wall's material remains. I would also question, however, the need for a major repair of the wall circuit at this early date, as there is no report of a siege between 378 and 353 that would have damaged the city's walls to the point of necessitating repair.

The dedication of the Temple of Apollo is a more difficult subject, but also may not have entailed much significant construction. Livy also tells us of the dedication of a Temple to Apollo Medicus in 431, vowed during a plague two years prior.[296] Asconius records that there was only a single temple of Apollo at Rome until Augustus. There is no evidence for another temple to Apollo in the Republican period aside from the triumviral-period Temple to Apollo built by Gaius Sosius. Thus, in order to reconcile Livy's two dedications and Asconius' insistence on a single temple, scholars accept the

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[293] Catalog no. 11; that they were unpainted for so long perhaps speaks to their ephemeral original construction.
[294] 7.20.9: *legionibusque Romam reductis reliquum anni muris turribusque reficiendis consumptum et aedis Apollinis dedicata est*
[295] The language cited again here is clearly that of repair rather than ongoing construction, *pace* Cornell 1995.
[296] Liv. 4.29.7; vow, Liv. 4.25.3.

Livian reference in 353 as a rededication of the same pre-extant temple of Apollo Medicus.[297] Excavations undertaken in 1997 and 1998 to determine the nature of the Early and Middle Republican temple uncovered a large platform, built of *tufo del Palatino* and *tufo lionato* from Monteverde cut into blocks of the same dimensions as those found in the Temple of Jupiter Optimus Maximus.[298] The excavators interpreted this as a large platform upon which the podium of the temple sat, not unlike the arrangement of the nearby temples in the Forum Holitorium area, or those of Fortuna and Mater Matuta. Architectural terracottas associated with this phase of the temple date it to the fifth century and suggest workmanship parallels to the Capitolium.[299] No phasing can be distinguished then until the second century, and thus there is no physical evidence to suggest a major reconstructive effort in 353.[300]

What building there was at Rome in the central decades of the fourth century left little trace, with the exception of the Temple of Juno Moneta, dedicated in 344. In 345, after a triumph over the Aurunci, the dictator L. Furius Camillus vowed a temple, and in fulfillment of his vow the senate created *duumviri ad eam aedem faciendam* and assigned the land previously occupied by the residence of M. Manlius Capitolinus or Titus Tatius.[301] The land was on the crest of the Capitoline.[302] The temple was built quickly: the fighting against the Auruncans must have happened early in 345 as its cause is

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[297] As Oakley (1998) §vii.20.9. See also Ogilvie on Livy 3.63.5 and 4.25.3, and Dio fr. 50.1. The question of two mid-Republican phases to the Apollo temple is to my mind still open, and the discrepancy between the two ancient writers is unresolved and in need of a closer study with attention to the archeological remains.

[298] Ciancio Rossetto 1997-98; the platform was already partly known to Delbrück 1907.

[299] Ciancio Rossetto 1997-98: 181.

[300] Catalog no. 8.

[301] Livy 7.28.4-6: Manlius; Solinus 1.21: Titus Tatius.

[302] Location: *arce…in summa*, Ov. *Fast.* 6.183-85 and corresponding to Manlius' house *inter duos lucos* in Cic. *De domo* 101. In the context of the *Fasti*, I am inclined to think the supposition meant that the temple was prominent on the arx, rather than at the absolutely exact summit of the arx.

described by Livy at the beginning of the year as a "sudden raid" (*repentina populatione*). After a levy, the war was finished after the first battle (*prima…acie debellatum est*). Upon the army's return to the city, the senate immediately started preparations for the temple, the dedication of which happened on the Kalends of June of the following year.[303]

In the Aracoeli gardens, remains excavated in 1876 and 1931 are now been plausibly identified as temple foundations of a fourth century date; Tucci has given the most convincing argument that these foundations are the remains of the Republican Temple of Juno Moneta. [304] The construction materials used would support his interpretation: blocks of *tufo rosso a scorie nere* rest on top of lower courses of *tufo del Palatino*. The division between one material and the other is very casual and may even help to explain the development of legends describing how the temple took the place of an earlier house.[305] Pre-existing foundations facilitated the builders; there was also perhaps more material reused from the older structure.[306] Neither the *tufo del Palatino* nor the *tufo rosso a scorie nere* shows any signs of lifting tongs or ropes, and the

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[303] The following year: Livy 7.28.4-6; the date is given by the mention in Ov. *Fast.* 6.183-85 and also in the *Fasti Antiates Maiores* and the *Fasti Venusiani*. Ziolkowski suggests it was the fastest-built temple known from the period, 1992: 218 n. 85.

[304] Giannelli 1980-81 followed by Ziolkowski 1992: 72 and expanded upon by Tucci 2005, though I am perhaps not entirely convinced on the later phase of the temple atop the so-called Tabularium, on which now Coarelli 2010. Tucci 2005: 17-19 refutes the arguments of von Hesberg 1995 and Thein in Haselberger *et al.* 2002.

[305] If indeed the lower structure was a previous construction, its real identity remains unclear. Giannelli 1980-81: 19 suggests a previous temple to Juno,; Tucci 2005: 19-20 suggests a retaining wall on an area of the Capitoline characterized by unstable deposits of clay. Ziolkowski 1992: 72 suggests that terra cotta architectural fragments from the sixth century found in association with the remains in the Aracoeli garden demonstrate the sacred nature of the original structure, thus ruling out the *domus Manlii* and vindicating Solinus attribution of the site. There is neither enough physical evidence nor enough faith in the sources to be so confident, however.

[306] Reuse also suggested by Tucci 2005: 19. The *tufo del Palatino* blocks are cut on the typical module of blocks of the same material found in the Capitolium, the sixth century defensive wall, and other Archaic constructions, and so this hypothesis is certainly plausible.

foundations were placed by means of ramps. Roman architects had leveled and terraced

part of the Capitoline in 388, fifty years prior, and fragments of the circuit wall appear

below the area of Juno Moneta. All of this suggests that architects in 345 were working

in a site that was not all that new, and they could access previous knowledge on the how

to dispose a construction project on that side of the hill.[307]

Without any risk of Tiber inundation, the temple did not require the bulky and

labor-intensive ashlar podiums that were constructed a few decades prior for the Temple

of Apollo Medicus or later for other temples in the Forum Boarium and Forum

Holitorium. The blocks of *tufo rosso a scorie nere* lack evidence of anathyrosis, and are

often cut in a slightly concave manner as a wedge.[308] The blocks are then set into the

wall roughly in alternating courses of headers and stretchers, though block size varies

such that this pattern is not uniform throughout the structure. Furthermore, no close

metrology seems to have been employed. One course of headers, for example, has four

blocks of .53, .55, .65, .46 m width. This may be due to in part to the choice of material,

as the large black scoria inclusions in the *tufo rosso* may have prevented precise

sawing.[309] The lack of a metrology may suggest a lack of close coordination between

quarry and worksite: the stone was more likely quarried in small batches specifically for

this site and then worked into a suitable shape block-by-block as each block was put into

the wall.

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[307] Terracing project: catalog no. 2. Fragments of the wall immediately below the temple podium, by the entrance to the Museo del Risorgimento, include *tufo giallo* blocks that von Gerkan 1941: 12 identified as the *Porta Fontinalis*, followed by Coarelli 1995: 31; Meneghini 2009: 19-21.
[308] A similar technique noticed by Säflund 1932: 117 for the Republican walls.
[309] As is the case also in the *tufo rosso a scorie nere* foundations of the twin temples at San Omobono where block size is highly variable.

The temple's floor plan was small even in comparison to previous projects. The actual length of the temple that sat upon the preserved foundations cannot be ascertained, but the strong parallel in scale to the Temple of Juno Curitis at Falerii, as Tucci points out, suggests a floorplan of roughly the same size, or slightly smaller: c. 25 x 35 m.[310] This was larger than the Temple of Apollo Medicus (21.45 x 25 m) itself, but the latter temple sat upon a solid podium built of ashlars (21.45 x 38.20 x 6.20 high).[311] Juno Moneta was dwarfed by the nearby Temple of Jupiter Optimus Maximus (c. 74 x 54 m)[312], which was on a particularly grand scale. The Juno temple was also somewhat smaller than the more typical Temple of Castor and Pollux (27.50 x 37-40 m) below in the forum.[313] In sum, the temple architects quickly completed a modestly sized project. They salvaged building materials and made use of a favorably disposed and well-prepared construction site. The conservative lifting technology was suited to an unskilled work force.[314] This was not an exceedingly strenuous undertaking, and there was minimal impact from the temple's construction process, lasting less than a year, on the Roman economy.

The Temple of Juno Moneta is representative of the conservative and unambitious building industry of the mid-fourth century. We cannot detect a change until the work of Gaius Manius on the eastern side of the Forum in 338 and 318 B.C. After the naval triumph at Antium in 338, Maenius affixed the prows of the boats onto the tribunal

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[310]Juno Curitis: 28 x 36 m, Colonna *Santuari d'Etruria* 112. Juno Moneta is usually reconstructed as a *peripteros sine postico*, e.g. Tucci fig. 11, which makes sense considering the time period, but we have no sound evidence to confirm this.

[311] Ciancio Rossetto 1997-98: 184, 190.

[312] Mura Sommella 2000: 21. A total measurement of the podium is still disputed, however, with Nielsen and Poulsen 1992: 118 giving a somewhat smaller measurement of 51-53.50 m x 60-62.16 m.

[313] Nielsen and Poulsen 1992: 75.

[314] Ramps more suitable to fast projects employing larger bodies of unskilled labor, Coulton 1974: 14.

platform, an act that would give the platform its customary name *rostra*.[315] As Coarelli

was the first to emphasize, Maenius returned twenty years later as censor to the area of

the city that still displayed his naval triumph, where he also probably owned land, and

concentrated several different construction projects.[316] The censor erected a column

(*Columna maeniana*) and constructed in the area wooden *maeniana*, second-story

viewing decks that served those watching spectacles now performed in the forum.

Observing the topographical unity to the censorial building program, Coarelli also argued

that Maenius was responsible for paving the comitium in *tufo giallo della via Tiberina*

and for installing some of the smaller monuments stratigraphically associated with this

pavement. This is Coarelli's normal working method of aligning disparate literary

notices of the installation of separate items (*maeniana*, rostra, *columna Maeniana*) with

the more utilitarian building attested in archaeological stratigraphy (pavement); his

reconstruction of the comitium has more recently come under challenge.[317] However, in

this case, the weight of the evidence, four projects by the same figure in the same

location, combined with the date given by the stone type (*tufo giallo*) would continue to

support his thesis. All told, the program of Maenius the censor in the northeast corner of

the Forum appears to have been multifarious and extensive.

This section has shown the shape of construction at Rome for a sixty year period

following the building of a defensive circuit wall. In the central decades of the fourth

century, Rome undertook very few construction projects, and what was built appears

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[315] Sources at catalog no. 12.
[316] The possibility that he owned land in that area is given by the fact that Cato later purchased an *atrium Maenium* in that area of the Forum in order to build his Basilica Porcia, as see sources cited at catalog no. 92.
[317] Carafa 1998; Amici 2004-5.

conservative, marked by temporary materials or reuse, and without showing any signs of technological innovation. Until the efforts of Maenius, the city's building industry was sluggish, not yet enriched with the spoils of Italy and, eventually, the east. But there is more to the story than the fullness of Rome's coffers. 318, the year of Maenius' censorship, was by no means extraordinary. In the years surrounding this censorship, Romans were achieving some encouraging, if limited, results in the Second Samnite War, but the dominion of Italy was passing to Rome not without difficulties.[318] Beyond this incoming wealth from war, however measured, there were also more structural changes taking place in Rome's economy at home.

Innovations in credit and debt: the Quinqueviri Mensarii

Even before the development of Roman coinage in the late fourth century, the Roman state can be seen reflecting on issues of liquidity, debt, and credit. The problem of agrarian debt is central to the historical narrative of the period. Solutions to debt crises in the early fourth century and prior, however, show a certain simplicity. For example, among the most famous laws aimed at curbing a debt crisis is the *Lex Licinia Sextia de aere alieno* passed in 367. It was intended, according to Livy, "so that, after that which was accrued to the usurers was deducted from the capital, that which remained would be discharged in three yearly payments of equal value," *ut deducto eo de capite quod usuris pernumeratum esset, id quod superesset triennio aequis pensionibus persolveretur*. This

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[318] The disaster at the Caudine Forks (321) had been mitigated in part by Papirius Cursor's victory over Luceria., and by 318, many towns in Samnium and Apulia were suing for a two-year peace. However, in two year's time, the war with Samnium had restarted, and the Roman legions suffered another a defeat or a draw at Lautulae; Livy 9.23 gives two accounts given by his sources for the outcome of the Battle of Lautulae, one a defeat, another a draw.

was nothing more than a cancellation of interest and an extension of the repayment of the capital over a term of three years; this law would not transform the nature of debt, but rather it was interested in an immediate lessening of the burden.[319] No wonder that the *Lex Licinia Sextia de aere alieno* was one in a long list of similarly concerned measures: it represented little more than a quick fix.[320]

A more radical approach to these matters of credit and debt, however, appears in our sources under the year 352. It is worth noting that laws like the *Licinia Sextia* attempted to mediate between private parties, and to address the oppressive encumbrance of *private* debt afflicting the Roman plebs. This is in contrast to the events of 352, when the Roman consuls seem to have purchased[321] private debt by created a banking commission of sorts, *quinqueviri mensarii* responsible for the easing of debt, *solutio aeris alieni* (7.21.5-8):

> *Inclinatis semel in concordiam animis novi consules fenebrem quoque rem, quae distinere una animos videbatur, levare adgressi solutionem alieni aeris in publicam curam verterunt quinqueviris creatis quos mensarios ab dispensatione pecuniae appellarunt. Meriti aequitate curaque sunt, ut per omnium annalium monumenta celebres nominibus essent; fuere autem C. Duillius P. Decius Mus M. Papirius Q. Publilius et T. Aemilius. Qui rem difficillimam tractatu et plerumque parti utrique, semper certe alteri gravem cum alia moderatione tum impendio magis publico quam iactura sustinuerunt. Tarda enim nomina et impeditiora inertia debitorum quam facultatibus aut aerarium mensis cum aere in foro positis dissolvit, ut populo prius caveretur, aut aestimatio aequis rerum pretiis liberavit, ut non modo sine iniuria sed etiam sine querimoniis partis utriusque exhausta vis ingens aeris alieni sit.*

> Immediately once everyone was disposed to peace, the new consuls, having also undertaken to alleviate usury, what seemed the singular matter that occupied everyone, turned the easing of debt into a public matter with the creation of a commission of five men whom they called "*mensarii*" for their dispensation of funds. For their fairness and care they deserve to be honored by name in the records of all the annals: and they were C. Duillius, P. Decius Mus, M. Papirius, Q. Publilius, and T. Aemilius. Not only with other restraint but also especially by more of a public expense than a loss, they took on a matter most difficult in respect to its management and often burdensome to both parties, but certainly always on one side. For either the aerarium discharged debts that were

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[319] In fact, it was another of the *leges Liciniae Sextiae* that would

[320] In 357, for example, the *lex Duilia Menenia de unciario fenore* fixed the interest rate at 1% (Liv. 7.16.1). Treated in such a manner, the debt problem remained unmanageable.

[321] We might call this "nationalizing" debt, but the term is hardly applicable to this situation.

> longstanding and encumbered more by the laziness of the debtors than by their means with tables set up with bronze in the forum, on condition that surety was first given to the state, or a fair assessment of the price of property released the debts with the result that a large amount of debt was paid off not only without a loss but also without complaint from either party.

Nicolet has contended that the details of this episode are overly Hellenizing, and that it may represent a reduplication of the events of 216, when another panel of *mensarii* was established. However, the authenticity of the episode seems to my mind more secure.[322] First of all, as regards supposed Hellenizing aspects, there are the striking similarities between financial matters in the historical records of Rome and Syracuse in the period, which would suggest that Rome at least was in contact with Greek banking practices far earlier than the third century.[323] But moreover, rather than being derivative, this episode in 352 forms a unique practice both in terms of Hellenistic and later Roman comparisons. While the *mensarii* are the Latin equivalencies of the Greek *trapezites*, both words derived from the respective terms for "table," the function of the *mensarii* of 352 is neither that of moneychanging, nor was it that of deposit banking, the traditional duties of the Greek *trapezites*.[324] At Rome in 352, moneychanging is precluded by the absence still of coinage; that these magistrates were not engaged in deposit banking is suggested by the fact that the commission was impermanent and is not mentioned again before its reformation in 216. When reformed in 216, however, the commission's role had changed: as Storchi Marino points out, the two commissions served vastly different roles,

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[322] Nicolet 1963: 421. Mommsen also notes a third related episode from the reign of Tiberius, which is beyond the scope of consideration here, *StR* II³ 1.641.

[323] For the points of contact between Rome and Syracusan financial history in the late 5th and early 4th centuries, see Gabrielli 2003a: Ch. 2.1.

[324] Bogaert 1968: 84 for a *trapezites* from Attica involved in the deposit for a contract, 115-16, for itinerant deposit *trapezites* found in Delphi; also Andreau 1987: 222-24. Interestingly, Plautus refers very frequently to *trapezites* in Latin as *tarpessita* or *tarpezita*, rather than *mensarii*; citations at *loc. cit.* 223 n. 12 and Andreau 1968.

the earlier as public exchequers of the *aerarium*, while the latter *quinqueviri* were

charged with replenishing the depleted treasury.[325]

If the historical episode is deemed authentic, Livy's description of it is striking in

several regards.[326] First of all, the action presents an unusual legislative procedure. The

typical approach of the period, exemplified by laws such as the *Lex Licinia Sextia de aere*

alieno, was to address debt crises by means of the ratification of laws. This makes sense:

the encumbered plebeians turned to their advocate, the tribunes of the plebs, for help; the

tribune in turn raised a *rogatio*; this then passed through normal channels into a *lex*. But

the episode in 352 is different: here, the consuls themselves create a special commission

of five, *quinqueviri*, to handle the matter.[327] This procedure is all the more unusual

considering that one of the consuls, Martius Rutilius, was a prominent plebeian figure

and would have been well disposed towards the plebs' favor.[328]

The actions of the *quinqueviri* themselves are also unprecedented. In the above-

cited passage, Livy records them as twofold: they were in charge of taking on debts that

were difficult to pay for reason of the debtor's sluggishness (*inertia debitorum*), and they

offered fair evaluations of property used to pay off debt. This represents a shift from

earlier legislation that appeared occupied primarily with an overwhelming *amount* of

debt.[329] Here, the ability to pay is less of an issue. The debtors appear to have had the

means to pay their debts, but were simply not doing so. Betraying his a moralizing tone,

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[325] Cf. Liv. 23.21.6; Storchi Marino 1993: 227.

[326] Some of the details may, however, be obscured in transmission: there is a strange mix of three plebeians and two patricians in this group. Storchi Marino 1993: 216-17, 228-30 sees this as supporting the historical authenticity and suggests that such a mixed-composition panel would have been plausible at the time.

[327] Mommsen citing the episode of 216 suggests that such banking commissions were created through the powers of the people's tribune, *StR* II[3] 1.641. But here, it is explicitly the action of the consuls, further giving an individual quality to this episode.

[328] S.v. Münzer "Marcius: 97 C. Marcius Rutilus" *RE* 14[2] coll. 1588-89.

[329] Discussion of these earlier legislation in the catalog of Gabrielli 2003a 105ff.

Livy attributes this inactivity to reasons of laziness or greed: *impeditiora inertia… quam facultatibus*. Still, it would be easy to imagine some difficulty in making equitable payments with non-monetary assets (real estate, livestock, etc.) in an economy that still lacked the coinage. The problem here does not appear to be one of bad credit or insolvency, and the state is portrayed as willing to take on the debt and to act as the guarantor (*ut populo prius caveretur*): the state instead seems to be contending with an issue of liquidity.

It is not surprising to find liquidity issues in Roman society prior to the appearance of coinage. As has been discussed, there is evidence of a bronze standard at work already in the Roman economy of the Archaic period, and this could facilitate asymmetrical transactions—the use of bronze for such a purpose lies behind the "tables with bronze placed in the forum" by the *mensarii* in 352 (*mensis cum aere in foro positis*). However, bronze aided fair estimations of the value for goods, which themselves were transacted, and there is no sign here of a bronze coinage system at this point. That is, the bronze itself was not yet being exchanged. Instead, issues of credit and debt in the early centuries of the Republic still revolved around assets such as land, livestock, and agricultural produce. According to Livy 7.22.6, a census was held in 350 to record changes in property ownership because of recent debt measures (*quia solutio aeris alieni multarum rerum mutaverat dominos, censum agi placuit*). Surely, this is a reference to the *solutio aeris alieni* of 352, and the citation demonstrates that matters of land above all occupied the commissioners. The function of the *quinqueviri* appears to have been to assess the value of land, to make an *aestimatio aequis rerum pretiis*, and to make an asset with a fair price able to be transacted.

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In this episode we can detect an early realization that a different way of

conceiving credit and debt may have been necessary to resolve Rome's constantly

reoccurring debt crises. If the Roman state was willing to involve itself in a liquidity

crisis, perhaps there was at this moment a hint of an awareness of the potential of money,

if only because no mechanism would serve as successfully as coinage to match the assets

of the debtor with the demands of a creditor. In this way, the commission of 352

represents an important step on the way to monetization at Rome. It was, however, a

failed step: to judge from the census of 350, the actions of 352 produced more confusion

over property ownership than any permanent solution. At least for the moment, the

Roman state would have to continue to contemplate an appropriate way to deal with its

debt difficulties. Rome would also continue to legislate directly against interest,

addressing the symptoms rather than the underlying causes: the *plebiscitum de fenore*

semuncario in 347 limited interest rates to 1%; in 344 and again in 304, the aediles

inflicted severe penalties on usurers; the *lex Genucia de feneratione* of 342 attempted to

outlaw usury altogether.[330]

None of these measure appears to have been successful; Appian even suggests

that the *lex Genucia* was never much enforced in the first place (*BC* 1.54).[331] But it can

be argued that the temporary experiment of the *quinqueviri mensarii* continued to

resonate in different ways. By the late fourth century, *tabernae argentariae* lined the

northwest side of the Forum; they had replaced butcher stalls shops, *tabernae lanienae*.[332]

Andreau sees the *argentarii* in these tabernae as "changeurs-banquiers professionnels,"

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[330] Gabrielli 2003a: 138-40.
[331] If this is a reference to the *lex Genucia*; Gabrielli 2003a: 311 suggests that this passage in Appia refers to the *Lex Marcia de fenore* of 311.
[332] Varro frg. Non. 853 L.

even if the date (still barely pre-coinage) is early for such an interpretation.[333]

Regardless, these figures became synonymous with bankers soon enough.[334] This was not an inconsequential transformation. It raises the idea that an economic mentality disposed to the use of coinage was appearing at Rome along with the physical setting for monetary exchange, even if coined money itself was not quite yet present.

Money was also being felt more strongly in the sphere of Roman politics. Several scholars have argued that the so-called Servian census classification, which divided Romans up into five classes based on wealth expressed in bronze *asses*, cannot have been imagined before the start of Roman coinage.[335] While pre-monetary forms of bronze (*aes rude*, *ramo secco*) helped in evaluating the value of movable property (livestock, commodities), it is less easy to understand how this system of accounting by weight could be applied to land. It would be circular logic to say that an anachronism proven by the absence of coinage shows the effects of the appearance of coinage; however, there is other evidence to suggest that the census classification using bronze *asses* developed no earlier than the Second Samnite War. In his recent monograph on Appius Claudius Caecus, Humm presents the most elaborate argument, beginning with the observation that the Servian classification is essentially a twofold division of Roman citizenry: by their

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[333] Andreau 1987: 340; Humm 2005: 326.

[334] Already by the time of Plautus, an *argentarius* in the Forum was a banker (*As.* 1.1.113). At this point, however, they seem best interpreted as silversmiths in our earliest mention of them, as they are tasked with dismantling Samnite armor and fashioning it into some other form (bullion or plate, perhaps). Discussion of the date of the first *tabernae argentariae* with sources in catalog no. 15.

[335] Nicolet 1966: I 18; Raaflaub 2005: 209; Humm 2005: Ch. 5, esp. 317-18. Revising an earlier position (1974) that tried to explain the Servian reforms in the context of the use of bronze in Archaic Rome, Ampolo in *St.R.* II.1 228 sees the bronze in the Servian census classification as an anachronism on the part of our ancient sources, but goes no further.

capacity to provide arms and armor, and by their wealth, as measured in bronze *asses*.[336]

The military nature of the census classification, correlating to the components of the

Roman legion, suggests that the qualifications based on ability to provide the panoply of

the hoplite warrior was more essential and earlier, and that qualifications based on the

bronze *as* belongs to a later development or reform.[337]

Humm argues that this later development occurred sometime around 311, when

the normal number of legions was increased from 2 to 4; this implied an increase in

manpower and, by the same token, a reorganization of the census classes.[338] Changes in

the Roman army during the Second Samnite War appear to have been profound, and

Humm also dates the origins of combat *manipulatim*, in maniples with the spear (*hasta*)

and small round shield (*scutum*), to the period around 311.[339] This military development

is reflected in the lightly-armed warriors of the fourth and fifth Servian census classes,

who were less involved in the hoplite-style warfare of the Archaic period, but now

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[336] The following is based on Humm 2005: Ch. 5. Cf. Liv. 1.43.1-2: *ex iis, qui centum milium aeris aut maiorem censum haberent…prima classis omnes appellati…arma his imperata…* etc.

[337] As Humm 2005: 313-4 and others have pointed out, a pre-monetary census based on land ownership evaluated only by surface area is not supported by the ancient sources, nor would it have been equipped to deal with differing qualities of land. In support of this, cf. Arist. *Ath. Pol.* 7.4, where the Solonian class assessment is measured in quantities of produce (grain and wine/oil), rather than land surface area.

[338] Liv. 9.30.3 for the increase in the legions. Where this new manpower came from is not clear; Harris 1990: 509 suggests that the burden of military service may have become light from 509-311, and so the doubling of the legions did not present a significant difficulty; Loreto 1989-90 points to the new tribes *Falerna* and *Ufentina* created in 318 as responsible for a recent augmentation in Rome's population.

[339] The famous description of this transition is found in the difficult passage at Liv. 8.8, as see Harris 1990: 508, "Livy 8.8 cannot be ignored, in spite of the near unintelligibility of part of the transmitted text." The exact date of this changeover is impossible to ascertain: Livy describes changes in the Roman army during his narrative of the year 340 where he dates it *postquam stipendarii*, i.e. after the sack of Veii (396). The Second Samnite War is as good a setting as any, if the *scutum* comes to Rome from Samnite practice as can be suggested from Samnite *scuta aurata* carried in the triumph by L. Papirius Cursor (Liv. 9.40.16) and also from some archaeological evidence discussed by Humm 2005: 270-71. In this case, as Harris 1990: 508 points out, military reform often follows defeat, and so the period after the disaster at the Caudine Forks (321) or the loss at Lautulae (315) makes for a good context, and Humm's date of 311, with the military reforms about which we do know, is a supportable hypothesis.

became an integral part of the Roman combat force.[340] All of this is to say that the

Roman census reorganization in the fourth century was a reaction to changes in Roman

military tactics that cannot have occurred much earlier. In this case, the division of the

Roman population into levels of wealth valued in bronze *asses* may have reflected the

financial mentality of the late fourth century, rather than that of the Archaic period.

Along with the *quinqueviri* and the *argentarii*, the census reform becomes symptomatic

of an expanding Roman attitude towards money in the latter half of the fourth century.

Revenue and Building: Construction ex manubiis

These signs of increasing monetization in Roman society in the late fourth century

were not merely confined to the worlds of finance, politics, and warfare; change can also

be patently observed in the sphere of Roman public construction. The record of temple

building between the fourth and early third centuries shows a change in the practice of

manubial construction that can reveal the rising reliance on coinage. Ch. 4 discusses in

much greater detail the process by which the income from military triumph was

translated into public architecture; here, I want to focus only on developments in the

process in the fourth century. Ziolkowski in particular has studied the temples of this

period, and he has argued that the late fourth century saw the beginning of construction

ex manubiis altogether.[341] I would tend to agree with Aberson that the process of

funneling war spoils into construction was much older and related to Bronze Age

practice; Romans themselves considered the activity Archaic, and were content to believe

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[340] Humm 2005: 308-9. This makes a certain sense if one compares the *manipulus leves* at Liv. 8.8.5, *qui hastam tantum gaesaque gererent*, to the fourth census class at Liv. 1.43.6 *(his) nihil praeter hastam et verutum datum*.
[341] 1992: 241-42.

that Romulus had participated in the tradition with his vow of a manubial temple during a battle with the Sabines (Liv. 1.12.4-6).[342] Again, these issues will be discussed at greater length in another chapter. What is important here is that, even if the association between war spoils and architecture was very ancient, the evidence does appear to support Ziolkowski in identifying some marked change in practice in the fourth century.

Ziolkowski describes this change as a transition in the responsibility for temple foundations from communal to individual. That is, he argues that the decision to build a temple at Rome was made and carried out by any number of members of the Roman community up to the later fourth century B.C., when the process of vowing, financing, and dedicating a temple began more and more to rest exclusively with a single individual, or with that individual's household or *gens*. The rededications in the early Republic of temples started under the kings, such as Jupiter Optimus Maximus (509), Saturn (497), and Semo Sancus (466), were communally performed simply by the fact that the monarch who started a public temple was no longer around to see its completion. This communal aspect also holds true for the foundations of the Temples to Ceres (493) and to Apollo Medicus (431), both brought about by consultation of the Sybilline books, not by a general's vow on the battlefield. Ziolkowski must negotiate through some earlier exceptions to his thesis: the Temple of the Castores (484) was vowed by A. Postumius Albinus and dedicated by his son as *duumvir*. Similary, the Temple of Juno Regina (392), which was associated with M. Furius Camillus at every step of its *votatio*, *locatio*, and *dedicatio*—here, Ziolkowski suggests that Camillus, like the younger Postumius

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[342] Aberson 1994: 96-101.

Albinus, dedicated the temple as senatorially appointed *duumvir*, rather than from an elected office, and thus functioned as an instrument of the community.

If Early Republican temples were more often than not communal building projects in nature, then the Temple of Juno Moneta shows that matters remained largely unchanged by 344. The temple was vowed during a battle by L. Furius Camillus, but its *locatio* was performed by *duumviri ad eam aedem pro amplitudine populi Romani faciendam*, created by the senate. The following year, the consuls C. Marcius Rutilus and T. Manlius Torquatus (Liv. 7.28.4-6) dedicated the temple; after the vow, the younger Camillus was no longer involved. Ziolkowski detects a shift beginning in 325:

> The sweeping change came in 325 with the vow of L. Papirius Cursor to Quirinus. The fact that the temple was dedicated thirty-two years later by the vow-maker's son is the best proof that the *aerarium* did not participate in its construction. Another distinctive feature is that the younger Papirius dedicated the temple as consul [in 293], not as *duumvir aedi dedicandae*.[343]

That is, rather than drawing on collective funds in the *aerarium*, the Temple of Quirinus was built from *manubiae*, spoils of war, which were somehow designated for the construction of the temple vowed during the course of battle, and which could be controlled by the vower or his heirs in their elected offices.[344] Ziolkowski sees this change taking hold in the same time period in other projects, noting that the Temples of Salus (vowed 311, dedicated 302) and of Victory (vowed 305, dedicated 294) were controlled in all phases by single individuals.[345]

Livy would also appear to support Ziolkowski's thesis that something different was occurring in the temple dedications of 293: in the same year that the younger

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[343] 1992: 240.

[344] A discussion of the legalities of *manubiae* can be found in Ch. 4. Here, it is worth noting that in the crucial passages of Cic. *Leg.agr.* 1.12 and 2.59, manubiae is distinctly kept separate from the *aerarium publicum* (*neque in aerarium relatum sit*); cf. Aberson 1994: 63ff.

[345] 1992: 240.

Papirius Cursor dedicated the Temple of Quirinus, the other consul, Sp. Carvilius

Maximus, contracted out the construction of a Temple to Fors Fortuna from his manubiae

aedem Fortis Fortunae de manubiis faciendam locavit (10.46.14). This is Livy's first use

in his narrative of Republican history of two phrases in relation to the foundation of a

temple: i) *de manubiis*[346] and ii) *locare* + gerundive to mean "to let out a contract," rather

than the older meaning of performing the ritual locating of a temple (*locatio*).[347] Sp.

Carvilius' actions also stand out in another manner, for, in describing his triumph, Livy

gives one of the fullest accounts so far in his histories of the allocation of Carvilius' war

spoils, and what portion of them went to the cost of the temple. Moreover, Livy records

these allocations *in money* (10.46.14-15):

> *Aeris gravis tulit in aerarium trecenta octoginta milia; reliquo aere aedem Fortis Fortunae de manubiis faciendam locavit…et militibus ex praeda centenos binos asses et alterum tantum centurionibus atque equitibus…divisit.*

> He brought to the treasury 380,000 *aes grave*; with the remaining bronze he let the contract from his manubiae for the Temple of Fors Fortuna…and he distributed 102 *asses* to each of his soldiers and so much as remained to his centurions and cavalry.

This passage comes on the heels of Livy's similarly detailed account of Papirius Cursor's

triumph *de Samnitibus* (10.46.5):

> *aeris gravis travecta viciens centum milia et quingenta triginta tria milia; id aes redactum ex captivis dicebatur; argenti quod captum ex urbibus erat pondo mille octingenta triginta. Omne aes argentumque in aerarium conditum, militibus nihil datum ex praeda est.*

> Carried (in the triumphal procession) were 2,533,000 of *aes grave*, it is said that this bronze was the proceeds from the (sale of) slaves; 1,830 pounds of silver that was captured from the cities. All the bronze and silver was deposited in the treasury; nothing was given from the *praeda* to the soldiers.

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[346] The word *manubiae* has not appeared in Livy's text since the monarchic period, when Livy reports that Tarquinius Superbus applied *manubiae* to the construction of the Capitolium by Tarquinius Superbus (1.55.7), but the early date of this makes it unreliable as precedent.

[347] On the evolution in meaning of *locare* "completed by the first century," see Ziolkowski 1992: 203-8. Livy uses *locare* in the sense of contracting before in relation to censorial construction of the Villa Publica as well as the circuit wall; however, as discussed below, I hold these mentions to be anachronistic.

In this case, and for the first time in his narrative of the Republic, Livy makes a metallic differentiation between bronze and silver. (The remarkable details concerning this triumph do not stop here: Pliny *HN* 34.18 goes so far as to suggest that Carvilius had a statue to Jupiter made from the bronze melted arms captured from the Samnites, and with the filings of metal leftover, *e reliquiis limae*, he also had a statue made of himself.) Considering the details in our sources surrounding both of these triumphs, it is plausible if not likely that they rest on some form of documentary material.[348] This is not to say that we should rely too heavily on the figures, but it does support the idea that the phrases *de manubiae* and *locare* + gerundive may derive from some authentic source.

Can this language be an early reflection of the appearance of cash by 293 in the process of temple construction? One thing that Ziolkowski's thesis does not sufficiently take into account is the fact that, prior to c. 300, Rome remained unmonetized, and the transfer of war spoils into architecture would have looked very different than the allocation of cash recorded in the triumph of Carvilius. In fact, the pre-c. 300 transfer of spoils into architecture would have been very similar to what Livy suggests that Papirius Cursor did for the Temple of Quirinus: the adornment of a temple with the spoils of the enemies (10.46.7: *exornavitque hostium spoliis*). Livy goes on to say that Papirius' triumph over the Samnites in fact produced so much spoliated arms and armor, that they were also distributed to allies and neighboring colonies in order to adorn their forums and public spaces (10.46.8).

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[348] Cf. *infra alia* the vagueness of the description of the spoils from Camillus' triumph over Veii (396) at Liv. 5.22.

There is good evidence of this practice of displaying captured armor as part of the triumph process in the Early Republic.[349] We even have material witness of this practice continuing well into the third century in the form of signed pieces of armor.[350] This display of conquered arms has a long pedigree in the Greek world as well, and Aberson connects the Roman practice to the world of the Greek Bronze Age and early Italian Iron Age, suggesting that *manubiae* originally comprised those metallic items taken in war and belonging by right to the leader of a household or clan.[351]

In this case, the transformation attested to in 293 with the dedication of the Temple of Quirinus may in part, as Ziolkowski has suggested, have been located in the rising individual attachment to temple building. But only in part: it is also possible to detect in Livy's account of 293 a changeover in the concept of the metal objects among the spoils of war from arms to include cash. The distribution of the arms and armor captured by Papirius was not enough to satisfy his soldiers; either they weren't among the *sociis et coloniisque finitimis* (10.46.8) who received the arms, or else they were expecting something else for their soldiering. Livy suggests to us that it was the latter: Papirius' soldiers groused that the triumphant general deposited the rich *praeda* from the campaign—the bronze from the sale of slaves and the silver—directly into the treasury, and that no part of this money went towards their *stipendium* (10.46.6).

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[349] Rawson 1990.

[350] Examples include the "Trophy of Novius Fannius," a breastplate inscribed with the name Novius Fannius in Greek and dating to the Second Samnite War, Colonna 1984; a cuirass inscribed *Q. LUTATIO C.F. A MANLIO C.F. / CONSOLIBUS FALERIES CAPTO*, now in a private collection in Geneva, but perhaps dating to the capture of Falerii Veteres in 241, Flower 1998; Flower discusses other examples such as a helmet from Trieste dated stylistically to the late third century and inscribed *M. PATOLCIO AR. L.P. VIII*.

[351] 1994: 96-101.

Backwards in time, during the campaign in 325 during which the elder Papirius Cursor vowed the Temple of Quirinus, the situation would have seemd very different.[352] Famously, the elder Papirius Cursor as dictator came into conflict with his *magister equitum*, the younger Fabius Maximus Rullianus.[353] Papirius had departed on the eve of battle to retake the auspices and given orders to await his return. Contrary to the command of his superior, Fabius Maximus proceeded to attack and to win at least one battle, though some of Livy's sources suggest that Fabius was victorious against the Samnites twice during Papirius' absence. Fabius Maximus then behaved in a fashion not atypical in military victory when he collected the massive amount of arms and armor (*multis potitus spoliis*), he piled them together on the battlefield, and he burned them as a thanksgiving-offering. Or he was more clever. According to Livy, Fabius Pictor's version of the story recorded that Fabius Maximus decided to burn the collected arms so that Papirius Cursor would not have a chance to benefit from the glory of the spoils, nor to carry them in his triumph (8.28.9-10: *ne suae gloriae fructum dicator caperet nomenque ibi scriberet aut spolia in triumph ferret*).[354] Considering that Papirius Cursor may already have vowed these spoils to the Temple of Quirinus at Rome, the fury of the dictator upon his return is understandable. And moreover, the fact that the income from

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[352] Livy could not find the record of such a vow in his sources despite searching, but he reconstructs the elder Papirius Cursor's vow as *dictatore* from the fact that the younger Papirius would not have had time to vow and dedicate a temple in the brief time span between the battle in Samnium and the triumph *de Samnitibus* (10.46.7). Add to this that apparently, the season between battle and triumph was winter, *nives iam Omnia oppleverant* (10.46.1)—hardly weather for construction. Pliny knew of the vow of the father and dedication of the son (*NH* 7.213), but it is not out of the question that he took this from the reconstruction of Livy. See Ziolkowski 1992: 139.

[353] The following paragraph derives from Livy's account at 8.28.

[354] Offering the spoiled arms as a burnt offering was not uncommon, e.g. Liv. 1.37.18, 8.1.6, 10.29.18. Could it be telling that in the last example, Fabius Maximus at Sentinum promises *both* a temple and the burned arms to Jupiter Victor, (*aedem Iovi Victori spoliaque hostium vovisset*)?

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the campaign went, literally, up in smoke makes it less surprising that the Temple of Quirinus took 32 years to build.

Although the idea that spoils could be applied to public construction projects seems not to change, there is an interesting difference over the 32 years of the Temple of Quirinus' construction between Roman attitudes towards the physical nature of those spoils (arms and armor, or cash). The previous section on the *quinqueviri mensarii* showed the Roman state starting to think in novel ways about the payment involved in debt. Here, again, Rome appears in the late fourth century as a society considering how to incorporate coinage into its economic structures and public finances. By 293, the younger Papirius' soldiers were disappointed not to have been given a share in the metallic rewards from military conquest by a triumphant general who was otherwise generous with his captured arms and armor. In 325, however, when Papirius' father served as dictator, there was no hint of similar concerns.

It is not surprising to find in this context Livy's first attestation of a temple built on contract in the Republican period. A recognition of the value of money lends authenticity to Livy's statement that Carvilius Maximus let a contract for the building (*locavit faciendum*) of the Temple of Fors Fortuna. We don't want to rely too heavily on Livy's language, as elsewhere he has spoken anachronistically about the process of arranging for public construction.[355] However, by the first decade of the third century, the context had changed, and Livy's description of a building contract expressed in monetized terms was no longer anachronistic.

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[355] See discussion above at pp. 68-71 of the language used to describe the censors project to build a wall in 376, where *locare* is also found in Livy's description.

The censorship of Appius Claudius Caecus

The activities of C. Maenius in his censorship of 318, accounting for several projects in the eastern part of the forum, represented an organized building effort that comprised several monuments. This effort presaged or perhaps even inspired a similar but much more grand program by the next censorial college. Appius Claudius Caecus' censorship beginning in 312 merited long-lasting fame for the construction of two important public works, the Via Appia and the Aqua Appia.[356] The road and the aqueduct are always found as a doublet in sources on Appius' censorship; neither is mentioned without the other. A third structure, the Temple of Bellona is included in Appius' *elogium*, but this was vowed and begun in his consulship in 296.[357] In 312, however, two ambitious structures in and around Rome were begun at one stroke and seen to completion by one magistrate, for Appius' colleague resigned early in his tenure as censor.[358]

The road and the aqueduct were impressive and innovative undertakings. There is a tendency in scholarship to focus on finding technological precedence for both projects at the expense, I think, of their real novelty and impact. A close examination of the labor

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[356] I am convinced that Livy's date, supported by Frontinus and the Capitoline *Fasti*, for the censorship is correct; but Diodorus gives the censorship as beginning in 310, and on this debate see Ferenczy 1967: 30.
[357] Livy 9.29.5: *quod viam munivit et aquam in urbem duxit*; Diod. Sic. 20.36.1-2; *De Vir. Illust.* 34; Cic. *Pro Cael.* 34 plays rather humorously with the pairing at the expense of Clodia. The addition of Bellona: the *elogia* from the Forum of Augustus restored based on the elogium from Arezzo, *CIL* I^2 p. 192 = *CIL* XI 1827; *InscIt* XIII.3 12 and 79. For further source criticism of the tradition concerning Appius, see Humm 2005: 35-100.
[358] He is named as C. Plautius in Livy but L. Plautius in Diodorus; the *Fasti* support Livy, cf. *RE* XXI.1 22-23 "Plautus 32: C. Plautius Venox"; Livy 9.29.5-8 suggests the resignation was due to his disagreement with Appius' severe manner of enforcing the census. That his cognomen is Venox ("a vein of water") may support the idea that he was involved in the early stages of the Aqua Appia, perhaps in locating its water soruce.

and technology behind both shows the extraordinary ambitions and innovation of Appius'

censorship. To begin with the aqueduct, Frontinus gives the fullest description:[359]

> *Concipitur Appia in agro Lucullano Via Praenestina inter miliarium septimum et octavum deverticulo sinstrorsus passum septigentorum octoginta. Ductus eius habet longitudinem a capite usque ad Salinas, qui locus est ad Portam Trigeminam, passuum undecim milium centum nonaginta; ex eo rivus est subterraneus passuum undecim milium centum triginta, supra terram substructio et opus arcuatum proximum Portam Capenam passuum sexaginta.*

> The Appia begins in the *ager Lucullanus* between the seventh and eighth milestone of the Via Praenestina on a side road 780 paces to the left. Its course has a length from the outtake at the Salinae, a place by the Portam Trigeminam, of 11,190 paces; of its course, the subterranean channel is 11,130 paces, and sixty paces are above ground, namely a built channel conveyed on arches near the Porta Capena.

There are numerous theories as to the source of the technology that influenced Rome's

first aqueduct, though no one source seems to serve as a perfect precedent. The water

system was primarily a tunneling project, only above ground for .5% of its course, mostly

at its outflow. The Etruscans and Latins had been carving *cuniculi* into the soft tuff of the

Tiber Valley for some two centuries prior, but these tunnels were shorter and of a far

steeper gradient than the Aqua Appia.[360] The Etruscan engineers themselves may have

been influenced by Near Eastern technology: the *qanats* of Iran consisted of a slightly

downward graded (~.5%) channel emptying an aquifer within higher terrain to a downhill

outlet and accessed by numerous vertical channels along its route.[361] They were of great

antiquity, and there certainly would have been technological diffusion between these

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[359] Very little of the aqueduct survives for study aside from some sections of the *specus*. The source has not been precisely located; the drop from the general area to the outflow in the Forum Boarium 16 km away suggests, however, a gradient of .5% or 5 m descent per km, see on these details, Ashby 1908.

[360] The classic discussion of this is Judson and Kahane 1963; Ward-Perkins 1962 makes the strong connection between this technology and Rome. Hodge 1992 notes a difference of grade: some of the Etruscan *cuniculi* ranged to 3.5-3.8 % grade, whereas the Aqua Appia fell at an average .5% grade from source to outlet.

[361] Hodge 1992: 23.

eastern areas and the Italian peninsula.[362] From the Greek East, we can also cite the

Tunnel of Eupalinos from Samos; the grade of the water channel in that tunnel was

.4%.[363]

This assortment of comparanda suggests that the search for a direct precedent at

Rome is unnecessary. What becomes clear is that most Mediterranean societies sought

technological means to supply their cities with water during the increasing urbanization

of the eighth through sixth centuries.[364] Indeed, we should not forget in this context the

Roman *cloaca maxima*, which must have closely resembled an Etruscan *cuniculus*.[365]

Roman engineers had also continued experimenting with water channels in the two

centuries between the *cloaca* and the Aqua Appia. In 396, on the eve of the fall of Veii,

they appear to have provided an outflow channel to help to drain the rising Alban Lake,

although some scholars now believe this to have been a project to reopen an Archaic

hydraulic tunnel, which had ceased to function.[366] Furthermore, Roman engineers would

have been familiar with tunnels (though perhaps less with tunnels following precisely

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[362] Goblot 1979: 60-65. Recently, Magee 2005 has identified pre-Achaemenid examples from the early 9th century. The link between central Italy and the near east, in this case the Assyrian empire, is made by the Etruscan lion of Veii, usually held to be a direct import, and seen as initiating the orientalizing period in Etruria, cf. Momigliano 1963: 105-6. Hodge 1992: 22 sees this link as facilitated through Phoenician traders, who were certainly active in Etruria from an early point.

[363] Grewe 2008: 320-21.

[364] Rather than a linear technological development, then, we see here something more akin to the scattered-development model suggested by Cuomo 2007.

[365] For this reason and for the fact that the Romans attributed the earliest *cloaca* to the Tarquins, Aicher supports an Etruscan-based influence for the Aqua Appia, 1995: 35.

[366] Livy recounts how a local Etruscan soothsayer predicted to the Romans at Veii that they would not take the city until they drained the Alban Lake, whose level had unexpectedly risen (5.15.2ff.). Livy goes so far as to suggest that the soothsayer instructed the Romans on how to go about channeling the water (*exsequebatur inde quae sollemnis derivatio esset*), thus explicitly putting an Etruscan mark on the engineering technology (5.15.12). The Romans receive a similar order from the Delphic oracle, and they seem to have then successfully drained the lake. Cicero thought it had a rather more economically minded purpose: *De Div.* 2.32 (69). A water-channel cutting some 2.5 km long into the side of the crater of the Alban lake has indeed been located and studied, cf. Ward-Perkins 1962: 1636-37; Coarelli 1991: 36 discusses the idea that this was a 6th century construction in origin, but reopened in the early 4th century.

calibrated gradients) through military sieges, such as when Veii finally fell after Camillus' troops tunneled under its walls.

The general context of water-supply technology is more important than the exact direction and nature of technological influence. If anything, the comparisons only serve to highlight the impressiveness of the construction of the aqueduct. The Aqua Appia was 16 km long, short in comparison to later Roman aqueducts, but much longer than the 2.5 km Alban water channel, and also considerably longer than the longest Etruscan *cuniculi*.[367] This was mostly a tunneling job, the techniques of such were correlated with mining technology, and shaft mining in antiquity was a horribly labor-intensive activity. Brutal corvées were associated with Tarquin's construction of the *cloaca*, and later shaft mining was a prime locus for chattel slavery.[368]

We can only imagine that Appius Claudius' effort was of considerable difficulty and implied an outsized outlay of labor. A good deal of this labor may have been unskilled, but as a record of near-failures in other ancient tunneling projects suggest, there was also need for skilled engineers: tunneling experiments often reveal signs of miscalculation, and as such they exhibit the limits of ancient technology.[369] The construction of the Aqua Appia also applied current technologies from the field of land survey due to the considerable length of its tunnel. This technological kinship between

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[367] The longest Etruscan example is that from Fosso degli Olmetti in two sections, the longest actual tunnel being 4.6 km, cf. Judson and Kahane 1963: 96.

[368] Tarquin: e.g. Pliny *NH* 36.24.107-8. Chattel slavery: Diodorus tells of a gruesome practice where slaves were worked to death in metal mines, 5.38. A similar thing is described by Strabo, albeit as much because of noxious fumes as of heavy labor, at 12.3.40, cf. also 3.2.10 on the startling amount of slaves employed in the mines at New Carthage.

[369] Both the Hezekiah Tunnel in Jerusalem an the Eupalinos Tunnel in Samos were counter-excavated, that is dug from both ends at once, and their very imperfect junctures show the necessary corrections between the miscalculated efforts of the two excavation teams, Grewe 2008: 324. An inscription from Lambaesis records how in fact the first efforts to counter-excavate a tunnel had missed each other entirely, *ILS* 5795 from 147 C.E.

water engineering and surveying is reinforced by Vitruvius, who prefaces his comments

on aqueduct construction with a description of the chorobate, the "land-walking" leveling

device that served as a tool for the Roman land surveyor.[370]

In terms of labor and expense, then, the outlay for both road and aqueduct needs

to be situated in the context of Roman land surveying as well, the technology and

arrangement for which was of importance for any long architectural feature in the Italian

landscape. From a technological perspective, this links the aqueduct with the road, which

was itself a feat of construction. Diodorus describes the Via Appia project as a

significant undertaking (20.36.2):

> Μετὰ δὲ ταῦτα τῆς ἀφ᾿ ἑαυτοῦ κληθείσης Ἀππίας ὁδοῦ τὸ πλεῖον μέρος λίθοις
> στερεοῖς κατέστρωσεν ἀπὸ Ῥώμης μέχρι Καπύης, ὄντος τοῦ διαστήματος
> σταδίων πλειόνων ἢ χιλίων, καὶ τῶν τόπων τοὺς μὲν ὑπερέχοντας διασκάψας,
> τούς δὲ φαραγγώδεις ἢ κοίλους ἀναλήμμασιν ἀξιολόγοις ἐξισώσας

> Next he paved with solid stone the greater part of the Appian Way, which was named for
> him, from Rome to Capua, the distance being more than a thousand stades. And since he
> dug through elevated places and leveled with noteworthy fills the ravines and valleys…

Diodorus' details on Appius Claudius' effort cannot be entirely true, as the road was

probably not paved with stone in its first incarnation. Rather, it was either graveled or

left as a defined dirt track, as is suggested by the record of three further paving projects

on the Via Appia.[371] But Appius' driving of the road's straight course through the

topography, especially traversing the Alban hills with little regard for the changing

elevation, was an impressive engineering accomplishment nonetheless, and would have

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[370] 8.6 begins the description of aqueduct construction, 8.5 describes the chorobate. It is difficult to tell
from Vitruvius himself what source he was following for this section, and thus how old such survey
technology was apt to have been. I do not mean here to suggest that a chorobate in particular was
employed for the construction of the Appian building projects, only to underscore the relationship between
surveying and aqueduct construction.
[371] 296: Liv. 10.23.11-2; 293: Liv. 10.47.4; 189: Liv. 38.28.3. Catalog nos. 26, 90.

involved cutting through and shoring-up terrain. When the road was extended or diverted in later times, such an ability to overcome difficult terrain was often celebrated.[372]

The road's course ran from the Porta Capena in the valley at the eastern end of the Circus Maximus in a nearly straight line to Terracina before making its way to Capua, covering a total distance of 212 km. The width of the road reached 14 Roman feet (4.10 m) and was at times amplified to almost 5 m across.[373] That meant the clearing and preparation of 869,200 m^2 of road surface. If we consider the amount of building material needed for this effort, even a thin 20 cm of a crushed gravel spread on the surface entailed a volume of 173,840 m^3 of material that needed to be supplied, transported, and spread over the road.[374] These numbers are all hypothetical, but they give some notion of the magnitude of such a venture, even ignoring the considerations of laying out the road and of engineering bridges or supporting the path. In short, it was a considerable construction project.

The effort to build the road itself impresses, but the road's major innovation in terms of technology may have come in the surveying project that preceded the actual construction phase. Again, with land survey, we need to consider the place of precedents both Greek and Etruscan. Greek colonies in Sicily as well as the northern Etruscan city of Marzabotto were arranged along a grid pattern: Greeks and Etruscans were capable for

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[372] A wonderful example is found at Pisco Montano, where the Trajanic cut of the Via Appia below Terracina is marked with elegantly inscribed Roman numerals at 10 RF intervals to show the progression of the massive cut made into the cliff-face.
[373] Spera and Mineo 2004: 10.
[374] Normal sand and aggregate being in the range of 1,150 to 1,700 kg/m^3 (Elzea Kogel 2006: 181), that puts the total weight of building material at a staggering 200,000-300,000 metric tons, though of course its module size was small and manageable.

civic or religious reasons of arranging architecture along regular orthogonal plans. [375]

Recent excavations in Gabii have pointed to a grid-pattern from the 6th century B.C.[376]

With this discovery in a town in Latium, the grid plan is beginning to look as diffuse and

polysemic in its origins as water technology; I am not sure that it is any longer possible to

trace a single intellectual thread through all of the early examples of the gridded city.

Still, southern Italy was a hotbed for novel geometric theory with Pythagoras in sixth

century Croton and Archytas in fourth century Tarentum; it is probable that these thinkers

applied their geometries to the measurement of land. [377] Noting this, several scholars

have wanted to see Appius' roadbuilding as derived from a milieu of Greek technology;

most recently, Humm revives an old argument that Appius himself was a devotee of

Pythagoreanism.[378]

There is a fundamental problem in the suggestion that the Via Appia rested on

Greek science and grid plans in Greek (or Etruscan) cities: the Greek theoretical

knowledge base concerns the laying out of a city, and not so much the extrapolation of

lines through a landscape from town to town. Pythagorean mathematics may not have

even been necessary for the Roman road engineers; Schiöler has demonstrated that with

only a *groma*, disregarding even the need for theory, Romans were able to draw straight

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[375] On the early orthogonal city plans of Greece, see Hoepfner and Schwander 1994: ch. 1; also see Boyd and Jameson's discussion of Halieis, 1981. The sensational discovery of a cross-marked cippus at Marzabotto aligning with both the grid plan and the auguraculum has helped to pinpoint the city's grid to its earliest phase; its excavators have been quick to make a link with the myth of Roma Quadrata: Sassatelli 1989-90. It is instructive that the Latin name for the *groma* derives from the Greek *gnomon* by way of Etruscan, Dilke 1971: 66.

[376] A preliminary report in Becker, Mogetta, and Terrenato 2009: 639-40.

[377] See Hor. 1.18.1-2 on Archytas; cf. Dilke 1971: 22. The Pythagorean theorem, of course, is at the core of triangulation and thus of land survey in general; on its later appearance, however, see Dilke 1971: 55-56.

[378] The Hellenistic aspect of the road: see most recently the reserved support of Humm 2005:489-96 with earlier bibliography. The notion has old roots, for example Münzer identified Appius Claudius as the Claudius depicted in the diademed and thus Hellenistic statue found in Forum Appi and recorded by Suetonius *Tib.* 2.5, cf. *RE* III.2 Claudius 92 Appius Claudius Caecus.

lines but also right angles in terrain with a high degree of accuracy.[379] Even if the site-

specific orthogonal city-plan had Greek origins, centuriation, which projected lines onto a

landscape, appears to have been a Roman phenomenon, and it is the operative practice

behind the Via Appia's straight course.[380] Vitruvius' Hellenistic-inspired method of

setting out and surveying with a gnomon resulted directly in a city grid.[381] It is telling

that our finest description of the Roman practice of bedding a road comes not from

Vitruvius, whose work is largely rooted in Hellenistic theory, but from Statius' *Silvae*,

describing a project of Domitian.[382] The Greek *koine* lacked such long straight roads: we

need only compare Alexandria, a center of Hellenistic learning and science, which was

laid out at about the same moment as the Via Appia, but which lacked through all of

antiquity a single paved straight road beyond its urban limits.[383]

This may reveal a fundamental difference in Greek and Roman cultural

perceptions of space. Though it is perhaps anachronistic to draw any real conclusions

from the comparison, it is worthwhile to think here of later Roman imperialistic

conceptions of space and land as distinct from Greek notions of *poleis*.[384] Mapping, a

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[379] Schiöler 1994. This held true even for more complex situations, see Romano's discussion of the centuriation at Corinth, 2003: 289-93, which found that even the rotation of the grid was based on the angle of 14°2'10" the tangent of which was ¼. Thus, plotting it out was as simple as walking 1 actus and 4 actus in perpendicular directions, and a 90 angle could easily be achieved with a simple *groma*.
[380] Campbell 2000: xlv-xlvi.
[381] Vitruvius 1.6; Vitruvius' "windy geometry" of urban planning and its theoretical underpinnings are elucidated by Haselberger 1999.
[382] *Silv.* 4.3 esp. 4.3.40-55. Road building manuals may well have existed, but they are completely lost to us, cf. Dilke 1972: 41, 127.
[383] I am thankful to D.G. Romano for pointing out a single possible exception in a pre-Roman centuriation pattern detected at Pharos, an island off of the Dalmation coast, but this odd example from the periphery is a lonely outlier. Cf. Stancic 1999.
[384] For the Greek view of land see the interesting observations of Boyd and Jameson 1981 where the rectangular division of Halieis. Note, for example, that at the archaic city of Megara Hyblaia, two zones of orthogonally planned insulae do not correspond to each other's orientation or grid-size; at Halieis, the grid-size corresponds but not the orientation, *ibid*: 329-31; also Hoepfner and Schwandner 1994: 4. The centuriation of southern Latium and northern Campania where the Via Appia made up the central road of

practice given early public emphasis at Rome with the hanging of bronze cadastral maps in the Atrium Libertatis, was entwined within strongly Roman perceptions of power and territorial expansion, and Appius' straight road can easily be construed within this mentality.[385]

The size and composition of Appius' survey team is unknown. Cicero would at a much later date describe an attempt in an agrarian law of P. Servilius Rullus to establish a land-survey staffed by *Xviri* along with 200 surveyors (*finitores*), attendants, and various other functionaries (*De Leg. Agr.* 2.13 [34]). It is impossible to tell how typical this staff size or this ratio of *decemviri* to *finitores* were; Cicero seems to imply that this was an excessively large bureaucracy, but this is in keeping with the thrust of his rhetorical point. At the very least, the layout of the road required skilled labor. Once started, driving the line across was an uncomplicated procedure for a surveyor who knew how to use a *groma*.[386] Oxen were needed as well: the surveyors, moreover, would not merely be measuring out the straight line, they would also mark it, probably by ploughing a furrow along its course.[387]

What the foregoing discussion has demonstrated is that both road and aqueduct represented significant labor outlays and technological innovations on the part of Roman engineers. Especially in contrast to the half-century of public construction prior, these

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many colonies, and thus united the orientation of architecture over hundreds of kilometers, was a new thing entirely.

[385] The practice of hanging cadastral maps in the Atrium Libertatis was first begun by P. Cornelius Lenticulus, and after his triumph over the Picentes in 268, P. Sempronius Sophus dedicated a temple to Tellus in which there was a painted representation of the Italian peninsula, Varr. *RR* 1.21. with Wiseman 1986: 21; generally, see Rodriguez Almeida 2002: 3-5; Purcell 1990; Hölkeskamp 1987: 182-83; Williams 2001: 35-40 discusses the divide between Roman and Greek ethnographic uses of maps and cartography and the implcation of such in this period.

[386] Schiöler 1994.

[387] Cf. Stat. *Silv.* 4.3.40-43.

represent a *volte face* for the Roman state's involvement in public construction, even if

most of the effort was expended outside of the *urbs* itself. I have also tried to suggest

that both can be seen within a context of technological influence, but more of a general

nature. Both projects had precedents in Italy, Greece, Etruria, and elsewhere, and this

shows the open manner in which technical knowledge circulated around the

Mediterranean at this time. A transference of building technologies was possible in such

an environment.[388] But it should be noted immediately that this makes neither project

derivative, and this is proven first and foremost by their physical extent. The building

techniques behind both road and aqueduct had perhaps been applied before, mostly on an

urban level, but never on such an ambitious scale.

Concomitant with such ambition would have been an enormous expenditure. This

is also the opinion of our sources. Diodorus states that for the Aqua Appia, "[Appius

Claudius] spent up a great deal of public monies on this project without a decree of the

Senate" and then for the Via Appia, "he spent the entirety of the public revenue."[389]

Diodorus here shows a fundamental misunderstanding of the office of the censor, who

was in charge not of the entire state budget, but of the *ultro tributa,* a fund designated to

his office by *senatus consultum.*[390] He could not have acted without senatorial approval

as he lacked *imperium*: the quaestor was in charge of actual expenditures, and even then

the consul was the only magistrate who could spend from the state treasury without

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[388] As was, it is argued below, a transference of the social apparatus behind that construction. Importantly, one might also see in this the beginnings of a labor market, a topic taken up in the following chapter.
[389] Diod. Sic. 20.36.2.
[390] Cf. Liv. 44.16.9 who uses technical language and is explicit on the requirement of senatorial approval. On the issue, see Suolahti 60, 63-64 and Walbank *ad* Polyb. 6.13.

senatorial permission.[391] This mention of the lack of senatorial approval is probably a

vestige of the larger struggle between Appius Claudius and the senatorial class during his

censorship making its way into the narrative of his building program.[392] We know that

Appius extended his censorship to allow himself the time to finish his public works; he

did so through political sleight of hand, through *tergiversationes* as Frontinus tells us (*De

Aq.* 5.3). Considering how expensive a road and aqueduct were apt to have been, such

resistance is understandable on the part of the senate, who were responsible for assigning

the funds of the *ultro tributa* to the censor. The thread of contentiousness and resistance

surrounding the censor's building programs also suggests conservatism on the part of the

senate and novelty on the part of Appius Claudius. The censor was proposing projects of

extraordinary costs to be funded by a state that had involved itself very little in public

construction for almost half a century—not to mention that the last major project, the

wall, had resulted in a painful debt crisis.

Despite the fact that they were major undertakings and that they raised the hackles

of the senate, Appius Claudius' public construction projects ultimately succeeded, insofar

as they aroused political resistance, rather than socioeconomic disruption. The difference

here, I would argue, comes from Appius' approach to arranging the effort for building his

projects. To understand the novelty behind this approach, I may now finally turn to

consider a new monetary instrument that may have been available to him, Roman

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[391] Suolahti 63-64; Mommsen *StR* II 1.443ff. A point made also by Ferenczy 1967: 36-37. Cancelli constructed an argument that the censors held a sort of *imperium domi*, but this concept appears to be of his own invention, 1960: 3, but in general, 1-58. His argument, as far as I follow it, is essentially that the general importance of the censors suggest that they held *imperium*; there is no good textual evidence to support him. But *imperium* was at its core a military concept, and such marshalling of an army in the field was a duty wholly foreign to the office of the censor.
[392] This argument draws upon a great deal of scholarship going back to Mommsen on the existence of a body of ancient anti-Claudian historiography that has influenced our sources' coloring of the history of the period: Mommsen 1864; Wiseman 1979: 104-39; Humm 2005: 77-94.

coinage, which was in its infancy at the time of Appius' censorship. The first coin to appear in Italy with any relation to Rome is a purely Greek creation (*RRC* 1/1): sometime just after 326, when a small bronze issue (3.29 g) appears with a head of Apollo on the obverse, and on the reverse a man-headed bull below the legend ΡΩΜΑΙΩΝ in Greek letters. In both weight and iconography, it is very similar to a coin of Naples of the same period (*HN* 568), which has the reverse legend ΝΕΟΠΟΛΙΤΕΩΝ. A corollary bronze strike with the same legend ΡΩΜΑΙΩΝ but of nearly twice the weight (6.14 g), and with a helmeted Minerva on the obverse, may suggest that the smaller coin was part of a larger economic system (*RRC* 2/1). But if we know little about the smaller coin, we know even less about the larger: Crawford only recorded its existence in a single copy. In 326, Rome and Naples signed a treaty (*foedus*: Liv. 8.25.5-13, .26.6-7), and some have raised the idea that the coin was minted to commemorate this pact.[393] I am not aware of other such Italian medals struck in this period to commemorate political events, but even if this were true, as Cornell notes, "These coins probably circulated only in Campania, and belong more properly to the monetary history of Naples than to that of Rome."[394]

More important was the beginning of Roman silver. In 1977, Burnett considered the hoard evidence then available to him and surmised in two articles that the first silver coin minted under Roman authority was the Mars/Horse head ROMANO didrachm (*RRC* 13/1, fig. 2.1) and was struck in or around the last decade of the fourth century.[395]

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[393] Crawford 1985: 29-30; Cornell in *CAH* 7.2 415; Cornell 1995: 394; Humm 2005: 134.
[394] *CAH* VII.2 415; restated at 1995: 394; similarly Crawford 1985: 29.
[395] The coin is *RRC* no. 13/1, now *HN Italy* 266. Burnett 1977, 1978; see further 1980, 1989 and 1998, which take into account the various critiques, mostly of Mattingly. I will set aside from the outset any discussion of *RRC* 13/2, a fractional silver issue known only from two reported examples, both lost.

Figure 2.1. The first Roman silver coin (RRC 13/1). Struck in Naples? Obverse shows the helmeted head of a bearded Mars; reverse shows a horse's head with the legend ROMANO. This example published in Numismatica Ars Classica NAC Auction 61, Lot 62.

This had already been anticipated on iconographic and historical grounds by Mitchell in 1969.[396] Burnett's chronology is well-founded, in particular, on the progression of the coinage of Tarentum, with which the Horse's head ROMANO didrachm is frequently found. His work has not been contradicted, only refined, by more recent discoveries.

Once again, like the story of King Servius, inventor of coinage, this chronology of Roman coinage runs up against the literary evidence, most fully preserved in Pliny's assertion that the Roman people did not use silver coinage until the time of the Pyrrhic War (*NH* 33.13: *populus Romanus ne argento quidem signato ante Pyrrhum regem devictum usus est*). Similar information is found in the *Periochae* (Liv. *Per.* 15). Burnett argues around this by noting that Timaeus was the source for this information, and that the Sicilian historian intended to refer to the first instance of the *populus Romanus* using silver, not to the first instance of Rome striking or making it. To whit, Burnett notes that

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[396] Mitchell 1969.

Pliny and the *Periochae* use the verb *uti*, instead of *facere*.[397] Mattingly continues to

insist on the evidence of Pliny that Roman silver belongs instead in the first quarter of the

third century B.C., but he has found little support.[398]

On the side of Burnett's reading of Pliny is the fact that the first Roman strike is

an oddity of sorts: the physical character of the Mars/Horse head ROMANO didrachm's

fabric differs from the following Roman strikes and suggests that it does not belong with

the later silver.[399] There is also the matter of the obverse and reverse dies. Crawford

counted a ratio of varieties of the Mars/Horse head ROMANO didrachm as 4:15. This is

unusual considering that the next strikes show 10:9, then 18:24, and 31:43.[400] The

Mars/Horse head ROMANO coin, then, shows innovation in process with several broken

or at least altered punches, but with relatively few anvils. Crawford suggests it was

perhaps produced in improvised surroundings.[401] At the least, it has all the characteristics

of a novel and isolated strike to fill the need of some sort of exigency. Like the early

bronze, this silver strike was probably minted in Naples.[402] It does not seem to have

traveled very widely outside of Southern Italy; it normally appears in hoards as the only

Roman issue, and does not seem to have circulated in conjunction with other Roman

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[397] Burnett 1977: 116. He finds confirmation in the only other source on the matter, Dionysius of Halicarnassus, who says that the silver from the sale of land and war spoils in 269 was distributed to the Roman people (20.17).

[398] Mattingly 2004: 116 must go to great lengths to argue around the hoard evidence, including suggesting that the Mars/Horse head didrachms in the Valesio hoard were later inserted into a previously closed deposit.

[399] I owe this differentiation to personal correspondence with Dr. William Metcalf. There is a difference in the fineness at the chemical level, too, see the results discussed by Burnett and Hook 1989: 157-58.

[400] *RRC* 13, then 15, 18, and 22. The ratio stabilizes very quickly in the third century showing how rapidly the minting technology and process became incorporated into Roman society.

[401] 1985: 29.

[402] Crawford 1985: 29 suggests Campania in general; Burnett 1978: 125 argues that the only other good guess at the time, Velia, was striking on broader and more spread flans, and so Naples is the best location for the strike by process of elimination.

strikes.[403] By all accounts, it was a separate issue from the rest of Roman coinage, and

Timaeus could reasonably say that silver began at Rome around the time of the Pyrrhic

War notwithstanding this earlier strike.

The next Roman silver didrachm (*RRC* 15/1) marks the start of a series of four

didrachms with slightly more spread flans and a progressively decreasing weight standard

from the earliest Mars/Horse head ROMANO didrachm (7.29 g) (*RRC* 15/1 = 7.21 g;

RRC 20/1 = 7.05 g; *RRC* 22/1 = 6.75 g; *RRC* 26/1 = 6.75). These four strikes belong in

the central decades of the third century, and can be seen as issues from a series beginning

perhaps around 269, in correspondence with Timaeus.[404] If Roman silver coinage began

in earnest around the time of Pyrrhus' invasion of Italy, then what do we do with the

seemingly erratic strike of the Mars/Horse head ROMANO didrachm some forty years

earlier? Mattingly was particularly troubled by this, and he argued that the long time gap

between Rome's first and second silver didrachm was evidence in and of itself against

Burnett's dating system. It should be noted, however, that Mattingly's alternate

chronology still leaves a lacuna of some fifteen years; Burnett's gap is a "disturbing

factor", but his is simply "an interval."[405] Rather, both chronologies serve to isolate

Rome's first didrachm to some degree.

This begs the question: what historical event fits the profile of a single strike

bearing the name of Rome but belonging, by its appearance and weight, to the monetary

system of South Italy? The older view was that the coin was related to Rome's payment

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[403] *RRC* I pp. 37-38. The exception to this is the recently published hoard from San Martino in Pensilis (Molise), discussed below.
[404] The relative chronology is established by their decreasing weight. The absolute chronology is unknown, with the exception of *RRC* 22/1, which borrows a set of control marks on coins struck for the deified Arsinoe II, and as she was deified in 270, they must postdate 270, *RRC* I pp. 39-40.
[405] 2004 [1990]: 106, 119.

for military operation in Campania and Samnium.[406] As the coin was Campanian in

nature, weight, and appearance, so the argument went, it could have been used to pay

Campanian mercenaries who aided Rome's struggle against the Samnites in South Italy

towards the close of the fourth century. Military pay, however, is not a satisfying

explanation. First of all, the coin was minted on a small scale and for a brief time;

Roman campaigning, however, was a nearly constant annual activity in this period. If

our sources are correct in assigning the beginning of *stipendium* to the prolonged siege of

Veii (406), Romans had themselves been perfectly content paying their troops *stipendium*

without recourse to silver for almost a century.[407]

Another solution put forward first by Crawford is that the coin was struck as

payment for the construction of the Via Appia.[408] The Appia, built in 312, led from

Rome straight towards the area of Campania where the coin was minted, and the coin's

circulation in Apulia (hoards at Messagne, Torchiarolo, and Oppido Lucano) could be

explained by the extension of the road just as easily as by warfare. This is an attractive

thesis, and one that would firmly bind the monetization process to the world of Roman

construction. It has met with much support from historians.[409] Torelli has gone so far as

to claim that the work of the censor Appius Claudius Caecus is legible in the coin's

iconography, as the portrait of Mars on the obverse and the horse's head on the reverse

were an allusion to Mars Invictus, and to the site of censorial *lustrum*.[410]

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[406] Crawford *RRC* II 713; revised at Crawford 1985: 29.
[407] Harris 1990: 507, where he finds the idea that soldiers in the pre-monetary economy were paid in *aes rude* not inconceivable.
[408] 1985: 29.
[409] Belloni 1993: 39; Cornell 1995: 396, "Once again a major innovation appears to be associated with Appius Claudius Caecus;" Laurence 1999: 15-16.
[410] 1998: 194-95.

As attractive as the view that the coin was directly produced as a means for paying for Appius' road is, however, it is not entirely unproblematic. Humm raises the point that a Roman public work does not necessarily explain why the coin used to pay public costs needed to be minted outside of the city.[411] Of course, considering the improvised nature of the coin, its unusual fabric, its odd ratio of obverse to reverse dies, the fact that it was minted outside of Rome may simply be a case of a search for technology that did not yet exist at Rome itself. If the mint-location was Naples, then this may have been a matter of Romans turning for help to a friendly city that had minted in silver for a century.[412] In fact, if anything, the fact that Rome's first coin was not minted at Rome itself is perfectly complementary to the idea that coinage still represented something revolutionary in late fourth century Rome, even if there was already some degree of monetization.

Humm raises an alternative hypothesis that the coin was issued by the Campanian cities condemned to pay the *vectigal* owed to the *equites Campani* who fought with Rome.[413] But to my mind this is unacceptable. Not only is the date of this *vectigal* (340, according to Livy) far too early, but we are back to the problem of seeing this isolated strike as payment for allied troops, i.e. for continuous military operations: the historical explanation does not fit the nature of the coin.[414] Humm offers an interpretation of the

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[411] 2005: 174-75.
[412] The earliest Neapolitan didrachms listed by Rutter in *HN Italy* are dated to 450-420;
[413] 2005: 174-75; in 340, according to Livy 8.11.15-16, those loyal Campanian knights were enfranchised and a *vectigal* was established for the upkeep of their horses, paid by the disloyal Campanians: *vectigal quoque eis Campanus populus iussus pendere in singulos quotannis—fuere autem mille et sexcenti—denarios nummos quadringenos quinquagenos*. Humm finds support for his thesis in *denarii nummi*, which he takes to be Livy's way of writing *didrachms*. But this only means that the vectigal was paid in the common coin of South Italy, not that it was paid in those didrachms minted under the name of Rome.
[414] He also offers as parallel the case of *RRC* 1/1, the bronze with PΩMAIΩN, which he considers to be struck to commemorate the *foedus* between Rome and Campania in 326. Even if this interpretation of that

iconography as centered around the cavalry, noting that the horse's head was the symbol

of the Dioscuri, and suggesting that the Temple of Mars stood at the beginning of the

transvectio equitum, the cavalry parade every July 15th in honor of the Dioscuri. It is not

implausible, but the horse is so common on early Roman bronze and silver that it makes

for great difficulty assigning its meaning to so precise a historical event. Moreover, it is

no less possible to make the same symbols cohere around several other interpretations

including, for example, Torelli's aforementioned interpretation of Mars Invictus and the

censorial *lustrum*.[415]

Another piece of evidence that proves troublesome for the connection between the

silver didrachm and the censorial building of the road comes from a recently excavated

hoard from San Martino in Pensilis, in Molise, showing the importance of stratigraphic

context to our understanding of early Roman numismatics.[416] In the context of a

Republican villa, archaeologists recovered a black-gloss *olpe* containing 163 coins, eight

of them Roman didrachms. The form of the pot, as well as 27 examples of later

Neapolitan didrachms (*HN Italy* 586, c. 275-50), suggest that the deposit was closed

shortly after the mid-point of the third century.[417] This makes the hoard the latest known

so far in which the Mars/Horse head ROMANO didrachm has appeared. This in and of

itself is not problematic, as the hoard also contains coins of late 5th/early 4th century dates

from Thurium, Velia, Hyria, and Neapolis; thus it was amassed over a long period of

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coin is accepted, I am not clear reading his argument how a commemorative coin can be considered as precedent for a coin minted as part of a tax—these purposes seem to be apples and oranges.

[415] Burnett 1978: 132-33, 1998: 20 connects the horse's head to the *October Equus*, and thus suggested that the coin had a specifically Roman appeal. Crawford *RRC* II 713 has given a hybrid answer: Mars' head is "appropriate enough for a war coinage" but the horse on the rear relates the *October Equus*.

[416] First published by Ceglia 1999; discussed by Burnett 2006.

[417] Ceglia 1999.

time.[418] What is more interesting here is the fact that the three examples of the

Mars/Horse head ROMANO coin (*RRC* 13/1) do *not* appear alone as the only Roman

examples among non-Roman coinage, but they are accompanied by five examples of the

next didrachm in the series, that showing a head of Apollo on the obverse, and a

galloping horse beneath a star on the reverse (*RRC* 15/1).[419] At present, it is unclear how

to interpret this new piece of evidence. On the one hand, the Mars/Horse head

ROMANO didrachm looks less isolated, and may now be pushed towards the end of the

last decade of the fourth century, rather than to the beginning of that decade. On the

other hand, the examples of *RRC* 13/1 are notably more worn than *RRC* 15/1, a fact that

can still ostensibly uphold the idea of a time gap between the two issues, but the

Apollo/Horse issue in that case would probably be earlier than previously thought. If this

is the case, the construction of the Via Appia's begun in 312 starts to look somewhat

remote from a coin that started c. 300 and overlapped with another silver strike from c.

260. The long chronological spectrum of coinage represented in this hoard makes

drawing any firm chronological conclusions from the assemblage difficult, but it does at

least serve to stress the continuing complexity to the appearance and sequence of Rome's

first silver coinage. Future excavation has the potential to add a great deal to this

discussion.

Conclusions

The question of Rome's first silver didrachms remains open, at least to an extent.

Perhaps the best solution at present is to remain agnostic towards the precise historical

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[418] Ceglia 1999 nos. 13-16; Burnett 2006: 39.
[419] Ceglia 1999 nos. 47-49 = *RRC* 13/1, nos. 50-54 = *RRC* 15/1.

circumstances behind the first Roman silver coin. This may seem an uncomfortable solution for an historian seeking to explain such an important event in Roman history. But I have decided in this chapter to focus as much on the context of monetization as on the very moment of the first coin's appearance. By doing so, I have highlighted the new approaches to money that appear at Rome in the later fourth century that show that Roman coinage did not appear in a vacuum. Cornell has gone so far as to suggest, "In economic terms the introduction of coinage is not of great significance in itself."[420] This is true insofar as the appearance of coinage in the later fourth century did not itself represent a moment of real change, but it *was* symptomatic of a context of profound changes at that time in the realm of Roman money, finance, and credit.

The Second Samnite War (326-304) provides the historical backdrop to most of the changes described in this chapter, but not all of them. The episode of the *quinqueviri mensarii* shows that Romans were already contemplating problems in their money supply in the central decades of the fourth century. For this fact, we are probably not dealing with a simple case of military success, or the exposure to and adoption of Greek practices in the case of Rome's monetization, even if the first coins were clearly Greek in weight and appearance (and even in the location of their minting).[421] It is true that almost all of the episodes discussed in this chapter relating to Rome's monetization have Greek corollaries: the *mensarii* have a connection to Greek *trapezites*; the *argentarii* in the forum relate to the Greek αργυραμοιβοι;[422] and the census divisions find obvious parallel in the constitution of Solonian Athens.

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[420] 1995: 397. A similar sentiment at Crawford 1985: 32.
[421] *Pace* Cornell 1995: 394.
[422] Andreau 1987: 337-46.

Yet a simple explanation of increasing contact with Greek societies fails to account precisely for why coinage arrived at the moment it did. Why had it not happened earlier, or why had Romans not begun at an earlier date to use foreign coinage, as had occurred in Etruria?[423] There was something more fundamental at the heart of Rome's adoption of coinage and use of contracts: the extension of a monetary economy was more often than not a process that started in cities and moved outward.[424] Coinage has always represented a step away from an agriculturally-based society, and it makes empirical sense that such a change would occur in an urban environment: towns were "born of the oldest and most revolutionary division of labour: between work in the fields on the one hand and the activities described as urban on the other," as wrote Fernand Braudel.[425] The decision to use coinage, then, was a reflection of the presence of a certain urban economic mentality; Howgego has argued that coinage in the Greek world may have contributed to a less feudal society than in Near East societies, where coinage never developed.[426]

It is fitting that this chapter has discussed the effects of Roman monetization in part through its relationship to public construction, one of the more costly non-agricultural industries in a city. Indeed, if one wants to measure the economic impact of Roman monetization, one need look no further than a history of the production of public architecture at Rome: the ambitious censorial projects at the end of the fourth century

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[423] Foreign Greek coins are almost absent from Rome prior to the start of Rome's own coinage Crawford 1985: 17. Etruscans did use coinage in the early fifth century in centers of metallurgy such as Populonia; there are also a few hoards with foreign coinage, as see the discussion of Rutter *HN Italy* p. 23. Crawford 1985: 2-3, however, downplays coinage in 5th century Etruria, but there does not appear to be quantitatively less material than can be displayed for the beginnings of Roman coinage in the fourth century.
[424] Braudel 1992: 512. For a good test case of this in Greco-Roman terms, see the work on Ptolemaic Egypt of von Reden 2007: Ch. 2, as well as a shorter version of the same thesis at *ead.* 2010: 41-47.
[425] 1992: 479; criticism of his town-centered approach in Horden and Purcell 2000: 90ff.
[426] Howgego 1995: 18.

indicated a new phase in Rome's urbanism. As this chapter has pointed out, the

construction projects of Appius Claudius Caecus are connected in our sources with

political struggles. The aqueduct and the Via Appia were not connected in any direct

manner with debt crises, as was the case with the building of the Roman circuit wall 66

years prior. It is less important whether or not Appius Claudius paid for his projects in

silver coins minted by Naples; it is more important to Rome's society and building

industry that by 312, Appius Claudius may have been able to conceptualize the price of

his projects in coin. This, combined with the lack of social unrest give the strong

possibility that Appius was building his public works on contract.[427] Maybe he was not

singlehandedly behind such innovation, but the way in which manubial temples appear

to have been built beginning in the early third century suggest that he would not have

been alone in his desire to build in such manner.

     This history of public construction continues to reveal the potential that coinage

and contracting had on urban Rome's economic performance. The advances made by

Appius Claudius were sustained. The censors of 307, M. Valerius Maximus and C.

Iunius Bubulcus, followed the lead of Appius Claudius and constructed another major

trunk road leading east out of the city.[428] The curule aediles of 296, Cn. and Q. Ogulnius,

are our first attested pair to engage themselves in public works projects while holding that

office; Livy records how they revamped the Temple of Jupiter Optimus Maximus with a

bronze lintel and a statue of the god in a quadriga for the roof; they placed a statue of the

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[427] Appius Claudius position as the innovative figure of the late fourth century has been emphasized by
Cornell 1995: 373ff. and Humm 2005. I have attempted here to avoid too heavy-handedly connecting the
censor to such Roman innovations as coinage, as others have done, but there is no avoiding the fact that his
censorship comes at a particularly important moment for the development of Rome's economy and society.
[428] The Via Tiburtina/Valeria, catalog no. 19.

wolves suckling Romulus and Remus in the Forum; and they paved a stretch of the Via Appia just beyond the city gate.[429] Multiple temples appear in the literary record; some attested in the material record, such as the first phases of the Temple of Portunus or of Temple C in Largo Argentina, may also belong to the decades around 300 B.C., during what Ziolkowski has called the "golden age of temples" at Rome.[430] This was a great deal of building activity; at Republican Rome, it was an unprecedented amount in such a confined space of time. And, importantly, this building boom no longer seems to have contributed to Roman society's problems of debt.

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[429] Liv. 10.23.11-12.
[430] Entries for temples in the catalog; "golden age" in Ziolkowski 1992: 307.

CHAPTER THREE
Construction, Labor, and Urban Development in Third Century Rome

This chapter describes an increasingly vibrant and urban Rome during the late

fourth and third century, its building industry fully recovered from the lull of the

preceding century. This recovery began to elevate the production of Rome's urban space

to a level rarely seen before.[431] In much of the pre-modern world, monumental building

was by and large an occasional phenomenon; demand for construction labor was uneven

and sporadic, and skilled construction workers, for this reason, were often an itinerant

class.[432] Cities formed the only real exceptions to this rule, especially those with rapidly

increasing urban fabric. In the early third century B.C., Republican Rome became just

such a city for the first time (fig. 3.1). In the thirty years between the narrow victory at

Sentinum in 295 and the opening of hostilities with Carthage in 264, we know of sixteen

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[431] Some of the urban changes at this time described here in full were recognized in brief by Brunt 1971: 29-30.

[432] This is the observation of Burford concerning the temple builders of Epidauros, cf. 1969: 10, 35. It is observable in other areas of Greco-Roman antiquity: a good example is Jos. *Ant.* 20.219 where building laborers are reportedly out of work out of the completion of the Herodian temple, showing that even a major capital like Jerusalem could not consistently employ a construction workforce. In the predominantly agrarian pre-modern world, it continued to hold true for early-modern England, cf. Woodward on townward movement for building projects, 1995: 98, 163-64.

public structures finished or started, including a number of particularly innovative ones, and this is despite the notoriously difficult state of our literary sources.[433]

This sustained activity at Rome, an otherwise rare phenomenon up to that point in central Italian history, created unprecedented demand for construction laborers. This demand in turn was answered both by Roman entrepreneurs who attached themselves to the building industry and by the transfer toward the capital of population looking to participate in Rome's growing economy. At the same time, the economic developments
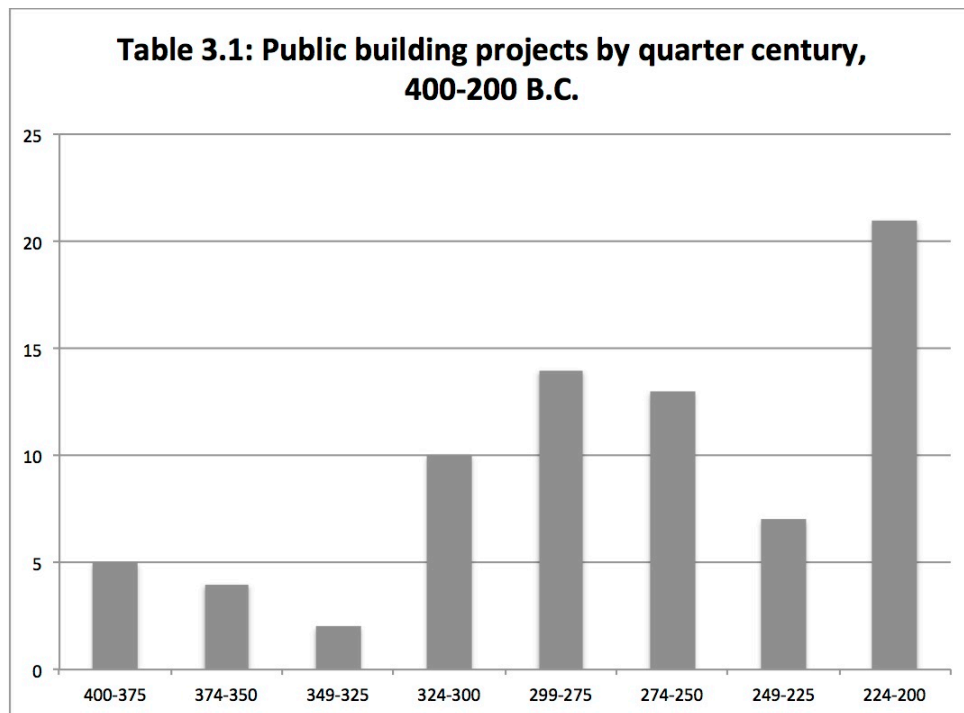
Figure 3.1. Roman public construction projects in twenty five year intervals, 400-200 B.C., based on entries in the catalog.

that had facilitated the beginning of contractual labor in the fourth century continued to liquefy wealth and move it vertically down the spectrum of Roman society. In short, the near permanence of the public construction effort of the third century B.C. had a profound

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[433] The slight slowdown displayed in table 3.1 between 275 and 225 in terms of building projects is almost certainly due more to one of the patchiest periods of Republican historiography, rather than to any real historical pause in construction.

impact on the labor history of the city. At its essence, this is an argument for the interrelation of separate social phenomena, and it may be more simply represented in graphic form (fig. 4.2).

The relation of liquidity, construction, and population movement is visible in other places and in other situations. In the last decade, an upsurge of construction in modern Dubai or Qatar saw the development of South Asian worker settlements, only to see the collapse of the entire situation with the recent credit (liquidity) crisis.[434] There is also some evidence of these forces at work together in the population boom of England in the early industrial age.[435] And finally, there is a considerable body of scholarship on early modern Europe that, while less concerned with building *per se*, has posited a direct causal connection between the growth of urban centers and economic development.[436] Of course, the greatest difference between comparative examples and Roman circumstances is the presence of slavery in the Roman economy. For this reason, the suggestion that there was a labor market at this point in Roman society is not an insignificant issue, because it is bound up with one of the most crucial debates concerning Middle Republican history: the origins of slave labor. In following, I review the debate concerning the slave economy of Middle Republican Rome, and I argue that

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[434] This story can be traced in a number of news outlets, though I am not aware of any single study on the topic: see e.g. R.F. Worth, "Laid-off Foreigners Flee as Dubai Spirals Down" in *The New York Times* 2/11/2009 and "Soaring Buildings, Sliding Dollar: Construction workers in the booming Arab emirate are increasingly unhappy" in *The Economist* 11/1/2007. Hugh Eakin in "The Strange Power of Qatar" in the *New York Review of Books* 58.16 (Oct. 27th, 2011) reports that 85% of the residents of Qatar and 90% of the labor force are migrant workers with no citizen rights; an astounding majority of workers live in camps and are bussed in daily to construction sites.
[435] Wrigley 1988.
[436] Holton 1986; Van der Woude, Hayami, and de Vries, eds. 1990; an attempt to work through this relationship in the Roman world can be found in Morley 2008.
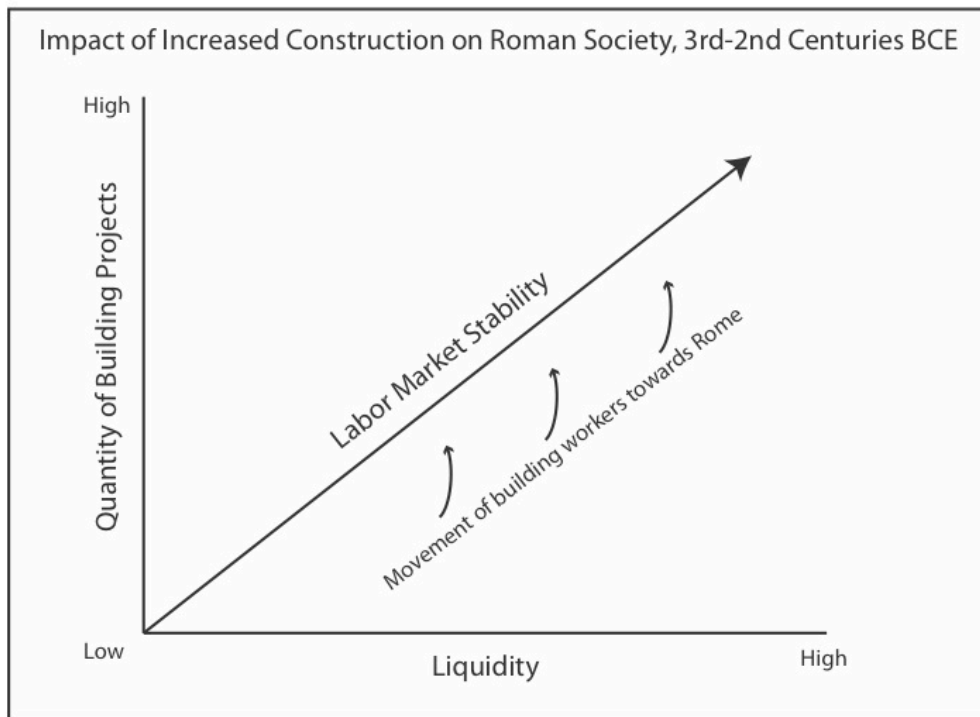
Figure 3.2. Model of the relationship between construction, liquidity, and labor.

free labor in the city has been ignored in the accepted model of slave labor. This chapter

then proposes a method of gauging the relevancy and importance of the (free) labor

market to this period in Rome's history, and finally turns to a demonstration of the effects

of such a labor market on the expansion and character of Rome's built space in the late

fourth and third centuries.

Social Change, Slavery, and Archaeology

It was Sir Moses Finley who first saw in this period the rise of a slave economy at Rome

in changing Roman attitudes towards labor.[437]   This has become the prevailing view

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[437] Finley developed this idea of Roman slavery in a series of works, see 1964 and 1981, and most
importantly *Ancient Slavery and Modern Ideology* (1980), esp. ch. 2. The relationship between his views
on slavery and the Roman labor market in general are brought out in *The Ancient Economy*, ch. 3, see p.
65ff.

expressed in textbook historical studies such as the *Cambridge Ancient History* (1990) or the *Storia di Roma* (1990). An earlier opinion had held that Roman slavery was a product of conquest, and that a slave economy was a product of Rome's stunning imperial expansion in the last two centuries B.C.[438] In his monograph on *Ancient Slavery and Modern Ideology* (1980), however, Finley stated that Rome was already a slave society "not later than the third century" as marked by the abolishment of *nexum* (a form of debt-bondage), and he situated its origins within an agricultural context of landholders and labor, rather than tying that development to war and imperialism.[439] This being the case, he pointed to changes in consolidated landholding in the fourth and third century, which he saw as correspondent to a nascent slave economy. By his logic, the slave supply followed an already existing demand for labor in this agricultural setting. His model drew immediate acceptance, as well it should have.[440] As an alternative, it was strongly preferable to the earlier view of the role of war in the development of Roman slavery, which was chiefly the creation of Eduard Meyer, whose late-nineteenth century rationale was strongly nationalist and orientalizing.[441] But even in bare economic terms, as Keith Hopkins expressed it, the argument that demand followed supply reveals an awkward picture of Rome suddenly finding itself possessed of tens of thousands of slaves

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[438] Meyer 1898 and Hopkins 1978, discussed below.

[439] 1980 ch. 2, esp. 82-85, the quote is on p. 83; see similarly *AE* 69.

[440] See Watson 1975: 84 n. 16; Harris 1990: 499-500; Gabba in *CAH* VII.2 204 and also see both his contribution at pp. 9-11 and that of Torelli's pp. 125-27 in *StRom* II.1; Gabrielli 2003a: 20-21. More generally downplaying the impact of slavery in Roman society prior to the fourth century are Cornell 1995: 280-83 and Raaflaub 2005: 15-16; *contra* Watson 1975: 81-84. Torelli's contribution on "La formazione della villa" in *StRom* II.1 owes much in its claim of "La trasformazione del IV secolo" (pp. 125-27) to Finley's model.

[441] Meyer held that Greeks and Romans would have abstained from enslaving their own kinsmen, and thus slaves must have been foreign, and *ipso facto* related directly to foreign conquest; however, he noted, in ancient Israel no such abstention was seen (11 n. 1), and in fact more primitive cultures were more open to intra-ethnic bondage relationships. He cites Celts and Gauls to this regard but also examples from his own time such as Turks, Mongolians, and Africans (12-13).

through the expansions of the second century B.C. and only then, quickly and out of necessity, adapting its entire agricultural regime.[442]

Part of what Finley was reacting against was the view, which he attributed most notably to Egon Maróti that massive slave-run estates, *latifundia*, arose in second century Italy.[443] Maróti, and Arnold Toynbee before him, evinced their opinions at the time mainly from literary evidence: the villa culture described by Cato's *De Agricultura* and the historiographic tradition concerning the Gracchan land reforms. Finley saw the origin of these estates in an earlier period, and he shrewdly recognized that efforts since the Licinio-Sextian laws of 367 to limit private landholdings reflected the fact that large single-owner estates originated before the second century.[444] At the time of his writing, Finley had no physical evidence to substantiate his claim,[445] though he stated with confidence that,

> Archaeologists have not found what they loosely call villas before the second century. I am unimpressed by this argument from silence.

Archaeologists in the last decade have proven Finley correct, but more so than even he had expected. Large estates indicative of centralized agricultural practices revolving around dominant major landowners can now be traced in the archaeological record all the way back to Rome's Archaic period.[446] This is especially true with a number of sites

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[442] Hopkins 1978: 8-15.

[443] 1980: 84 where he refutes Maróti 1976. Maróti himself cites Toynbee 1965 II 576, who was probably more responsible for such historical reconstruction.

[444] In fact, archaeology would seem to place the real bulk of Republican villas in the middle first century, not in the Catonian period, Becker 2006: 219.

[445] He was, however, probably unaware of some evidence that would have helped his cause: see Gjerstad *ER* IV 401-17 where he identifies numerous large archaic residences in central Rome; some, such as the house on the upper *Via Sacra* have been further excavated more recently.

[446] Generally, see Terrenato 2001, *contra* Fentress 2003 who sees the 5th century villa as one of many influential factors on the Roman villa that was ultimately a polysemic formation of the 2nd century. Be that as it may, with the Auditorium villa, we can draw the thread through time, as that particular villa remained in use from its Archaic origins all the way through the late Republic. Carandini 2009: 301 suggests three

along the Tiber Valley, most notably at the so-called Auditorium Villa, which had

distinct residential and industrial quarters already in the 5th century,[447] and at the Villa

delle Grotte at Grotta Rossa.[448] Surplus viticultural production from central Italy in the

Archaic period is also now readily detected thanks to advances in our knowledge of

coarseware ceramics. Roman and more generally Italian amphorae of the "Greco-Italian"

type take over for vessels of the MGS (Magna-Graecia Sicily) type in the fifth and fourth

century and indicate the presence of central Italian wines in a market previously cornered

by the Greek cities of Magna Graecia.[449] If Finley was correct to connect slavery's

origins to consolidated systems of landholding and surplus agricultural production, we

may now give even more credence to those hints of slavery in the earliest period of the

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phases of villa culture: 1) a first phase of the 5th-4th century of estates such as the Auditorium Villa worked by *nexi*; 2) a second phase from 300-225 of "ville patrizio-plebee…lavorate prababilmente da client, liberi, e famiglie di schiavi," 3) and from 225 onward a third phase of the Catonian model. He argues for continuity and transformation of the slave-mode of production in Roman agriculture, rather than quick change in the wake of Hannibal: "La comparsa del modo schiavistico di produrre non appare come un fenomeno conclamato e improvviso, ma si presenta in termini di trasformazione. Ma le trasformazioni possono implicare a volte mutamenti straordinariamente rilevanti, quando persistono e si incrementano nel tempo."

[447] Terrenato in Carandini *et al.* 1997: 142-47; Carandini 2006.

[448] Becker 2006, who argues for a 5th-4th C date on parallels for architectural terracottas and for the above-ground use of *tufo del Palatino*; he also suggests an earlier date for several other *villae*. The question of Monte delle Grotte and its earliest phases is taken up again in Terrenato and Becker 2009: esp. 395.

[449] There has been a small revolution in our knowledge of transport amphorae from Latium and Campania in the Mid-Republican period, particularly reflected in the work of van der Mersch 1994: 144-45; *id.* 2001, presents a new model of the distribution of Latin amphorae prior to the Second Punic War, and ultimately attributes the origins of this viticulture to the land gains in the fourth century. On top of this, Morel 2007: 492 claims that practically all the wine drunk in Marseille in the early sixth century B.C. was produced in Etruria, and the Etruscan "ZitA" amphorai represent significant Italian wine consumption in Phoenician North Africa.

As for wine produced in Rome itself, Volpe 2009 calculates that deposits in the city of Mid-Republican date contain only 5% amphora fragments, whereas starting in the Augustan period that number reaches as high as 30% of the ceramic fragments in archaeological contexts. She attributes this not to the consumption of less wine, but to the fact that, in the Mid-Republic, the hinterland was supplying sufficient wine to the city, and less was being imported from abroad in amphorae. In her comments on Volpe's paper in the same volume (Jolivet, ed. 2009: 389-90), Clementina Panella expands on this thesis to suggest that the idea that the suburb was supplying wine for Rome by the Mid-Republican period puts an end to the idea of a "traditional peasant subsistence economy" that was put forward by Toynbee in others. As Panella points out, this makes better sense of the *Lex Claudia* of 218, which attempted to prohibit the involvement of senators in freight shipment of products such as wine.

Republic, as was already the opinion of Alan Watson concerning Roman society of the XII Tables.[450]

If this is the case, however, then Finley's chronology is wrong: his model supposes that slavery supplanted free labor sometime in the late fourth century, but this idea no longer reconciles with an even earlier history of intensive surplus agriculture in central Italy.[451] The repeal of *nexum*, of debt bondage, with the *Lex Poetelia* in either 326 or 313—our ancient sources are not in agreement—was crucial to Finley's model as a chronological indicator of that shift: perhaps this was because he saw this event as parallel to Solon's repeal of debt-bondage as an indication of the beginning of the rise of slavery in Greek society.[452] It was undoubtedly a watershed moment in Roman history, but perhaps not so much for the actual plight of the free laborer: there was yet another major debt crisis behind the fifth *secessio plebis* in 287.[453] Rather, the *Lex Poetelia* should be connected, as Gabba and Gabrielli more recently have argued, to the senatorial prosecution in 291 of L. Papirius Megellus for coercing soldiers under his command to

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[450] Watson 1975: ch. 7 and esp. 81-84. I am speaking here less about such legends as Servius Tullius' slave background, which even Livy doubted (1.39), and more for the *servi* of the XII Tables, or for the story of the freeing of an informant slave Vindicius in the first years of the Republic (Liv. 2.5, Plut. *Pub.* 7.5). There is also Dionysius' claim that the *Compitalia*, one of Rome's oldest festivals, was presided over from its origins by slaves (4.14).

[451] Conceivably, we could take a punctuated-equilibrium approach whereby sometime in the mid-fourth century slavery crossed some abstract threshold in significance to the Roman economy and finally forced long-overdue changes, but continuously strong growth does not square with what we can identify as a limited Roman economy at the same time. The Roman recession of the mid-fourth century is the topic of the previous chapter.

[452] Always a Hellenist first, Finley used the Solonian reforms to great effect in his first work on slavery, highly schematic by his own admission, the 1964 article "Between Slavery and Freedom." Here, Roman history seems an appendage, e.g. p. 235 where "analogous struggles in early Roman history" are reduced to a parenthetical aside in his discussion of Athenian history. See the same logic again in *AE* 70, though his stressing of the importance or even historicity of the Solonian reform has been strongly challenged by E.M. Harris 2002.

[453] Gabrielli 2003a 155-56.

work on his Gabine estate.[454] Taken together, these two events mark a period of tension

when Romans were growing suspicious of coercive forms of free labor. However, as

Rome had been a slave society for generations prior, slavery may have had little itself to

do with this changing social attitude.

We cannot blame Finley for being unaware of undiscovered archaeological

advances. However, there is another flaw in Finley's model of the origins of Roman

slavery, and that is his typical marginalization of the urban situation in his view of the

ancient world. For Finley, the city existed at the fringes of a mostly agrarian ancient

society, upon which it had, if anything, a negative-sum impact. If he raised the topic of

urban labor, it was only to show that it stood outside of his general thinking.[455]

It is impossible, however, to extract the city from a history of labor regimes of the

Middle Republic, because it was the opinion of our ancient sources that the connection

between labor and debt was centered at the time around the topography of Rome itself:

the tension was remembered as an urban phenomenon. This contrasts with the later

narrative focused on slavery for plantation agriculture in the period of the Gracchi, which

Finley rejected as marking the true rise of a slave economy; it is also unlike the later

slave revolts of the second century, also closely tied to villa agriculture. Take for

example the crucial moment in the fourth century when *nexum* was abolished. As Livy

tells us, the cause behind the promulgation of the *Lex Poetelia* had nothing at all to do

with circumstances outside Rome's walls. According to his narrative (8.28), much fuller

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[454] Liv. *Per.* 11 and by fortuitous coincidence in a new fragment of Livy 11 published by Griffin and Bravo 1988 and discussed most recently by Gabrielli 2003b; see Gabba in *St.Rom.* II.1 9-11.

[455] This is most visibly reflected in *The Ancient Economy* Ch. 3: "Masters and Slaves;" esp. cf. 74 where he discusses the uniqueness of the urban building industry in particular as placing it beyond his general scheme. In his later epilogue to the work, he raises some of the ideas of Brunt's work on the "Roman mob" only to dismiss them again from his larger argument, cf. 186-87. See also his thoughts on Athens and Attica at 1980: 89 where, even there, slavery was "an agrarian as well as an urban institution."

than that of Varro, the law was brought about because a creditor, L. Papirius, tried to rape a young debtor, C. Publilius, claiming it as part of his legal purview under *nexum*. Livy's story is not necessarily to be believed in its particulars, and William Harris has rightly doubted that such petty motivations could stir up such a profound social change.[456] Still, it is worth mentioning that agricultural serfdom is nowhere found in this episode as Livy recounts it. The end of *nexum* may have greatly affected Rome's agricultural economy, but the story as Romans viewed it was removed from that context: the outrage at the creditor's actions was expressed by a crowd in the Forum, and the measure was debated in the Curia.

In this way, Roman society of the Mid-Republic was remembered more as a *polis* society, where historical action unfolded primarily within the city and its penumbra. According to the XII Tables, a *nexus* who could not repay his debt in 60 days faced not only loss of his free status, but exile: he could be sold *trans Tiberim* (*RS* II no. 40, 3.7). This *polis*-focus is still legible in the topography of debt in the late fourth century that was centered around the Columna Maenia and the nearby statue of Marsyas; the fourth *secessio plebis* involved withdrawal to the Janiculum Hill.[457] Again, this is all in stark contrast to the later historical narratives of the Gracchan conflict, which are so keenly focused on free and slave labor in an agrarian setting.[458] This is not to deny that a shifting labor regime was felt in Rome's agrarian hinterland, but the evidence for the social tension of the late fourth century must be read, as our sources situated it, against

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[456] 1990: 499

[457] The Columnia Maena was the place of the *proscriptio* of debtors, cf. Torelli in *LTUR* I 301 for sources; for the connection between the statue of Marsyas and the end of *nexum*, see Coarelli in *FR* II 36-38, 91-100, 104-23.

[458] In fact, it's these episodes that form the basis of our literary knowledge of Republican landholding patterns, as see Rathbone 2003: 136-37. Contrast esp. the narratives at Plut. *TG* 8 and App. *BC* 1.7-19 to the scenario in fourth century Rome as told to us by Livy.

the urban backdrop of Rome, and this chapter demonstrates how intrinsic urban labor was becoming to Roman society.

In sum, Finley was right in two respects: a slave economy originated in Roman society well before the period of the Catonian villa, and some shift away from coercive forms of free labor occurred at Rome at the turn of the fourth century as reflected in the *Lex Poetelia*. He was, however, incorrect to connect these phenomena, because he failed to consider the city where, according to our sources, this shift away from coercive labor was occurring, and because this urban shift did not correspond to its contemporary rural labor regime, where slavery had begun much earlier. In this case, to understand the economic history of the Middle Republic as it has been transmitted to us, we must consider those labor forms in the city. More to the point, we have to consider the alternative view expressed here that Rome took on an urban quality, characterized both in terms of architectural innovation and socioeconomic complexity, at the turn of the fourth century, and that within this new context hitherto unseen market forces acted on the city's work regime and had their own impact on arrangements of labor.[459]

Labor markets, mobility, and wages.

Under market conditions, a labor supply corresponds to a labor demand.[460] In order for this to happen, workers must be free to change their economic activity and/or

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[459] This point has been anticipated to some degree by Gabrielli 2003a: 16-19.

[460] The following owes a great deal to Temin 2004: 515. As he points out elsewhere (Temin 2006: 35) much modern economic theory, as it is more interested in the performance of the labor market than the question of its existence, is uninterested in defining the sort of elements we should begin to look for in Roman society. Social anthropology following the lead of Marx has had its own difficulties of definition. See for example the almost humorous frustration of Pryor 1977: 114, "The appearance of labor markets seems also a function of the level of economic development. Following the doctrines of Adam Smith,

their location, and they must be paid something commensurate with their labor

productivity. In this way, the worker can move away from poorly compensated

employment and towards better compensated employment, and a general equilibrium of

compensation presents itself across the extent of the labor market. In a recent article,

Peter Temin argues that just such a scenario was in force in the early Roman empire.[461]

He points to evidence that wages (labor compensation) corresponded with each other

around the empire and acted under the influence of the market pressures of supply and

demand.[462] This equilibrium in the price of labor can only be the product of ability and

willingness of workers to change jobs in response to variations in wage, and it can only

be brought about by information circulating around the entire labor market.

Recently, Willem Jongman has also pointed to the high rate of wages in relation

to the cost of subsistence in the early empire.[463] If slave labor cost an employer

subsistence or only just above, then the fact that Roman free laborers were earning well

over this rate suggests that their labor was not rendered worthless by the existence of

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economists have argued that labor markets are a function of the division of labor. Since the division of labor is often an indicator of the level of economic development, certain problems of circularity arise."

[461] 2004; restated in 2006. Temin also makes an argument concerning slavery's participation in the labor market that fails to convince and is in fact dropped from his restatement in 2006. No matter how incentive-laden Roman slavery was in comparison to other slave societies, in no way did it fulfill the mobility requirements of Temin's own definition of a labor market: the slave lacked an option of freely changing occupations or willfully to other professions (cf. the sale of slaves at Cato *De Agr.* 2).

[462] See e.g. Cuvigny 1997 on wages for miners in Egypt and the Danube region; real wages reacting to demand issues after the Antonine Plague in Scheidel 2002: 106-7, but see the critique of Bagnall in the same volume. Scheidel 2008: 42-44 has recently suggested that the Roman labor-market could have been 'thinned' as the civic obligations of the free workforce, primarily military service, interfered with their stable supply of labor and artificially raised demand. This can explain why slaves continued to be bought in such large numbers. Rome itself, however, has a large enough population to avoid this factor, which may have impacted smaller Italian cities under citizenship obligations; non-citizen free-laborers also avoided the problem but are difficult to detect in Roman society; compare the situation with metics in Athens, Epstein 2008. Furthermore, Rosenstein 2004 argues that Roman family structures were strategically constructed to cope with both military service and agrarian labor requirements, mitigating any 'thinness' in free labor.

[463] Jongman 2008: 600-602, where he critizes Hopkins as pessimistic on the ratio of free wages to subsistence, and qualifies his own former position on higher wages as "unduly skeptical."

slavery, but rather that they were among themselves party to competition and market forces. That is, relatively high wages would appear to be clear evidence of a substantial labor market during the Roman empire. It is interesting to note that the majority of evidence for higher wages that Jongman musters comes from urban contexts.[464] This is not surprising, since, when revisiting his *Ancient Economy*, Finley himself admitted that cities, Rome in particular, stood outside of his model.[465] This line of thought whereby urban environments are more amenable to market-driven employment can be traced as far back as Marx.[466]

If wages reflect the fact that a labor market affected employment in the cities of the Roman empire, how far back can this correlation be placed? As there is only the thinnest of evidence for wages in general in the Middle Republican period, we will take a more structural approach. What can be demonstrated is the plausibility that a worker could change profession and/or location (mobility), and that he could have been compensated (wages). The chapter sets out to do just that, situating the former in demographic changes and the latter in the development of coinage, increasingly becoming the basis of wages.

Mobility

We are looking for two sorts of mobility, the ability to change profession and to change location. A worker did not need to be able to change his type of work *per se*—a butcher does not need the ability to take up banking—but rather, to respond to a labor

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[464] 2008: 600-1: e.g. the holding of Roman senators, the pay of municipal scribes at Urso. See the relevant comments of Temin 2006: 41-42.
[465] Finley 1999: 185-86.
[466] Marx saw the commodification of labor as, in part, an urban phenomenon, as see e.g. *Capital* 794-96.

market, he had to be able to stop one job and take up another if he perceives the potential

for higher wages. For the Roman period, there is much more evidence for changes in

location, and since a change in profession of this sort is implicit in such relocations, we

start from there.

1. The mobility of workers in the building profession

There were different scales of mobility connected with episodic construction

projects. The first involved a close-range pull of people from a city's catchment area to

the city itself, where, during periods of exceptionally high labor demand, free

nonresidents of a city could expect to find casual employment: sustained periods of

monumental building were just such periods of high demand.[467] We can only guess that

this had some correspondence to agrarian cycles and seasonal periods of

underemployment, but there is very little Roman evidence that shows such internal

migration.[468] We may speculate that Appius' building program (312) was among the first

to show this pattern, as both the aqueduct and the road extended building into Rome's

hinterland for the first time on that scale, but these projects were not at Rome itself, and

may speak more to labor involvement than to labor migration.

The second type of mobility was of a much larger scale and involved more

specialized builders who moved around the Mediterranean in search of a demand for their

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[467] For a good example of this phenomenon of labor migration towards an urban context from Soviet Moscow, see Hoffman 1991. The interaction between a suburban labor supply and urban labor demands for public works in Jurchen China was considerably more coercive as seen in, for example, the description of labor recruitment from the area surrounding Kai-Feng as well as neighboring prefectures by Chan 1992.
[468] On seasonal cycles to Roman labor, see especially Rosenstein 2004; though he is concerned specifically with negotiating a non-urban context, his thoughts there are still instructive. There are several examples from Greece of walls built by populations πανδημεί (Thuc. 1.90.3, 5.82.6; Diod. Sic. 11.40.1, 12.47.4): this must have entailed the inclusion of those suburban populations attached to the city though not necessarily within its environs.

skills. The rich epigraphic evidence from Classical Greece portrays the building

profession as a trade involved in this second and larger-scale movement of population.[469]

What evidence we have also suggests that architects at Rome were an international class:

of 20 architects identified in inscriptions from imperial Rome, nine have Greek names;

however, the majority of those nine are freedmen, and one is specifically named as a

servus of Domitian.[470] During the later Middle Republic, in the second century, we can

identify the Greek architect Hermodoros of Salamis as present in Rome over the course

of twenty years when he designed the Metellan Temple of Jupiter Stator, and later the

Temple of Mars *in circo*.[471] Going the other way, Vitruvius tells us that the Roman

architect Cossutius was employed in Athens by Antiochos IV Epiphanes to construct the

Olympieion before continuing on to the royal city of Antioch where he helped to build an

aqueduct.[472] Both of these stories speak to a cosmopolitan nature at the upper echelon of

the building trade. Admittedly, however, all of this discussion on architects tells us little

about the thousands of lower-level laborers working on the buildings themselves, who

formed part of a larger Rome-ward migration in the period. These workers are almost

invisible in our sources and are better approached as part of a larger phenomenon of

demographic change.

2. The growing urban population of Rome in the first period of Italian colonization

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[469] Burford 1969: 112-13, 201-5; *eadem* 1976: 62; Epstein 2008: 108-9.
[470] According to the catalog numbers from Donderer 1996: C. Licinius M.F. Alexander (A 124, Late
Repub./Early Empire), Amianthus Nicanorius (A90 and A91, Augustan), Hilario (A 160, Augustan),
Tychicus (A 143, Domitianic), Aristeides (A7, Trajanic), Herakleides (A 40, Trajanic), Alcimus (A 89,
Antonine), Anicetus (A 92, Severan), C. Pomponius Heracon (A 133, 2/3rd CE).
[471] Gros 1973; 1976a.
[472] Vitr. 7.*pr*.15, .17; see Rawson 1975: 36-37.

Workers must have been coming to Rome during the early third century to participate in the aforementioned upsurge in construction projects (tab. 1).[473] Seen more contextually, human mobility especially in the direction of Rome was built-in to the Republican world. This is important: a worker decides to move because he is presented with information on conditions external to his own environment, and his mobility rests not only on his ability to move, but also on his access to the flow of information.[474] Political institutions such as voting and the census saw Roman citizens from all over Italy acting at this point in the capital itself. There have been doubts expressed about the inclusiveness of voting beyond the city and its suburbs in this period when the Comitium could have held no more than about 5000 people.[475] Prior to the establishment of censorial boards in the Latin colonies in 204, however, the census was registered on the Campus Martius itself, and this system, while cumbersome, implied a cyclical mobility of free Romans moving to the capital.[476] The army also functioned as a means of moving Romans around Italy and gave them a physical awareness of the world outside of their hometowns that was indispensible to any decisions to relocate.

Besides these political reasons to travel, Archaic and Republican Rome had a number of other social institutions that suggested territorial mobility. In élite circles, these included *hospitium*[477] and marriage practices.[478] As far as craftsmen were

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[473] Coarelli in *StR.* I 336; Cornell in *CAH* VII.2 (1989) 407-8 repeated almost verbatim at *idem* 1995: 381-82; *idem* 2000: 46-47.
[474] On the question of human mobility in antiquity, the pessimism of Brunt 1971: 191-92 has been checked by Osborne 1991, although Erdkamp 2008: 419-20 is more guarded.
[475] Hin 2008: 212-13.
[476] Nicolet 1991: 126-29; Liv. 29.15.9-10.
[477] The *tessera hospitalis* naming T. Manlius M.f., probably the Roman cos. of 235 and 224, and his *hospes* T. Staiodius N.f. from Trasacco is the best example of this practice in the period concerned (*CIL* I² 1764 = *ILLRP* 1066); cf. Plaut. *Poen* 1046-50 for the possible use of such an object, and see Patterson 2006: 141.

concerned, Romans believed that the father of King Tarquin was Demaratus, a Corinthian

potter; sources seem to suggest that he was motivated by economic rationale, and there is

also some archaeological evidence to suggest pre-Republican central Italy as a sort of

mobile and open society.[479] Even more broadly, transhumance was a major phenomenon

in central Italy of the Republican period, and, by the later Republic at least, industrial

products manufactured by transhumance found their way to urban markets: such a link is

further evidence of a general climate of human mobility attached to the city.[480]

We could measure all of this mobility towards Rome itself if we could get some

handle on the general pattern of urban growth during the period.[481] Though it is

universally accepted that Rome saw high growth, the means to make any accurate

quantitative assessment are lost to us. Various guesstimates have been advanced, some

receiving support, but they give an unfortunately divergent spread.[482] The best solution

offered rests on construction projects: Brunt held that the construction of the city's

aqueducts corresponded to the needs of a growing population, and that the population

consequently had doubled in size between the building of the Aqua Marcia in 144 and the

work of Agrippa and Augustus at the turn of the millennium. By extension, it had

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[478] Best illustrated in the third century by the story of Pacuvius Calavius, a prominent Capuan during that city's revolt against Rome in the course of the Second Punic War: he was apparently married to the daughter of Ap. Claudius Caecus, Liv. 23.2.2-6. On this episode, see Humm 2005: 144-46.
[479] Sources and discussion in Ampolo 1976-77, who bases his argument primarily on the 'Tomb of the King' from Monterozzi (Tarquinia) where an inscribed *oinochoe* was found naming *axapri rutile hipakrates* (*TLE*[2] 155), an Etruscan with a Greek cognomen. See also Smith 1996: 210-15.
[480] Generally, Gabba and Pasquinucci 1979; Curti, Dench, and Patterson 1996: 180-81; for market interaction, Pagano and Rougetet 1987: 756-57 and 759-60; Curti, Dench, and Patterson make this connection more strongly aligned with Rome itself, *loc. cit*. For possible earlier Republican impacts of transhumance routes see Morel 2007: 501.
[481] Note, at least, Livy's opinion in the wake of the Gallic sack, although the historicity of this particular passage is criticized in Ch. 2: *et Roma cum frequentia crescere* (6.4.6).
[482] A high of 100,000 in the fourth century was suggested by Frank *ESAR* I 34; Beloch set the lower end of the range with a guess of 20-25,000, *RG* 209.

probably doubled also between the building of the Anio Vetus in 272 and the Marcia.[483]

With an early Augustan city in his view of roughly 750,000 inhabitants, he suggested a

city of 187,500 people at the time of Pyrrhus.[484] It is also worth noting that by this logic,

the short 40-year period between the construction of the Appia and the Anio Vetus would

have displayed one of the highest urban growth rates at Republican Rome.[485]

Brunt's number has found a following,[486] but it has also been challenged as too

high for the early city: Starr reduces the number arbitrarily by half to 90,000 at the time

of the Pyrrhic War.[487] Starr's only evidence was his own doubt. To support Brunt and

the high count in the city, we may give two further estimation methods, both speculative

but at least suggestive of a similar level of magnitude.

The first is a simple historical comparison of land densities. The area within the

fourth century wall was 426 ha, but not all of this was occupied. Rather, there was

agricultural land even within the city, there were parks and gardens, and there were

public spaces and temples unavailable to residential occupancy.[488] Looking at the

Imperial city, which contained far more public monuments, scholars have estimated the

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[483] It is somewhat more complex, however, then Brunt's simple notion that two aqueducts means twice the water that one does. Official records consulted by Frontinus had the Marcia's capacity at 2,162 *quinaria* (*De Aq.* 67.1), the Anio Vetus at 1,541 (*De Aq.* 66.1), and the Appia at 841 (*De Aq.* 65.1). Thus, the Marcia did nearly double the city's water capacity, delivering about as much water as the previous two aqueducts combined. In all three cases, Frontinus' own check on the actual water delivered varied from the official report as leakage or other impediments had altered the aqueducts' flows.

[484] 1971: 384

[485] As noted, according to Frontinus' calculations, the Anio Vetus actually nearly tripled the city's water supply, rather than just doubling it. Are we also to see a doubling of the city's population between the building of the Aqua Appia in 312 and the Anio Vetus in 272, and thus a veritable population explosion in that period? Another reading could suggest that the Aqua Appia, as a first attempt at engineering a water-distribution system for the city could have been close to insufficient, and another aqueduct became necessary quickly.

[486] Hopkins 1978: 68 tb. 1.2; Morley 1996: 39; Scheidel 2004: 14.

[487] Starr 1980: 15-16, followed by Cornell 1995: 385. However, in Cornell 2000: 46-47, he appears to have accepted the larger estimate.

[488] Cornell 2000: 45. The Aurelian walls enclosed 1,373 ha, Morley 1996: 34.

ratio of inhabitable land to uninhabitable land to have been between 3:2 and 1:1, with

Ostia falling at 5:3.[489] It would be safer to err on the side of less inhabitable land, and

accept that some 213 ha were available for occupation. In this way, when the wall was

built in 378 B.C., a density of 300-400 persons/ha, representative of urbanized space in a

Mediterranean context, produces a range of 63,900-85,200 people, already akin to the

low estimate. Consequently, if the wall has a relationship to Rome's urban expanse at the

time of its construction, the city probably eclipsed Starr's guess by the early fourth

century. A century later, when the Aqua Anio Vetus was built, the urban population had

spread beyond the wall into the *Trans Tiberim* neighborhood and also probably eastward

outside of the *Porta Esquilina*.[490]

　　　Another way to approach this problem is to model the caloric requirements for an

urban population of such a size, and, assuming that most of these caloric needs were met

by the production of the *ager Romanus*, to calculate what the productive capacity of the

ager Romanus would have reached in the fourth and third centuries.[491] The average

subsistence requirement could be met by 250 kg of wheat per year per person, and for

Starr and Brunt's population estimates, we must consider the plausible production of

$22,500 \times 10^3$ versus $46,875 \times 10^3$ kg of wheat within the *ager Romanus*.[492] Afzelius

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[489] Hermansen 1978: 146-47 with further citations.

[490] *Transtiberim* was still at risk of Etruscan attack when it was mentioned for the first time in the XII Tables (*RS* II no. 40, 3.7), but after the fall of Veii and the construction of the wall, it became more connected to the city. Its growing population is especially felt in the third century with Sp. Carvilius' Temple of Fors Fortuna in 293 and with the first stone bridge across the Tiber, the *Pons Aemilia*, built sometime in the late third century (s.v. Coarelli "Pons Aemilius" *LTUR* IV 106-7).   An eastward population expansion in the third century is signaled by the discovery of the outflow tank of the Anio Vetus under San Vito on the Viminal, Santa Maria Scrinari 1979: 61.

[491] Starting with Hiero's donatives in the second Punic War, the cereal supply for Rome was supplemented as it was to be throughout the empire, but beforehand it must have largely been made up from the planting of directly controlled territories.

[492] Clark and Haswell 1967 used by Hopkins 1978: 66-67; see the recent endorsement of this estimate by Jongman 2008: 598-99. Rosenstein's more complex calculations concerning a family of five ends up being

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estimated the size of the *ager Romanus* in 264 to have been 26,805 km^2.[493] The standard

yield in antiquity, at least according to our ancient authors, derived from a sowing rate of

five *modi* (each at c. 6.65 kg) of wheat per *iugerum* (.2518 ha).[494] According to one

model, which accounts for attrition for seed and as well as climate, this yielded 66.50 kg

per *iugerum*, or 26,400 kg per km^2. The maximum annual yield of the *ager* on the eve of

the First Punic War was thus 707,652 x 10^3 kg of wheat, sufficient to provide a

subsistence diet to 2,830,608 people. The maximum capacity is highly impressive,

capable of feeding the supposed 187,500 people living in third century Rome ten times

over. We have to allow for three mitigating factors, i) that much if not most of this land

was not arable or was dedicated to other crops or livestock, ii) that this yield also fed the

population of the *ager*, iii) and that many Romans may have eaten at a level above

subsistence. Even if all of this represented a 90% reduction in land dedicated to cereal

agricultural production, the *ager Romanus* was capable of producing the necessary

surplus to feed a city of several hundred thousand people already in the third century.

Still, Livy reports a grain shortage in 299 (10.11.9), a signal that, if anything, the

production of the *ager Romanus* suddenly had difficulty keeping up with the swelling

urban population.[495] As a representation of magnitude, Brunt's original higher estimate

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only slightly larger, but supposes the entire diet was made up of wheat alone (2004: 66-67), whereas
Jongman acknowledges more realistically that the roughly 2000 daily calories from 250 kg of cereal was
supplemented by a variety of other foodstuffs. Cornell uses much lower numbers but without much
evidence, 1995: 470 n. 38 citing his own work in *CAH* VII.2 408 where he gives no citations.
[493] Afzelius 1942; followed by Cornell 1995: 380.
[494] Varr. 1.44.1; Columell. 2.9.1; Plin. *NH* 18.198; Rosenstein 2004: 67-68.
[495] Italian wars in Samnium and Etruria, as well as the report that Etruscans tried to sabotage Romans by
burning their lands, may have had contributed to the difficulty in feeding the city (Liv. 10.11.1-6), but in
that case it also suggests that Rome necessarily had to provision part of its population on grain from
annually conquered territory. Fabius Maximus was aedile in charge of making up the *dispensatio annonae*
in foreign grain, though Livy does not say from where. The fact that Livy cages this as a Fabian story
suggests that Pictor was his source and the episode is apt to have been recorded early on (*ut scripsere
quibus aedilem fuisse…Fabium Maximum placet*). The rash of grain shortages attested in the fifth century

makes most sense: the aggregate population of Rome in the third century at around the

time of the construction of the Anio Vetus reached nearly 200,000 people, expanding

from perhaps under half that amount in the early fourth century.[496]

In contrast to this early third-century urban growth, the evidence of the Latin

colonies sent into Italy during this period argue for large population movement *away*

from Rome (table 3.1).

Table 3.1: Italian colonies in the Middle Republic up to the period of the First Punic War.

Date	Colony	# Settlers Reported	Citation
334	Cales	2500	Liv. 8.16.14
328	Fregellae	(not given)	Liv. 8.22.1-2
314	Luceria	2500	Liv. 8.26.5
313	Saticula	(not given)	Vell. 1.14.4.
313	Suessa Aurunca	(not given)	Liv. 9.28.7-8
313	Pontiae Insulae	(not given)	Liv. 9.28.7-8
312	Interamna Sucasina	4000	Liv. 9.28.7-8
303	Sora	4000	Liv. 10.1.1
303	Alba Fucens	6000	Liv. 10.1.1
299	Narnia	(not given)	Liv. 10.12.5
298	Carseoli	4000	Liv. 10.3.2
291	Venusia	(not given)	Torelli 1978: §291 B.v
289	Castrum Novum	(not given)	Torelli 1978: §289 A.iii
289	Hatria	(not given)	Torelli 1978: §289 B.i
273	Paestum	(not given)	Torelli 1978: §273 B.iv
273	Cosa	(not given)	Torelli 1978: §273 B.iv
268	Ariminum	(not given)	Torelli 1978: §268 B.iv
268	Beneventum	(not given)	Torelli 1978: §268 B.iv
264	Firmum	(not given)	Vell. 1.14.7
263	Aesernia	(not given)	Liv. *Per.* 16

Cornell estimates a total of 71,300 *coloni* sent from Rome between the foundation of

Cales (334) and the First Punic War (264). It is difficult to know exactly what proportion

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(see Ogilvie *ad Liv.* 1-5 pp. 256-67 for citations) when Rome's economic reach was highly limited disappears in the early period of expansion only to reappear at this moment: this is perfect evidence for a sudden population increase around 300.

[496] Is the jump in the Roman census data between 339 and 293 reflective of a sudden population swell? The figures change magnitude quickly between these dates, with the only intervening report of 323 being textually corrupt. Brunt found the whole matter incomprehensible and chose to reject the earlier figures entirely 1971: 29-30. Admittedly, the correspondence between Roman citizens *sui iuris* (Hin 2008) in the census and craftsmen entering the city is tenuous at best.

of these colonists were Roman citizens: Brunt assumed that ¾ of them were Roman citizens, the rest drawn from the already existing Latin cities.[497]

Of the Roman citizens, it would make sense to think of most of these colonists as coming originally from the Roman city itself, its suburban area, or its penumbra, where farmland was increasingly at a premium. Scholars of the Greek colonial period at least have long understood demographic pressure to be a contributing factor towards colonizing movements.[498] There was little point in moving settlers from colony to colony. Rome's intentions may have been predominantly military; the Latin colonies were *propugnacula imperii* (Cic. *De leg. Agr.* 2.27).[499] But Livy calls the colonists who set out during this period *stirpis augendae causa missos*, and population concerns were also explicitly behind Roman actions (27.11.11).[500] Brunt speculates along these lines that the colonists may have been the younger sons of small-holders: by distribution of land, they could have had the opportunity to marry earlier and thus reproduce faster, hence the reference to the *stirps Romana*.[501] Whether or not the colonists considered the situation so complexly, the point is that these settlers were given land when previously they were in a more constricted environment. They may as well have been freeborn peasants without industrial or artisan skills who could no longer feasibly make a living for a family in Rome itself as the crowding cityscape became less amenable to small-

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[497] 1971: 29. Kornemann in *RE* IV 1 col. 572 thought that *socii Latini* comprised a good portion of these settlers, but Brunt argues convincingly that he overvalued such contributions.

[498] Graham 1983: 5.

[499] Most scholars have followed Cicero: e.g. Brunt 1971: 28 n. 3; similarly, Kornemann in *RE* IV 1 col. 561. Gabba, who worked extensively on this topic, has a more nuanced view that put military concerns first, but also allowed for social and economic rationale, see his summary conclusions at *StR* II.1 12, or expanded in 1988.

[500] Of course, the transplanted population formed a bulwark against foreign populations, but the point here is that the *stirps Romana* could be better increased by sending these colonists out rather than confining them to Roman territory.

[501] 1971: 28.

holding.[502] At the least, we can see them as predominantly from those areas within and around the city that were attaining higher population densities.

During the same time as this wave of colonists, there is further evidence that Rome's inhabitants were leaving to settle on the expanding territory under Roman control, most notably on the *ager Gallicus* absorbed into the *ager Romanus* by M.' Curius Dentatus in 290 B.C.[503] Again, we do not know how many Romans were party to such transfers, but the formation of several new rustic tribes in this period is indicative; Cornell estimates that 20-30,000 adult male Romans were resettled. Along with colonists, this would bring the total number of people emigrating during this period to 100,000 adult males. Both situations seem motivated by the desire on the part of the Romans to distribute land to unlanded citizens. Whether they are landless through social circumstances, as Brunt's younger sons of smallholders, or through growing population density, is impossible to tell. [504] Even if we are extremely conservative, however, and suggest that only a quarter of that total originated from Rome and its surrounding environs, that still entailed an emigration of 12.5% of the city's total population, and much more when we consider that they left with their families. More importantly, that

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[502] I disagree with Brunt 1971: 28 n. 3 who appears to have implicitly followed Kornemann *RE* IV 1 col. 572 that either Cic. *Caec.* 98 or Gaius 3.56 imply that Romans sent to colonies forfeited citizenship rights, but if this were the case, then younger male offspring, a class that could conceivably become *sui iuris* if they obtained their own land, would have stood more to lose from going to the colonies, whereas landless citizen tenants in the city would have had less at stake.

[503] We are sorely ill-informed on the actions of Dentatus in the area of Picenum, and this is a pity considering the important precedent that Rome's activity with this conquered land had in the pattern of land-absorption and settlement during the crisis of the Gracchi. The *communis opinio* related by Cornell 1995: 380 and Rathbone 2003 is that Rome dispossessed the native inhabitants of their land either by killing them, enslaving them, or forcibly deporting them.

[504] Cornell calls it safe to assume that these settlers were Roman *proletarii*, 1995: 465 n. 21. The issue becomes more substantial in the Gracchan period: Salmon 1969: 120 believes that the urban poor became landholders through C. Gracchus' colonies, *contra* Cornell *loc. cit.*

migration represented the loss of a large proportion of its adult male population—the potential labor force.[505]

To compensate for this loss of manpower, Rome must have been gaining population at a startling rate—the newly built aqueducts alone speak to the fact that population gains in the city outpaced the rate of this outward migration. The gain cannot have come from natural increase: rapid rises in birth-rate are really unknown in the pre-industrial world and are attributable to important advances in infant care and especially in disease prevention.[506] Furthermore, the so-called "urban graveyard effect" would suggest that the net natural increase in the city as it grew would actually trend lower than that in the surrounding countryside.[507] The only remaining factor is immigration, which must have been significant.[508] Mobility towards Rome was not only plausible; it was necessary, and must have outpaced the emigrating colonists.[509]

3. Tracing the movement of builders to Rome

There is both epigraphic and archaeological evidence that this centripetal migration to Rome in the third century involved those specialized in construction, and that these workers ended up in the public building industry. One such example is an inscription naming two workmen of a late third century date found on the northeastern

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[505] Salmon 1969: 59.
[506] For example, in effective medicine to fight malaria.
[507] Scheidel 2003.
[508] The formula for population change is $P_1 = P_0 +$ Natural Increase (Birth rate-Death rate) + Net Migration (Immigration – Emigration).
[509] Jongman believes this gap was made up by the growth of the slave population, 2003: 109, 116-22. *Contra* Morley 1996: 46 suggests that the ultimate incline to a population of 1,000,000 under Augustus was indicative that a sudden influx of slaves after a successful campaign would have been insufficient in and of itself to account for such an increase; he proposed 7000 free transfers to Rome annually.

slope of the Palatine.[510] The inscription is on a structure excavated by Pietro Rosa, who

misidentified it as the Temple of Jupiter Stator, and it was recorded as such by Christian

Hülsen in *CIL* VI.[511] While this identification would securely date the blocks along with

the temple's foundation to the first decade of the third century, photographs in the

Archivio di Stato di Roma published by Claudia Cecamore confirm that the structure was

not the foundation of a temple but, rather, belongs to an as yet unidentifiable drainage or

cistern structure (fig. 3.3).[512] Written on the face of two blocks set at a right angle are the

names:

> *PILOCRATE*
> *DIOCLE*

The names are on the lowest course of structure's interior, and nothing is inscribed on the

courses above: they seem to be signatures. Because they are inscribed into two adjoining

blocks, but at such a low and difficult point to reach, they were carved into the stones

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[510] Since the inscription can no longer be dated by its association with the Temple of Jupiter Stator (see below), it is given a more general date in line with the letter forms and the material (*tufo giallo della via Tiberina*) on which it is found.

[511] Rosa's excavations: Tomei 1993. Hülsen in *CIL* VI 36615.

[512] 2002: 75-77, fig. 26. She follows Middleton 1879: 169, "These inscribed blocks have been wrongly supposed to be part of the foundations of a temple, but their size, shape, and position show that they belong to a separate structure, and were simply part of a down-shaft, possibly to carry surface rain water into the sewer below." The sewer, which Middleton proposes here, is reportedly brick and so not to be associated with the earlier tuff structure, which may have been part of a cistern of some sort. The Middle Republican *Clivus Palatinus* is practically unknown.

Figure 3.3. Archival photograph of De Rosa's excavation on the Clivus Palatinus. The inscription is visible on the lower facing blocks of the channel. Cecamore 2002 fig. 26.

sometime during the construction process, after this course of stone had been laid but before other courses made access difficult. The signers must have been involved in the construction project. It is thus interesting that the names are Greek but written in Latin: these two workers seem to have immigrated to Rome but settled there long enough to pick up the local alphabet.[513] This is exactly the sort of movement I have been describing of workers traveling towards Rome in response to demand for construction labor. Their status remains at issue: both men lack the Roman *tria nomina*, but they also do not identify as *servi* as many servile artisan signatures do from this period.[514] We should not

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[513] This inscription predates or at least is contemporary to the earliest Latin inscription in Sicily, which may be the milestone of C. Aurelius L.f. Cotta *cos.* 252 and 248 from Agrigento, *AE* 1957 158, see Reynolds 1960: 206-7.

[514] For example, the signatures of slave potters on third-century black-gloss ware, see below at p. 167.

exclude the possibility that they were *incolae*, resident aliens who must have accounted for some portion of Rome's urban population.[515]

The archaeology of the buildings themselves is also revealing especially as it relates to the changing technology of lifting machines. As I mentioned earlier in my discussion of the Roman circuit wall (Ch. 2), holes for *ferrei forfices* (lifting tongs) appear disposed on both the tops and bottoms of blocks *in situ* in the fourth century wall, and this suggests that cranes were only used at that point in tandem with ramps, the former probably employed for unloading material off boats at the Tiber port, the latter for the actual placement of stones on building sites.[516] This disposition of lifting tong holes is seen in podium blocks of the early third century Temple C at Largo Argentina, dated to the late fourth or early third century.[517] This suggests that cranes using *ferrei forfices* were still not employed at construction sites, and that this technology remained restricted to the river port. The blocks were then maneuvered around the city by means of sleds or rollers, and workmen placed them into the foundations of Temple C on earthen ramps.

Cranes appear with regularity for the first time by the end of the third century in the interior podium courses of one of the twin temples at San Omobono. These walls relate to the reconstruction of the temples following the fire there in 213 (Liv. 25.7.6). For the first time in evidence at Rome, every block of *tufo rosso a scorie nere* has a regularly positioned hole for the insertion of a *ferreus forfex* (fig. 3.4).[518] It is noteworthy that the same material was used in the foundation courses of the Temple of Juno Moneta

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[515] *Dig.* 50.16.239 equates *incolae* with the Greek πάροικοι; discussion of Capuan *incolae* at p. 171.
[516] Pp. 63-65.
[517] Marchetti-Longhi 1960: tb. 6, pl. 1; date given by Coarelli 1981: 15.
[518] The holes are found at equal spots on the reverse side of each block, but the interior is better preserved, and is thus illustrated here.

on the Capitoline a century earlier, but in that case there is no evidence that lifting machines of any kind were employed.[519]

This important technological shift shows the developing complexity and permanence of the building industry in third century Rome. Rope and iron were needed in quantity, and the wood required for such cranes was not insubstantial.[520] New material resources may have played a role in this expansion of technology, for example, the Roman acquisition of Bruttium after 282 B.C. expanded its timber production beyond the local Alban hills.[521] A few permanent cranes at Rome's loading docks were one thing,
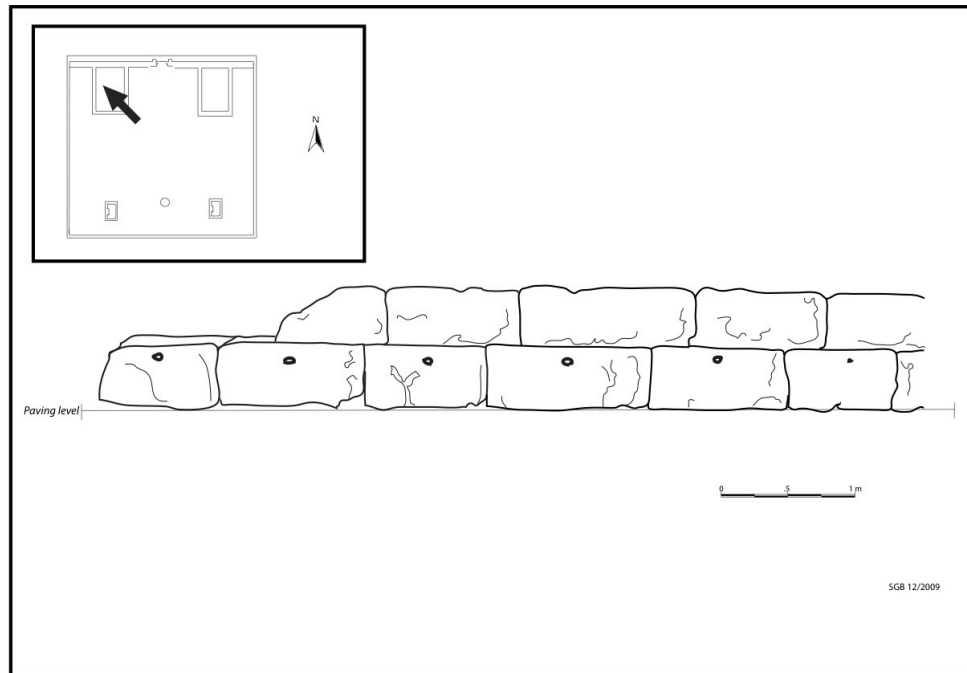
Figure 3.4: Plan of the interior face of the cella wall of the western San Omobono temple. A schematic at the top right locates the wall. Each block on the lower course shows a regularly positioned hole for a lifting tong; the upper course is too eroded to show similar evidence.

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[519] See discussion at pp. 66-69.

[520] From a later period, part of Domenico Fontana's payment for lifting the Vatican obelisk was the right to keep the wood from the lifting machine after the project. In our period, wooden siege engines were kept as spoils of war (e.g. Liv. 25.40.3), showing the importance of the material itself and the difficulty in reverse engineering examples.

[521] Dion. Hal. 20.15.2.

but the movement of a crane or its component parts to various worksites, the planning

and setting-up at the worksite, and the operation of the machines were all specialized

tasks requiring advanced technical knowledge. Evidence of their consistent use entails

innovation, but it also entails a change in the workforce with a higher ratio of skilled to

unskilled workers as opposed to the masses of unskilled workers necessary for portage

and for pushing and pulling material up ramps.[522]

The newfound ubiquity of the crane may indicate the discovery at Rome of

compound pulleys, which doubled the crane's mechanical advantage and made it more

useful for lifting heavier loads. The fact that this change first appears in the San

Omobono temples may also point to the presence of Syracusan builders at Rome during

this time. The sanctuary at San Omobono burned in 213; in the following year,

Marcellus conquered Syracuse. He celebrated an *ovatio* at Rome in 211, and paraded

through the city streets with his spoils; among them were the war machines created by

Archimedes to defend Syracuse against Roman siege.[523] Depending on where we see the

Porta Triumphalis, we may even imagine Marcellus carrying these novel war machines

directly past the ongoing construction of these two temples, although this is hardly

necessary to infer the transfer and diffusion of technology.[524]

War engines and building machines formed part of the larger class of *machinae* in

antiquity and relied on closely allied technologies.[525] Associated with many siege

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[522] This was a change in the labor-force ratio: unskilled labor was never completely phased out: see Hor. *Ep.* 2.2.72-73.

[523] *Catapultae ballistaeque et alia omnia instrumenta belli lata* (Liv. 26.21.7).

[524] The *Porta Triumphalis* is on Coarelli's account northwest of the San Omobono temples (1988: 372; cf. Haselberger in Haselberger *et al.* 2002, "Porta Triumphalis"); *contra* Wiseman 2008b: 391 who is less confident that it can be placed at all.

[525] As is clearly the case with Vitruvius' tenth book on machines including both construction cranes and war engines.

engines was the compound pulley, which doubled the mechanical advantage of lifting

machines and with whose invention ancient authors credited the Syracusan

Archimedes.[526] Vitruvius knew of the compound pulley (*rechamus*); he also knew of

Archimedes' treatise on machines.[527] Treating Vitruvius as a *terminus ante quem*,

scholars have not known with more precision when the compound pulley debuted at

Rome. However, the development of lifting technology visible in the temples from the

time of Marcellus, which I have identified, may represent the original transfer of

Archimedean lifting technology to Rome in the late third century.

This hypothesis is important because technological innovation can indicate

population movement. This innovation and the subsequent operation of complex lifting

engines imply a skill-set that was not previously evinced at Rome and would have

required skilled workers. Again, gleaning the status of these skilled workers who helped

with the technological transfer is difficult. These workmen may have been slaves, part of

the same spoils of conquest as Archimedes' machines. As such, their decision to bring

their specialized crafts to Rome had little to do with market-driven choice. On the other

hand, Temin and other economists have often argued that innovation is a hallmark of free

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[526] Plut. *Marc.* 14.8 and several late antique sources discussed by Wilson 2008: 343-4. But Wilson notes that the historical fact of this point is problematized by the fact that the pseudo-Aristotelian *Mechanica* seems to describe the device a century prior.

[527] *Rechamus*: 10.2.1; Archimedes on machines 7.*pr.*14; Vitruvius again specifically cites a treatise by Archimedes at 1.1.16. This is all very interesting as, according to Plut. *Marc.* 17.3-4, there was another ancient tradition that Archimedes intentionally abstained from committing any of his technological innovations to writing, see also Wilson 2002a: 4. If, however, on my suggestion the compound pulley entered Roman engineering via Archimedes and Syracuse, this explains the development of the ancient tradition associating him with such an innovation.

labor: the incentive-laden pressure of a market encourage higher efficiency and better technology.[528]

4. Migrating craftsmen in the Middle Republic

Up to this point, we have considered two cases specific to the building industry; both cases demonstrate mobility, but in terms of the status of mobile workers, the evidence has admittedly been ambiguous. Let us widen our lens and consider more broadly the movement of a related group, skilled craftsmen, of which builders formed a part. By the later fourth century, a class of builders and craftsmen seems to have had a notable and permanent presence in Rome. The dissolution of the Latin League in 338 promoted the movement of several noble families in Central Italy to Rome, some of them with probable ties to industry.[529] In 329, on the occasion of a *dilectus sine ulla vacatione* for a conflict with the Gauls, Livy tells us that "even a crowd of builders and craftsmen, hardly an appropriate group for an army, were said to have been called up" *quin opificum quoque volgus et sellularii, minime militiae idoneum genus, exciti dicuntur* (8.20.3). This shows that a class of workers had formed in the city already in the later fourth century. Slaves were occasionally enlisted in the army, but in such special circumstances that our sources are usually explicit about the rare fact.[530] In this case, this group of builders and craftsmen were more likely freeborn.

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[528] Temin 2004: 515-16. Sen. 90.25, however, attributes a list of technological innovations to the inventiveness of slaves; Brunt 1971: 23.
[529] On this phenomenon, and especially in regard to the Plautii, see Münzer 1999 (1920): 45-47.
[530] E.g. with the recurring narrative about the corps of *volones* in the 2nd Punic War, Liv. 24.14.3-16, .19. Isid. *Orig.* 9.3.38 emphasizes the rarity of this arrangement.

Livy's choice of words here is also interesting. *Volgus opificum* rather than simply *opifices* stresses their motley nature and bolsters his claim that they were an inappropriate group for a well-ordered military setting. *Sellularii*, however, is more of a mystery: the word is *hapax legomenon* in Livy's work as we have it, and in fact is exceedingly rare in Latin literature.[531] Its etymological root is a seat, *sella*, and Livy's decision to call these workers *sellularii* plays upon their sedentary nature in contrast, again, to the normal activities of a Roman soldier. Gellius also used *sellularius* in such a derogatory manner in order to deride businessmen and those interested in mercantilist pursuits as emasculated by their sedentary nature (*sellulariis quaestibus*).[532] This is the same sort of rhetoric that is found in the beginning of Cato's *De Agricultura* when he discusses the proper occupation for a Roman nobleman of the Republic.[533]

This was not baseless rhetoric, however: beyond the editorializing, there is little reason for Livy to have invented this episode entirely, and other discussions of the composition of the Roman army in the Middle Republic suggest that some documentary basis did exist.[534] Archaeology further confirms the presence of a craftsman class at Rome by the late fourth century. The famous Ficoroni Cista (late fourth century) proclaims itself in an inscription to be a Roman product, and its craftsman Novius

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[531] s.v. *OLD* "sellularius" only cites this passage in Livy along with Gellius and a mention in Apuleius' *Florida*.

[532] Gel. 3.1.9-10: *'Quorum' inquit, 'avaritia mentem tenuit et corrupit quique sese quaerundae undique pecuniae dediderunt, eos plerosque tali genere vitae occupatos videmus, ut sicuti alia in his omnia prae pecunia, ita labor quoque virilis exercendique corporis studium relictui sit. Negotiis enim se plerumque umbraticis et sellulariis quaestibus intentos habent, in quibus omnis eorum vigor animi corporisque elanguescit.'*

[533] *De Agr. pr.*1-3, note in parallel to Livy's sentiments here how Cato suggests that it is the farmer who makes the strongest soldier: *ex agricolis et viri fortissimi et milites strenuissimi gignuntur*.

[534] Besides the *volones* cited above, there is also Polybius discussion of the allied and Roman forces at 2.23-24.

Plautius, apparently a free Roman, took pride in its provenance.[535] In similar fashion, a

number of fourth and third century inscribed black-gloss ware vessels from Rome and

surrounding Latium speak to the growth of a potter class in the region attached to

established Roman families. From the work Jean-Paul Morel, we know that Roman

potters were producing and exporting these ceramics not only in Central Italy but also as

far afield as Spain, the Greek East, and North Africa: in short, to the entire Mediterranean

basin.[536] Signatures on some of these vessels found on the Esquiline identify both free

Roman and servile foreign names operating side by side, or slaves under free

managers.[537] Di Giusseppe identifies the class involved in the production of black-gloss

ware as "free men of modest social station who still had servants or slaves at their

disposal, and who used pottery production as the basis for their social and political

ascent."[538] There are some important plebeian families such as the Gabinii who attached

themselves to this production (*CIL* I^2 409-14). A slave of the Canulii was at work on the

Esquiline.[539] The distribution of the pots and the attachment of these *gentes* suggests that

this Roman ceramic production was lucrative and part of a widely spread commercial

activity.[540]

The best representation of this phenomenon is L. Sextius Lateranus: Coarelli was

the first to connect the important plebeian, who was largely behind the *Lex licinia sextia*

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[535] *CIL* I^2 651 = *ILLRP* 1197: *NOVIOS PLAUTIOS MED ROMAI FECID*. A late fourth century date seems best, Cornell 1995: 390.
[536] The classic work to this regard is Morel 1969; see also in *RMR*.
[537] Compare the signature of C. Antonius (*CIL* I^2 462) or Furius (*CIL* I^2 473) in the nominative with another bearing the name of *Pilotimes Lucretius Luci servus* (*CIL* I^2 488)
[538] Di Giusseppe 2011: 59.
[539] *CIL* I^2 416: *K(aeso) Serponio Caleb(us) feci(t) viqo Esqelino C(ai) S(ervus)*.
[540] These are usually small, open-shaped vessels, and thus not appropriate for carrying wine or grain. I hesitate to suggest that the pots themselves were the valuable objects in circulation, but I am not certain what valuable cargo they were suited for.

of 367, with the signature of his slaves from kiln-wasters found on the Esquiline.[541] If

this is correct, Sextius Lateranus' *cognomen* becomes an indication of his attachment to

the potting-industry, involving him in brick and tile making. From a technical standpoint,

the link between brick and tile production and pottery is important to our entire

discussion here of ceramic craftsmen.[542] Moreover, as the proprietor of *figlinae* on the

Esquiline, Sextius Lateranus would form an early example of the connection at Rome

between wealth, social mobility, and industrial activity found in the supply of building

materials.[543] The privatization of brick works, *figlinae*, contrasted with the contemporary

public control of that industry in Magna Graecia and southern Italian communities in this

period and formed the early origins of what would become the world of *officinae*

doliariae known from brick stamps in the late Republic and Empire.[544]

Like Sextius Lateranus, powerful Romans, many with connections to the building

industry, were amassing significant private capital in this period through commercial

activity. Several early prominent members of the *gens Servilia* bore the *cognomen*

"Structus."[545] Four of them reputedly held consulships in the fifth century. The entire

apparatus of the fifth century *Fasti* has, I think, justifiably been doubted by Peter

Wiseman, among others. There was confusion among ancient authors over the

cognomina of the fifth century Servilii (Liv. 4.21.9), and the tradition may have

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[541] Coarelli 1996aa: 40-41. See *CIL* I^2 467 and 468. Hülsen read 467 as *C. Sextius V(ibi) servus*, but to my eye the V here may just as well be an L, making this *C. Sextius L(uci) servus*, perhaps even a slave of Lateranus himself?

[542] On the technological overlap between ceramic production for vessels and for architectural products, see Jackson and Greene 2008: 504-9.

[543] Diodorus erroneously records two earlier consuls with putative connections to building in T. Stertinius Structor of 441 and C. Servilius Structus of 421: both are contradicted elsewhere.

[544] Morel 2008: 501.

[545] Admittedly, *structus* is a past participle translating "built-up" rather than "builder." Still, to my mind the connotation remains.

anachronistically given the early Servilii Structi their names from the later Sp. Servilius Structus, cos. 368.[546] Still, the meaning of the *cognomen* and its relationship to construction is not immediately clear: it is, problematically, a past participle, rather than "Structor." Furthermore, what any of these Servilii built is unknown, although the *gens Servilia* was associated with Roman public construction: a *Lacus Servilius* existed in the Roman Forum from the second century, and La Regina connects it with the construction of the Aqua Tepula in 126 by Cn. Servilius Caepo, who was then serving as censor.[547] The *gens* also later appears with some frequency on brickstamps.[548] If the Servilii Structi associated themselves with the building industry, the opportunity for personal capital from similarly industrial activities can be seen influencing the movement of some Italian *gentes* to Rome: several pots found in southern Italy bear the signature of the Atilii, a Campanian family whom Münzer saw as pressing for a political career at Rome at this moment through their alliances with established Roman nobility.[549]

Thus far, the focus has been primarily on the organizers of labor, as they are more visible. During this period, even some of those men who originally transferred to Rome as slaves would eventually contribute to the free population as workers at Rome. After the fall of New Carthage in 209, Scipio is reported by Polybius to have told the captive New Carthaginians craftsmen that they were now public slaves of Rome (10.17.9):

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[546] Wiseman: 1987, 293-96; *idem* 1995: 104-5; Degrassi *Insc.Ital.* XIII I p. 25; *RE* 2nd Ser. II.2 col. 1810 "86) Sp. Servilius Structus, C.f.C.n." Earlier possibilities are P. Servilius Priscus Structus cos. 495, Q. Servilius Priscus Structus, cos. 468, C. Servilius Structus cos. 476, Sp. Servilius Structus cos. 478. Liv. 4.21.9: *Prisco alii, alii Structo fuisse cognomen tradunt.*

[547] In *LTUR* III "Lacus Servilius" 172-73; Front. *de Aq.* 1.8.

[548] See the instances cited in Bloch 1948: 46.

[549] The phenomenon of Italian *equites* gaining access to Roman politics through Roman relations is the topic of Münzer 1920 Ch.2; on the Atilia specifically see p. 60 and Palmer 1976-77: 139. The *gens Atilia* attained the consulship in 335 with M.Atilius Regulus *RE* II 2 col. 2086 no. 50. There may have been many more similar stories, but it is clear from the distasteful description of C. Terentius Varro, pr. 217, the son of a butcher (Liv. 22.25-26), that such origins were hidden by their owners if possible.

τοῖς δὲ χειροτέχναις κατὰ τὸ παρὸν εἶπε διότι δημόσιοι τῆς Ῥώμης εἰσι· παρασχομένοις δὲ τὴν εὔνοιαν καὶ προθυμίαν ἑκάστοις κατὰ τὰς αὐτῶν τέχνας ἐπηγγείλατο τὴν ἐλευθερίαν, κατὰ νοῦν χωρήσαντος τοῦ πρὸς Καρχηδονίους πολέμου.

He told the craftsmen that for the present they were temporarily public property of Rome, but should each of them exhibit good will and industriousness in their various trades, he promised them their freedom after the war against the Carthaginians was concluded according to plan.

These craftsmen were entrusted as public slaves to Scipio's quaestor and used to replenish the rowers of ships returning to Rome, where they would contribute in their various skills until gaining freedom at the conclusion of the war. [550] Polybius casts Scipio here in a typically generous light—this was probably not the fate meted out to all the captives of this campaign. Polybius himself elsewhere discussed the revenue brought from 40,000 slaves working in the mining operation around New Carthage.[551] Some of these slaves were certain to have formerly been New Carthaginians as mines were a common destination for enslaved war captives in antiquity.[552] It is not unlikely that Scipio offered these workmen who presented specific industrial skill-sets a choice between slavery at home or employment in Rome, the latter with the promise of freedom shortly thereafter based upon a term of service for the Roman state. Presented as such, this may not seem to us a difficult choice to make, but the episode demonstrates the perceived demand for craftsmen at Rome and the movement of the supply of those craftsmen towards that demand. In this manner, these New Carthaginian captives can be

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[550]Polybius refers to these men twice as χειροτέχναι (10.17.6, .9) and once as ἐργαστικοί (16.1). Livy claims explicitly that they were free and numbered 2000 men, calling them *opifices* (26.47.1-2), but then he confuses the Polybian passage suggesting that the *opifices* were promised freedom if they helped make arms for Scipio's forces whereas slaves were added to the Roman rowers. Polybius claimed only that these same *opifices* were put on boats and asked to contribute to Roman industry in state service. There is some discussion as to the status of these artisans before their capture in New Carthage, as see Walbank's commentary.

[551] Strabo 3.2.10: Πολύβιος δέ, τῶν περὶ Καρχηδόνα Νέαν ἀργυρείων μνησθείς…ὅπου τέτταρας μυριάδας ἀνθρώπων μένειν τῶν ἐργαζομένων..τότε, "Polybius says, recalling the silver mines around New Carthage…that 40,000 slaves remain in the facilities…in his day."

[552] E.g. Thuc, 7.87; Xen, *Vect.* 4.15-16; Plut. *Nic.* 4.2; Diod. 3.12.2.

seen as participants in a labor market centered upon Rome where they would ultimately be free craftsmen.

This incident is not isolated. Livy elsewhere remarks on Rome's preferential treatment for artisans among the conquered populations in describing the repopulation of Capua after its conquest in 211 by the retention there of "a crowd of resident aliens, freedmen, traders, and workers," *multitudo incolarum libertinorumque et institorum opificumque* (26.16.8). If Capua had such a population in the third century, we can only presume that Rome, a much larger city, did as well. The Roman senate's actions towards this artisan class after the capture of a city not only gives plausibility to the actions of Scipio at New Carthage, but it also demonstrates the centrality of a non-agrarian working class to Roman urbanism in the period.

5. Concluding Thoughts on Mobility

The foregoing section has demonstrated that a vital working class engaged in non-agrarian economic activity was developing at Rome in the late fourth and early third centuries. Mobility directed towards the *urbs Roma* was high during the Middle Republic, and free labor made up a component of some of this movement. These people moving to Rome were involved in mercantilist activities, and some were involved in the building industry. Demand was high, and there was consequently wealth and status to be gained for free Romans from participation in the building industry. This movement of population towards the urban center did not abate in the early second century: in 184, embassies from the Latin allies arrived in Rome to complain to the senate that their cities were being depopulated by emigration towards the capital. The senate responded by

expelling 12,000 Latins from the city and sending them to their hometowns, thus

relieving Rome, as Livy says, from a burdensome crowd of foreign-born residents (39.3.4

multitudine alienigenarum…onerante).

A final note: this trend of non-Romans seeking work in Rome during the third

century finds confirmation in the biographic traditions of our earliest Latin literary

figures, who are largely a non-Roman class moving to Rome in the same period. Ennius

was from Rudiae. Early playwrights such as Livius Andronicus, a Tarentine and perhaps

a freedman, or Maccius Plautus, a freeborn Roman from Sarsina, made their way

presumably of their own volition to the city.[553] Though the biographical tradition of

Plautus is highly dubious, we find in it the perfect example of professional mobility not

only towards Rome but in the city once there: Plautus reportedly lost his fortune as a

merchant, then found employment at Rome as a miller, before regaining his standing as a

playwright.[554]

Wages

Literary or documentary evidence for wages in the Republican period is

extremely thin. Crawford suggests that a standard lowest daily wage paid by the Roman

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[553] Biographies in Conti 1994 *passim*.
[554] The source is Varro as reported by Gellius, 3.3.14: *Sed enim Saturionem et Addictum et tertiam quandam [sc. fabulam], cuius nunc mihi nomen non subpetit, in pistrino eum scripsisse Varro et plerique alii memoriae tradiderunt, cum pecunia omni, quam in operis artificum scaenicorum pepererat, in mercatibus perdita inops Romam redisset et ob quaerendum victum ad circumagendas molas, quae "trusatiles" appellantur, operam pistori locasset,* “But indeed Varro and several other sources tell that he wrote *Saturio*, the *Addictus*, and a third play, whose name I don’t now recall, in a bakery, since after losing all the money which he had obtained in work related to the stage-arts, he returned to Rome and had sold his labor to a bakery in order to obtain food, to turn the mills which are called the ‘*trusatiles.*’” Rejected by Conti 1994: 49-50, the episode is reminiscent of the plots of Plautus’ plays.

state in the Middle Republic was 3 *asses*.[555] It is unclear, however, how applicable this

figure is to the wage-laborer: two of his three examples refer to the payscale of the

legionary.[556] The last, Scipio Nasica's scornful offer to the Gracchan land commissioners

of three obols each a day, is meant to be insulting, and may thus correspond to an

equivalent salary for menial labor, but we can only speculate in this regard.[557]

Commodity prices, which should have some relationship to wages, are even more

invisible at this point.[558] If only we had the ability to triangulate as Braudel did for

medieval Europe between gain prices, calorie requirements, and wages, but the Roman

evidence is trivial in comparison.[559] Instead of looking for wages themselves, we need to

consider the problem of wage payment indirectly by looking at the feasibility of such

payments and their function in the Roman economy of the period. For this, we turn to

numismatics.

This section argues that the development and usage pattern of coinage, and in

particular the proliferation of smaller denomination coinage in the third and second

century, point to an increasing ability at Rome to offer wage payments for labor. It is

clear that employers, especially those contractors who bought state-let contracts including

building construction and repair, participated in a cash economy. In addition, I argue, the

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[555] *RRC* II 624.
[556] The first is the much debated statement of the payscale for the Roman army by Polybius (6.39.12), though I am inclined to follow Crawford's interpretation of the 2 *obols* paid to the legionary as meaning 3 *asses* (or, roughly a third of a denarius, which Polybius equated with a drachma), more on this below. Plautus *Most.* 357 does seem good evidence that *trium nummum* was considered the standard legionary pay at the time, thus in the early second century.
[557] Plut. *Tib. Gracch.* 13.3; at 13.2, the patricians have denied the commissioners a tent on public expense, and so are clearly toying with them. But Plutarch also states that the pay as three *obols* each, not *asses*, and so we are back in the trouble of Greek and Roman equivalencies.
[558] Livy gives some grain prices during the Hannibalic war; otherwise, all I have found is Plautus' note that a pig cost a *nummus* in the *Menaechmi*, 289-90.
[559] Braudel 1992: 129-34.

payment of cash wages was a necessary means of matching the state production of

coinage to the consumer uses of coinage in the third century Roman economy.

1. The development of bronze coinage

After the advent of Roman coinage, bronze in the third century appeared in two

forms—coins and bars. The role of the money bars in the Roman economy is unclear,

but probably involved both religious and wealth-storage functions. The bars do not

appear to have been a medium of everyday exchange.[560] In their wealth storage function,

they continued the tradition of *aes rude* and the *ramo secco* that dated back to regal

period. They appear together with *aes rude* in hoards.[561]

As we have seen in the last chapter, Roman bronze coinage developed in the late

fourth century, when coins in silver and bronze were struck at Naples, but under the name

of Rome. Bronze coinage struck at Rome began in earnest during the period of the first

two Punic wars in the middle and late third century. During this period, the weight

standard of the bronze coinage was incrementally reduced, and the coins can profitably

be grouped by their weight:

Table 3.2 Chronology and weights of early Roman bronze coinage

Standard	Weight	Dates
Early bronze strikes	Variable, on Magna Grecia standards	c. 310 – c. 260[562]

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[560] Crawford relates them to the distribution of *spolia*, but admits that afterwards they were used as bronze bullion and cites an example with the Umbrian legend *FUKES SESTINES*, "of the forge at Sestinum,"*RRC* I 41-42 n. 5. The bar in question, however, was found in a sanctuary, and the inscription may just as well have some sort of sacral valence, Alföldi 1972: 64.

[561] Hoards: *RRCH* 8 Cerveteri, 10 Vulci. The stratum of the Forum associated with the *Lapis Niger* contained *aes rude*, Thomsen *ERC* III 202.

[562] These coins comprise the "Romano-Campanian bronze," and as they relate more to Magna Graecia than the *aes grave* of the libral standard, I largely leave them out of the discussion. Some are late, though dates are variable and problematic: *RRC* 17 at least was struck after the foundation of Cosa in 269, see Taliercio

Libral	*as* = pound	c. 280 – 218
Semilibral	*as* = ½ pound	218 - 16[563]
Post-semilibral 1	Quadrantal, *as* = ¼ pound[564]	214[565]
Post-semilibral 2	Sextantal, *as* = 1/6 pound	c. 211-146[566]

The workhorse coin of the third century was the bronze of the libral standard, the cast *aes grave*, of which at least nine distinct strikes can be identified as Roman in a period of around seventy years; there may in fact be more Roman *aes grave* of this period.[567] It is difficult to refine further the sequence of this group, and there are few fixed points in the chronology.[568] With the larger issues during most of the third century, coins were cast rather than struck, bringing them into alignment with the production of a number of cities in central Italy that were making cast bronze coinage for a strictly local circulation.[569]

The remarkable thing about the *aes grave* coinage, and also the struck bronze coinage following the Second Punic War, is the numerous values issued in each series, many of which were minted in up to eight denominations.[570] A cast libral *as* itself was an enormous and awkward coin, hardly pocket change, as the early issues of *asses* could weigh as much as c. 330 g. In its fractions, however, the *aes grave* more easily facilitated

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Mensitieri 1998: 88; *RRC* 23 is more enigmatic and may be as late as the second Punic war, Taliercio Mensitieri 1998: 110-12.

[563] The date of the first reduction is given by the circumstances of the early second Punic war when metal was in short supply. The drastic reduction, quickly halving the weight standard, sensibly required such circumstances, and there is every reason to agree with Crawford *RRC*: 43.

[564] For arguments for and against an intermediate reduction to a triental standard between the semilibral and the quadrantal, see Crawford 1985: 55 and Lo Cascio 1980-81: 347-48.

[565] The date of the second reduction, from the semilibral *as* to the quandrantal *as*, is given by overstrikes on late semilibral *asses* from Capua, which revolted from Rome in 216; Crawford *RRC*: 43.

[566] The tying of gold, silver, and bronze from here onward revolves around the dating of the first *denarii* based on hoards from Morgantina analyzed by Buttrey 1989.

[567] A large amount of unattributable *aes grave* exists from this period, see nine such coins identified by Rutter in *HN* Italy 51; Russo 1998 focuses on assigning new denominations to series previously identified by Crawford.

[568] One, the beginning of prow-coinage, or the large strikes of *aes grave* featuring a prow on the reverse has been linked either to a similar coinage minted by Antiogonos Doson starting in 227 (Crawford in *RRC* I 42), or earlier to 235 in connection with the *quadrigatus* based on the size of the issue (Thomsen in *ERC* III 169-70).

[569] For the Italian cast coinage and the local circulation, see Crawford 1985: 46 tb. 2.

[570] Dupondis, as, semis, triens, quadrans, sextans, uncia, semuncia.

smaller transactions. By comparison, silver at this time was never minted in more than two or three denominations at once. This bronze was thus the first appearance at Rome of small change, and was an entirely internal value system, having only tangential correspondence with the then-minted silver in *didrachm* units.[571] While there is no direct evidence for prices or purchasing power for these early bronze coins, they were clearly suitable for use in the smallest daily transactions. To understand how they eventually made their way into such small transactions, it is necessary to understand both how the Roman consumer was using coinage, and also why the state was minting it in the third century.

2. Consumer Needs for Coinage: Urban Rents, Taxes, and Markets

Romans in the city were using coinage for both daily and intermittent transactions.[572] Payment in kind and barter persisted, of course, but the non-cash economy fails in itself to explain these clear signs of circulation in the Forum, as it also fails to explain the numerous hoards of *aes grave* found in Rome.[573] Cash was used in a variety of settings, but for our purposes, we can profitably divide our discussion into i) periodic regular payments such as rents and taxes, and ii) daily marketplace purchases such as commodities or luxury goods. Cash also appeared less frequently as specified for payment of indemnities for public offense such as that paid by M. Postumius for fraud in 212 (Liv. 25.3.13), or those in legal texts such as the *Lex Iulia municipalis* (*CIL* I² 593).

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[571] As is plain in difficulties with understanding the conversion suggested at Polyb. 6.39.12.
[572] Cities were always relatively more monetized, and this is certain for Rome in the Ciceronian period, as see Crawford 1970: 42, though we are speaking here of a much earlier phase in the use of Roman coinage.
[573] Forum: Reese 1982; hoards discussed below.

Rents were apt to be paid in cash in a city. Especially with the appearance of multi-storey city houses by no later than the third century, agricultural space was limited, and city tenants needed to find a means of payment besides commodities.[574] The occupation of public spaces around the Forum by private shopkeepers and especially bankers may also imply the need to pay rent to the state.[575] That said, we lack anything but these inferences to clarify the means of payment. For taxes, especially while the *tributum* was still paid in Italy (until its abolishment in 167), we are somewhat better informed. [576] Taxes could be paid in kind in more rural settings, but in the city itself coinage appears to have been preferred, as there are several instances from the narrative of the second Punic War that suggest a high degree of liquidity in the income from the state taxes that could only have been fulfilled with coinage. For example, after Cannae and Lake Trasimene, when there was grave concern at Rome that the significant loss to the propertied class would weaken incoming *tributum*, the senate decided to plead with those purchasers of state-let contracts to allow payment to be delayed until the *inopia aerarium* could be addressed and the treasury replenished. Among the delayed state-let contracts specified was the military grain provision (*frumentum*). It is doubtful that those providing the army with grain were awaiting payment in the same; rather, they would have expected compensation in cash.[577]

We are in the dark as to what sort of coinage was appropriate for tax payments. The Roman mint had to understand that a good deal of the money they were putting out

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[574] Liv. 21.42.3.
[575] For *Tabernae* see Papi in *LTUR* V 10-16.
[576] Cf. more broadly Howgego 1994: 17-20 for money taxes in the provinces.
[577] Liv. 23.48.8-12. See further at 26.35.6 where Roman citizens complain that they have no more cash at hand as *si quid cui argenti aerisve fuerit, stipendio remigum et tributis annuis ablatum.*

would be returned to the *aerarium* through various taxes and imposts. This being the case, it was not unusual for states to mint coin specifically designated in some form for a regular tax: the Ptolemies appear to have produced bronze denominations targeted at the payment rates for the salt tax.[578] Interestingly, in 204, Rome initiated a *vectigal* on the *annonia salaria* with the price of salt set in Rome itself at a "*sextans*."[579] Livy does not specify whether this rate is a sixth of an *as*, as the Loeb editor translates it, or alternatively a sixth of a pound: the latter does raise the highly intriguing connection with the fact that the *as* had recently retarrifed some seven years prior to the salt tax at a sixth of a pound.[580] We would like more evidence on any alignment between bronze denominations and tax rates, but the possibility of some coordination can at least be raised.

Then there were the daily purchases of commodities at Rome's new marketplaces such as the *macellum* or the *Forum Piscatorium*.[581] Such transactions are frequently described in Roman comedy, where money is pervasive. These plays, first performed on a Roman stage around the turn of the third century, often imply that daily purchases would have been impossible if not for coinage.[582] As with much of the subject matter, the monetized economy of these plays derives from the *milieu* of the Hellenistic Greek

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[578] Von Reden 2007: ch. 2, "Monetising the Countryside". We should note here that Ptolemaic Egypt developed its coinage at around the same time as did Republican Rome, and technical similarities between Ptolemaic and Republican coinage have been recognized, in particular with relation to the control marks on the early silver didrachm *RRC* 22, which take their precedent from coinage of divine Arsinoe II, see Crawford *RRC* I pp. 39-40.

[579] Liv. 29.37.3-4.

[580] For more on the salt tax, and for evidence of its imposition even in Sardinia, see Frank *ESAR* I 140 and *CIL* I² 2226.

[581] For the third century origin of both markets, see catalog no. 71.

[582] E.g. Plaut. *Asinaria* 198-201: *diem, aquam, solem, lunam, noctem:haec argento non emo. Ceterum quae volumus uti Graeca mercamur fide. Quom a pistore panem petimus, vinum ex oenopolio, si aes habent, dant mercem.* "Day, water, sun, moon, and night: these are things I don't buy with money. Other things we want, we purchase on Greek faith. What bread we want from the baker, what wine from the vintner, if they get money, they hand over the merchandise."

world, but it nonetheless remained comprehensible to its Roman audience who were accustomed to the same comic types and the same uses of money.[583] In this corpus, we find a multiplicity of goods and services, from doctor's fees to prostitutes, and from donkeys to dowries, all of which seem by that point to be customarily paid for with cash.

The predominant metal for everyday exchanges in Rome of the Middle Republic was bronze. The moneychangers on the forum were known as *argentarii*, but actual stray finds of foreign currency there are overwhelmingly of bronze.[584] Moreover, stray finds of Greek coins dated to the Middle Republic excavated from the Tiber were bronze issues without exception.[585] The great variety of these common transactions, and especially the fact that many of them entailed only small sums of money, points to the involvement of multi-denominational bronze rather than silver. The more monetized this lower-level economy became, the more liquidity it required, and the small- and multi-denominational bronze coinage quite literally fit the bill.

3. The nature of Roman coinage and its pattern of use

There is, however, one significant hitch in this picture of a monetizing Roman populace: the money supply of the Roman state was not normally intended to supplement consumer liquidity; rather, the Roman mint issued coin to pay for state expenses. [586] It is impossible to interpret Roman coinage as an attempt on the part of its issuing agency to

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[583] For the applicability of Plautine comedy to the urban setting of Rome, see Moore 1991 on Plaut. *Curc.* 462-86; for a recent attempt to use Plautus to describe Roman Mid-Republican practices, see Nichols 2010. To my mind, not only the common reference to cash payments and transactions, but moreover the metaphoric use of cash debt at, e.g., Plaut. *Cist.* 188-89 is indicative that this was not only a Greek activity but had to have been understandable to a Roman viewer as well.
[584] Reece 1982: 119, bronze made up 103/108 Greek coins. The state treasury was called the *aerarium*, hence the private moneychangers could hardly have been called *aerarii* themselves.
[585] Frey-Kupper 1995.
[586] Crawford 1970: 45; *contra* Lo Cascio 1980, though he is speaking of a much later period.

meet the expenses of daily life, though cash eventually served as a means for low-level

private transactions. Thus, contending that Rome's urban economy was increasingly

monetized in the third century requires locating a mechanism for moving cash from state

expenditures to consumer transactions. There were two chief fiscal exigencies that the

Roman state paid in coin in the Mid-Republic: military *stipendium* and state-let

contracts.[587] The following review of both activities, however, argues that the latter

activity was more attached to consumer transactions at Rome because of the need for

wage payments.[588]

4. State Payments I: Stipendium

Concerning the preferred metal of military payment, the *stipendium militum*, our

literary sources are contradictory.[589] Polybius, who gives an account of the pay scale,

does so in terms of both silver and bronze coin, but his aim was to express military pay in

terms of a silver coin (the drachm, probably as an equivalent to the denarius) and

fractions thereof.[590] Furthermore, while Polybius specifies daily pay, soldiers were paid

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[587] Hollander 2007: 97-101 lists four predominant expenses in the Late Republic, *stipendium*, the *annona*, public works, and magistrates' allowances. Of these, the *annona* was obviously a payment in kind, and as to magistrates' allowances, the evidence is almost entirely found in Cicero, and I would think the practice was developed somewhat later than the period here in question.

[588] It is noteworthy that the redistribution of coinage from state to consumer is one of the chief questions of the role of coinage in the imperial economy a la Hopkins and Duncan-Jones; see also Howgego 1994. In this case, however, we are looking much more closely for a redistributive agent at the point of minting activity.

[589] The two direct reports on the matter of middle Republican pay are i) a military oath dated to 190 and recorded in a fragment of the late-Republican technical writer L. Cincius, not to be confused with the annalist L. Cincius Alimentus, which twice mentions *nummi argentei* (=Aul. Gell. 16.4.2), and ii) a fragment of Varro's *De vita populi Romani* which explains the etymology of dismissed soldiers called *aeres diruti* by explaining that they were no longer paid *stipendium, merces menstrualis aut annua, quae esset in nummis aeris* (= Non. 853L)

[590] The famous and much debated passage is at 6.39.12. I follow Walbank's interpretation in his commentary that suggest that the equation of *denarius* to *drachma* is typical of Polybius' work and that the

annually or semi-annually; in the earliest Republic they were paid at the end of a

campaign, and that pay was closely tied to incoming *spolia*.[591] A philological

investigation of Livy's terms for coinage is unhelpful, but does at least show that

stipendium militum increasingly appears in conjunction with *frumentum*, suggesting that

over the course of the third century, the *stipendium* was increasingly monetized and

formed a cash component of a larger variety of military expenses.[592]

The truth is probably that there was some variability in the metal of the earliest

cash payments to the Roman military, but that soldiers were increasingly paid in freshly

minted Roman silver mixed with local (non-Roman) bronze during the third century.

This fact is demonstrated above all by the hoard evidence, which I will examine shortly,

but the same result may be demonstrated by a simple calculation. Starting with Polybius'

pay-scale, we can calculate that an entire legion was owed on the order of 613,800

denarii every year.[593] Once armies started operation overseas during the Punic Wars, a

magistrate leaving for a campaign and intending to pay his army in fresh coin would have

entrusted his quaestor with the transport of 2,700 kg of silver *denarii*. If we imagine that

he preferred to take bronze with him, he would have had to negotiate the export of an

alarming 331,500 kg of contemporaneously struck coin.[594]

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other amounts follow from there, hence 2 obols stands for 1/3 of a *denarius* rather than two *asses*. See Boren 1983 for a longer account of earlier scholarship.

[591] As is explicitly the case in the events of 293, cf. Liv. 10.46.5 discussed at length at Ch. 3 §3.5.

[592] *Stipendium* appears sixteen times in books 5-7, always alone; by book eight, it almost always appears with either *frumentum* or as the full formula *stipendium vestimentaque et frumentum*. At 23.12 and 23.48, there is explicit mention of *pecunia in stipendium*.

[593] The paper strength of a Republican legion is given at Polyb. 6.19ff. as 4170 infantry of the four classes, 30 centurions, and 300 cavalry each. This calculation is made on his payscale given at 6.39.12 and based on a 360 day year with wages then being 360 denarii per cavalry, 180 per centurion, and 120 per infantryman. For the year length at 360 days, see Boren 1983: 438.

[594] And earlier in the third century, during the first Punic War when the libral *as* weighed six times as much as it did in the late third century, the calculated weight was astronomical. Some of the actual cash payment

Roman armies were not dedicating their transport capabilities solely to bronze coin. If armies took coin minted at Rome with them into the provinces, they took high-denomination silver.[595] If they had to meet financial needs in bronze or in additional coin of whatever sort, they could and did make use of locally circulating currencies.[596] When the Scipiones relayed difficulties in paying their legions in Spain to the Roman senate in 215, they requested cash, clothing, and grain, but then added that if there was difficulty in providing the cash, they could make do on local resources.[597] The combination of major indemnities paid in metal (e.g. Liv. 21.61) along with the plentiful local silver made this the least of their concerns,[598] as is underscored by the hoard evidence discussed below.

5. State Payments II: Contracts

Along with military pay, contracts were the prime incentive for minting coin, and contractors could serve as a necessary intermediary between the state and the consumer at Rome. From literary sources, we are poorly informed as to what sort of metal was preferred for payment of state-let contracts. A deciding factor would have been the size of the contract. In Ch. 3, I discussed the evidence for Roman building contracts and the

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would have been mitigated by deductions for clothing, etc., counted against the *stipendium* as Metcalf 1995: 146 points out, but the general point remains the same.

[595] *Quaestors* were in fact responsible for taking cash with curule magistrates into the provinces, see e.g. Cicero's complaint against Verres at *Verr.* 2.1.13.34-36.

[596] As is the point of Wolters 2000-1: 580-81.

[597] Liv. 23.48.4: *pecuniam in stipendium vestimentaque et frumentum exercitui et sociis navalibus omnia deesse. Quod ad stipendium attineat, si aerarium inops sit, se aliquam rationem inituros quomodo ab Hispanis sumatur*, "Cash for pay, clothing, and grain was lacking for the army and the allied navies. But as pay was concerned, if the treasury were empty, they would find another manner in which to get it from the Spaniards."

[598] By the very early second century, we know that local Iberian *denarii*, the *argentum oscense*, was being brought back from Spain to Rome, see Knapp 1977.

fact that they tended to be expressed in large amounts of coinage: for example, building

the *Aqua Marcia* in 144 reportedly cost 180 million *sesterces*.[599] The amount, however,

could then be broken down in various ways. If Roman public buildings were constructed

in the same piecemeal way as Greek temples, with contracts ranging in price and size,

then we have an easy explanation for the involvement of small denominational

coinage.[600] In the case of the *Lex puteolana*, the city of Puteoli was not liable for

payment at once, but paid the total in two smaller installments at the leasing and then at

the approval of the finished construction. This practice appears standard and helped to

diminish the actual payments for which the state was liable.[601]

There were also a variety of other contracted state activities that could have been

paid in small change, among them pious acts such as the contract for feeding the geese at

the Temple of Juno Moneta (Plin. *NH* 10.51; Liv. 5.47.4). For festivals, the censors were

responsible for renting parade horses (Liv. 24.18.10) and for contracting out the task of

reddening the face of the cult state of Jupiter Optimus Maximus with cinnabar (Plin. *NH*

33.36). Further small state transactions also included salary for non-military public

officials such as the Gracchan land commissioners (Plut. *TG* 13.3). Another whole class

of contracts were those taken up at Rome for the supply of military equipment such as

vestimenta, and for shipping *frumentum*, an activity which was insured by the state

against catastrophic loss from 215 onwards (23.48.7). From the difficulties in paying

these state contracts noted during the financial hardships of the Second Punic War, it

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[599] Front. *De Aq.* 7.4 citing Fenestella.
[600] At Epidaurus in the fourth century, the construction of a temple was the composite cost of 47 separate contracts ranging from several thousand drachmas for a column to petty sums of 1 drachma and 4 obols for fitting a lock on the door: Burford 1969.
[601] See the same procedure at Plaut. *As*. 440.

becomes obvious that Rome had already developed by that point a permanent class of contractors with regular attachments to certain state needs, a newly stable class not unlike the *publicani* who would make their living from the purchase of state tax contracts in the provinces.[602]

Perhaps the best chance for large amounts of small-denomination coin to enter the Roman economy would be the upkeep of those buildings, rather than construction itself. As Rome's urban fabric expanded, maintenance became more intensive and expensive. Again, in the difficulties of the Second Punic War, a permanent group of Roman contractors attached to the upkeep of public buildings emerged, and we see them complaining to the censors in 214.[603] Appearing here for the first time in the third century, these were the sort of people such as the Iunii family who had held the contract for the upkeep of the Temple of Castor in the Forum for several generations by the turn of the second century.[604] This class also included those contractors working under state-let *locationes demoliendae* referred to in the *Lex Iulia municipalis*; before any rebuilding began after the many major fires in downtown Rome during the period, the rubble had to be sorted, salvaged, and cleared. As has often been repeated, Polybius called such contractual work the largest single domestic expense by far of the Roman senate (6.13.3), and suggested that contracting implicated most of Italy's population (6.17). All of this restoration work was highly piecemeal and not particularly expensive by single transaction, but rather in its aggregate. Moreover, these contractors needed laborers and

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[602] Badian 1983: 16-17.
[603] Liv. 24.18.10.
[604] Cic. *Verr.* 1.2.50.

could pay them wages.[605] In this way, maintenance was an important mechanism for the

circulation of large amounts of small-denomination coin.

6. Hoard Evidence

The clearest indication for the pattern of metal use in the third century derives

from a study of the hoards, which show that Roman bronze stayed at home while silver

circulated abroad, probably with the army. Most of the earliest bronze hoards are Italian,

reaching into the heart of Samnium[606] or into southern Etruria.[607] Before the post-

semilibral bronze, there is only scarce hoard evidence for bronze circulating as far as

Sicily.[608] The earliest hoard from Ostia is of *aes grave* (*RRCH* 15); the same is true for

the area of the Alban Mount[609] as well as along the seacoast of Latium.[610] Meanwhile,

the first silver coin appears to have circulated in southern Italy, as discussed in the

previous chapter. By the last quarter of the second century, silver coinage first appears

abroad. A hoard of 50 quadrigati dating to that period was found on Sardinia, a Roman

possession after the First Punic War (*RRCH* 32).[611] Finally, in Spain, the theater of the

Second Punic War, the earliest hoards contain Roman silver mixed only with local

bronze.[612]

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[605] E.g. the *redemptor* and his *geruli* at work with a crane and blocks at Hor. *Ep.* 2.2.72, and the same word (*geruli*) associated with a money wage at Plaut. *Bacch.* 4.1002.
[606] Pietrabbondante *RRCH* 24, 31; Isernia *RRCH* 78
[607] Vico Matrino *RRCH* 47; Amelia *RRCH* 38: Cerveteri *RRCH* 8, 53
[608] Piazza Armerina *RRCH* 17
[609] All-bronze hoards at Castelgandolfo *RRCH* 2; Ariccia *RRCH* 13; Genzano *RRCH* 14; Velletri *RRCH* 4.
[610] At Ardea (*RRCH* 20) and Antium (*RRCH* 18)
[611] Bronze, however, reached Sardinia in large quantities later in the third century with, for example, a major bronze hoard of nearly 800 coins found at Perdas de Fogu (*RRCH* 100) in which 766 Carthaginian bronzes were accompanied by 16 small fractional bronzes. The hoard of a merchant?
[612] Granada *RRCH* 33; Cheste *RRCH* 75; Mogente *RRCH* 91; Tivissa *RRCH* 94.

From central Rome, four hoards containing *aes grave* can be counted, three of which were found in the Tiber and featured only bronze.[613] From just outside the walls, four hoards are now known from Monte Mario, just north of the Vatican.[614] Again, they are all bronze. Molinari suggests that they may have been connected to a sanctuary to Bellona in that area, but they may also have gone underground during the panic of Hannibal's assault on the city in 211.[615] Only one silver hoard is known from this point in the city's history, a hoard from the Capitoline (*RRCH* 60) containing 77 silver coins.[616]

Two trends emerge: the first is that Roman silver and Roman bronze did not frequently circulate together. [617] Perhaps this did not reflect as heavy-handed a division between metals as could have been seen, for example, in the contemporary coinage of Ptolemaic Egypt where von Reden has shown how silver and bronze operated for separate functions and in separate parts of the Ptolemaic empire.[618] It still showed that the bronze of the third century was targeted mostly at central Italy where cast bronze coins were also being struck, and hardly circulated further. Again, in consideration of the fact that coin was struck by the Roman state for its own expenditures, it seems unlikely

[613] *RRCH* 7, 30, 44.

[614] *RRCH* 40, 41, 42, and now Molinari 2004

[615] They all contain the libral prow coinage *RRC* 35, and thus were assembled probably between the first two Punic Wars.

[616] Imitative Messalian drachms with didrachms of Neapolis, Tarentum, Rome, and 53 quadrigati. Published by Serafini 1943-45, this is a fascinating hoard that was brought to light near the north face of the Tabularium by the Temple of Vediovis, thus the area suggested for the Republican mint, as see Tucci 2005. It was found in fill that contained "scaglie e, inferiormente, anche grandi lastroni ricavati da colonne di marmo pentelico." The coins point to a date closing around the Second Punic War, whereas Pentelic marble is rare in Rome until the later second century, and so this hoard's origins remain mysterious, but perhaps the proximity to the mint suggests that this was kept together as metal purposed for the minting post-*quadrigati* coinage, perhaps *victoriati* or even early *denarii*, but was somehow misplaced.

[617] First exception: Mandanici from Sicily *RRCH* 71, which contains a single *victoriatus*. The famous Morgantina hoard that showed the start of the *denarii* is another such case, cf. Buttrey 1989. Still, in mainland Italy, the metals are almost always hoarded separately into the second century.

[618] The relationship between silver and bronze had begun to fluctuate under Ptolemy III, and by the late third century, von Reden argues that the relationship between silver, bronze, and gold had been abandoned entirely and that bronze was being retariffed against itself, 2007: 70-78.

that the cast bronze was intended for payment to soldiers headed for the provinces. The second trend is the geographic distribution, which shows the same underlying principle: Roman legions in Spain were not unaware of bronze coinage, they simply were not receiving freshly minted Roman bronze. If they were deployed outside Italy for an extended time, they saw *stipendium* in Roman silver and picked up foreign bronze in their local markets.

7. Conclusions on Coinage and Wages

The hoard pattern suggests that Roman bronze in the third century was minted to pay for state-let contracts, which helped redistribute the coinage to urban or local Italian consumers whose transactions were becoming increasingly monetized. This system was far from perfect, and demand for cash eventually outpaced the redistributed money supply, as is evinced by masses of crudely imitated Massilian and Eburian bronze coinage at central and south Italian cites in the second and first centuries.[619] Nor is there reason to be absolutist; of course there was overlap as troops returned home with coin and trade circulated between Rome and its new provinces.[620] It was also not a static arrangement: a lacuna in silver coinage in the first half of the second century suggested to Crawford that the army was then paid in bronze,[621] and Buttrey interpreted a hoard of

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[619] On the imitative coinages of Italy, see Stannard and Frey-Kupper 2008, 2010.
[620] Though the ability of trade itself to spread coinage has been questioned as cash made on selling a cargo could be spent on the spot to buy the cargo for the ongoing voyage, Howgego 1994: 7.
[621] 1985: 72.

2004 *denarii* found at Cosa as the savings of a merchant taking up state contracts at Rome ca. 73-71 B.C.[622]

The Roman world of the later Republic, however, was far more monetized; silver was minted more commonly, and bronze issues slowly dwindled until the triumviral period. In the earlier phase in the third century, however, contracts and wages were the means of matching the production of coin for state payments with urban consumer needs for cash. Plautus' plays included urban workers who expected to be paid a cash wage.[623] In the *Aulularia*, the miserly main character remembers that before he found his pot of gold, he made a living through casual employment moving dirt.[624] For the underemployed urban residents of Rome, too, the increasing labor demand for such menial tasks as this in the service of the building industry provided a means of acquiring cash and participating in Rome's monetized urban society.

Reactions I: The Urban Picture

Rome in the late fourth and third centuries presented a mobile worker with the ability to earn a cash wage: the preconditions of a labor market. The following two sections show how this new scenario affected the Roman cityscape. The easiest way to demonstrate the pervasiveness of a labor market would be to point to equalizing wages, but as I have already remarked, this would be impossible in the period in question. Instead, the focus is on two factors as proxy of market activity: i) the increasing

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[622] 1980: 87-88, he argued that the fresh condition of the coinage and their regular serial distribution pertained to a regular attachment to the *annona* or military supply.
[623] Plaut. *Aul.* 448, *Pseud.* 808-9.
[624] Non. 333L = Plaut. *Aul.* Fr. 3: *ego ecfodiebam in die denos scrobes*, "I used to dig out ten ditches a day." S.v. *OLD* "scrobis," the word is less often applied to a grave, and Euclio here may refer to work as a grave-digger, though this information is nowhere else in the play.

crystallization of commercial activity within Rome's urban space, and ii) technological

innovation, which demonstrates the production of technical knowledge unique to Rome's

new cosmopolitan environment. In the first place, commercial infrastructure indicates

industrial activity and above-surplus production, signs that the products of urban labor

were subject to increasing and increasingly regular demand, and that wages were

reaching workers involved in non-agrarian economic activities. In the second place, as

has become a recurring thread in this chapter, technological innovation can stem from a

desire to reduce the cost of labor, and is thus indicative of market pressures on a labor

force that now found itself in a competitive environment.

During the fourth and third centuries B.C., the city appears to have become a more

dense urban environment, and we can intuit this from several notices in Livy. Hannibal

allegedly perceived the outskirts of the city in 211 as "the enclosed pitches and rooftops

of garden plots, and everywhere both tomb monuments and sunken lanes" *convalles

tectaque hortorum et sepulcra et cavas undique vias*.[625] Rome appears here to have

gathered the sort of suburban peripheral space typical of large urbanized ancient cities.[626]

Admittedly, this description in the mind of Hannibal is Livian fantasy.[627] However, there

is also little reason to doubt that Hannibal did come within sight of Rome and, for some

reason, decided to retreat. Livy uses this description of the city to explain Hannibal's

motivations: the Punic general recognized that a battle in Rome would have been a much

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[625] Liv. 26.10.3, Wiseman 1998: 95 translates this as "humps and hollows, slopes and sunken lanes."
[626] Compare Strabo's description of Alexandria's immediate periphery containing a mix of gardens and tomb-plots (17.1.10); these garden spaces on the city's fringe were not so much ornamental as economical as see *BGU* IV 1120, and worked by the city residents.
[627] There *were* however by this point large tomb monuments just outside Rome such as that of the Scipiones.

different fight than a battle on a broad plain, and he thus chose to withdraw. If Livy

interprets Hannibal's curious decision to avoid confrontation with the Romans in their

own city correctly, then it seems that Rome had acquired a distinctive urban character.

Hannibal had no trouble besieging other cities in central and southern Italy, but there

were few if any other cities in Italy that rivaled Rome at this point.[628]

How extensive was this urban fabric? Earlier in the Punic War, Livy describes

among the record of prodigies in 218 how a cow had climbed to the roof of a multi-

storeyed building in the Forum Boarium.[629] I am inclined to believe this rests on some

historical basis: found among a list of prodigies, it was probably derived from a

documentary source. This in and of itself is not reason to give credence to Livy's

account—his recollection of prodigious pebble showers, ghost ships, and

anthropomorphic animals are in fact the least believable aspect of his entire work, and

this particular story seems either guilty by association or positively truthful by

comparison. But it makes perfect topographic sense to find Rome's first tenement houses

in the area of the Forum Boarium where the Aqua Appia let out. This was the first area

of the city regularly supplied with fresh water.[630] Further confirmation of the reliability

of this notice, according to Palmer, is found in the fact that there was apparently enough

build-up in this area to sustain a two-day conflagration in 213, which wreaked havoc on

the Forum Boarium and its structures.[631] This area was also adjacent to the Tiber port,

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[628] For the generally small size of Italian towns in the Roman period, see Scheidel 2004: 15.

[629] Liv. 21.42.3: *in foro boario bovem in tertiam cotignationem sua sponte escendisse atque inde tumultu habitatorum territum sese deiecisse.*

[630] Fr. *De Aq.* 5.9, the Aqua Appia arrived *ad portam Trigeminam, qui locus Salinae appelatur*, thus on the SE corner of the Forum Boarium. The outtake of the Anio Vetus was on the E side of the city on the Viminal, where it was discovered in 1972 under San Vito, Santa Maria Scrinari *ArchLaz* 1979.

[631] Palmer 1976-77: 140.

and it would have been easy for managers at the docks to solicit casual labor from the nearby houses.[632]

There are also two mentions in Livy's narrative of the Second Punic War that the city felt crowded. With Hannibal in Italy and threatening Rome, there was an inrush of people from the periphery into the city where the fortification could protect them, making the city feel crowded. During Hannibal's advance on Rome itself in 211, traffic in the city was choked by the influx of a crowd of farmers and their oxen.[633] This sentiment of being cramped within the 426 ha within the city-walls was exacerbated by the fact that more and more of Rome's urban space was filled with architecture, so that one felt crowded all the more quickly. This rise in architecture included a great deal of new public infrastructure dedicated to commercial activity for the first time in Rome's history.

The Forum Romanum had been the nerve center of Rome since its level was artificially raised and it was demarcated as a public space in the late Archaic period.[634] It rapidly took on an economic role, and Roman historians held that Tarquinius Priscus built the first shop stalls, *tabernae*, there.[635] In the third century, however, this sort of infrastructure for commercial or industrial purposes multiplied in the city with a previously unknown rapidity. The Archaic *tabernae* around the Forum expanded and became more specific with money-changer stalls (*tabernae argentariae*) existing by 308,

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[632] Very little is actually known of lower-level housing in the Middle Republican period: as most examples dating to that time are so assigned due to ashlar masonry, they appear as grander residences, and most have come to light just off the Forum Romanum (s.v. Dumser, "Domus: Velia (2)" in Haselberger *et al.* 2002: 116; Meneghini 2009, 21-23 on Salita del Grillo.
[633] This movement is first mentioned in Livy's narrative of 213, 25.1.6, and then again with Hannibal's advance at 26.10.8: *refertis itineribus agrestium turba pecorumque.*
[634] Ammerman 1990: 644.
[635] s.v. Papi "Tabernae circa Forum" in *LTUR* V 12-13 for sources.

wool-worker stalls by the mid-third century (*tabernae lanianae*), and an entire remaking of the old *tabernae* on the Forum after a fire of 210.[636]

Other new public buildings expanded this commercial cityscape beyond the Forum; chief among them was a new *macellum*, the Republican marketplace just north of the Forum. It first appears in our sources during the period of the Second Punic War, when it is implied that it was already standing. Varro reportedly notes that his ancestor, C. Terentius Varro cos. 216, had a shop there (Val. Max. 3.4.4), and Livy states that the censors of 209 were responsible for its rebuilding after it had been destroyed by fire the previous year (27.11.16). De Ruyt dated its original phase to the period between the first two Punic Wars, and excavations in the 1980s have revealed part of its structure.[637] It was restored as a colonnaded *porticus* of nearly square plan, and impressively large, almost 100 m on each side running almost the entire length between the Via Sacra and the Velia, with an interior paved in slabs of *peperino di Marino*.[638]

Another important commercial hub that developed in Rome in the fourth century was the Tiber port. Coarelli argued that the Tiber banks in the Forum Boarium had served as a port area in Rome since the Archaic period. His evidence has been challenged, and Smith suggests with more nuance that the east bank of the Tiber must have formed an unloading point for shipments into the city since an early period, though it probably did not form a substantial and regular port complex in the sixth and fifth

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[636] *Argentariae*: Liv. 9.40.16 and catalog no. 15; *Lanianae*: Plaut. *Epid.* 195-200, see Papi "Tabernae Lanianae" in *LTUR* V 13-14; *Novae*: Liv. 26.27.2. See Papi 2002 for the continuation of this industrial and artisanal space.
[637] De Ruyt 1983: 46-50.
[638] Tortorici 1991: 37-44.

centuries.[639] What seems certain, however, is that by the late fourth century, the area had

gained a formal organization. The cult and temple of Portunus was established there,[640]

and it was now more regularly defined as the unloading point for commercial traffic

entering Rome by river.[641]

Permanent markets for foodstuffs also first appear in third century Rome. The

vegetable market, the *Forum Holitorium*, became a permanent toponym by the mid third

century as four temples from that period, those to Spes, Janus, Juno Sospita, and Pietas,

are noted in the *Fasti* as being located there.[642] Nearby was the fish market, the *Forum*

Piscatorium, which was standing already in 210 when it was damaged in a fire.[643] At this

time, the Velabrum was also developing a reputation as a place to find bakers, butchers,

and oil merchants.[644] The proliferation and permanence of these marketplace for

commodities reveals a previously unseen complication in the city's economy that

probably accompanied an increase in small-denomination monetization.

Within and related to this commercial cityscape, neighborhoods of workers were

also beginning to take shape, many with direct connections with the building industry.

Groups of craftsmen based themselves at the Tiber port, among them smiths (*aerarii*),

tool makers (*falcarii*), and basket-weavers (*vitores*).[645] Lumbermen also congregated in

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[639] Coarelli 1988: 113-27; Smith 1996: 180-81.
[640] Underneath the early 1st century Temple of Portunus is a podium of *tufo giallo della via Tiberina* normally dated to the fourth or early third centuries B.C., cf. catalog no. 22.
[641] An early landing for ships has been suggested for the spot on the bank just N of the Temple of Portunus based on the absence there of an embankment in *opus quadratum* of *tufo giallo della via Tiberina*, which is otherwise seen to the N and S along the Tiber bank, see Buzzetti "Portus Tiberinus" in *LTUR* IV 155.
[642] The oldest of those four is Duilius' Temple of Janus, dating to 260.
[643] Liv. 26.27.2-3; called the *Forum Piscarium* by Varro (*DLL* 5.146), it was quickly rebuilt and appears in the tour of downtown Rome in Plautus' *Curculio* (470-74). On the further possibilities for a *Forum Cuppedinis* and a *Forum Coquinum*, see Tortorici 1991: 38 with notes.
[644] Palmer 1976-77: 158.
[645] Palmer 1976-77: 151.

the area at the foot of the Aventine just outside the *Porta Trigemina*, which was already

named after them (the *Lignarii*) by the very early second century.[646] Here, they were

close to the Tiber port where shipments entered the city, where large trunks could easily

be broken down into usable timber for building sites without expending too much effort

on transport. This sort of intermediary processing of materials for the building trade, the

first of its kind in evidence in Rome, is reminiscent of the later practice of the

marmorarii: they were located at the base of the Aventine and at various points on the

east bank of the Tiber so that they could work shipments of marble before dispatching

them to building sites.[647]

Besides these wood workers, more intermediary processing of building materials

may be in evidence beginning in the Middle Republic. In recounting the locations of the

sanctuaries of the *Argei*, Varro notes one among the potter's quarters on the Oppian, *in*

figlinis (*DLL* 5.50). His source, the *Libri Argeorum*, seems to have been an authentic

document of the third century.[648] Epigraphic evidence for major kilns on the Esquiline

belonging to the Canuleii or the Sextii has also been discussed above. The claybeds of

Rome, however, were in the valleys between the hills, the low-lying Velabrum and

Argiletum areas at the edges of the Forum Romanum, where recent core-sampling has

identified these zones as the locations of clay beds exploited by builders to make the

terracotta tiles and revetments of Rome's earliest stone architecture from the seventh and

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[646] Livy records the construction of the *Porticus inter lignarios* in 192 (35.41.10). Of a later date, the regionary inscription lists *Vicus Columnae Ligneae* and *Vicus Materiarius* in Reg. XIII (*CIL* VI 975).
[647] The staging of marble workers is discussed by Haselberger 1994.
[648] For a date c. 240 of the Argean itinerary cited by Varro, see Palmer 1976-77: 139.

sixth centuries.[649] While clay was extracted and worked in the lowlying central areas in the Archaic period, by the fourth century potters had congregated at the edges of the city. The material processing had thus grown more complex. From a philological point of view, it is interesting to note how the topography of ceramic production at Rome has shifted from the older toponym *argiletum* suggesting only an association with claybeds, to the later *figlinae* more closely focused upon the industrial production from that clay. This picture implies increasing specialization between those responsible for extraction and those responsible for processing material intended for construction. It is this kind of specialization that in turn indicates a larger and more market-oriented urban workforce.

Reactions II: Roman Architectural Technology and Knowledge

Within this newly expanding urban fabric of the third century were the beginnings of the first truly Roman architectural style in the growing knowledge of diverse building materials.[650] The change that this section maps out is of vital importance to the greater theme of the chapter: the incoming work force had reached a critical mass such that it began to generate its own style reflective of this new cosmopolitan aspect. The wave of building and the repetitive production of particular architectural types—best represented by temples—sped up the process of technological transfer and innovation and made Rome a generator of building technology. In plan, the *peripteros sine postico* appears to

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[649] By the fifth century, another clay was being used from a source outside Rome. Ammerman *et al.* 2008 for identification of the two fabrics, and Winter, Iliopoulos, and Ammerman 2009 for discussion of the architectural use of the different clays.

[650] In seeing this development somewhat earlier, I diverge here from the *communis opinio* expressed most explicitly by Torelli 1980 that a distinctly "Roman" architecture was not generated in the city until the rubble-cement construction techniques of the second century, particularly *opus reticulatum*.

be the most daring invention of the third century.[651] Castagnoli described it as a uniquely

Roman hybrid between the Tuscan prostyle and the southern Italian peripteros of a purely

Greek style.[652]

At the same time, the third century saw innovation in the technology of Roman

construction, recognized in advances in the use of building materials. New volcanic tuffs

were employed for the first time, and they were used in different and more strategic

manners. Though softer tuffs from the Monti Sabatini eruption continued to be used (e.g.

tufo giallo della via Tiberina), Roman builders began to employ *tufo lionato* from

Monteverde and Anio and *lapus Albanus* or *peperino di Marino* for the first time in the

third century.[653] This expansion entailed longer and more complex chains of supply

connecting Roman construction projects further into the Italian hinterland. It also

implied changes in techniques of transport and stone-working.

These harder pyroclastic tuffs could take a finer finish. Into this harder stone,

masons began carving rudimentary mouldings, which would have been impossible in the

more friable *tufo giallo* or *tufo del palatino*, the two stones of construction in the fifth and

fourth centuries. In the early third century, Roman architects were experimenting with

the addition of a reverse curve to a simple rounded or *ovolo* moulding. The earliest

extant *cyma reversa* in Roman architecture is found on the upper cornice of the base of

Temple C at Largo Argentina.[654] This was without precedent in Etruria or Latium, and

Merritt was inclined to link the new Roman technology to Magna Graecia where it had

been prevalent since the sixth century.

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[651] The *peripteros* and the *tholos* at Rome date to the second century.
[652] Castagnoli 1974.
[653] DeLaine 1997: 555-58; Jackson and Marra 2006; examples can be found in the catalog.
[654] Merritt *ERRM*[2]: 22-24.

While it represents an advance in Roman construction, the first example of a *cyma reversa*, Temple C, still shows some hesitancy in its execution. The temple's podium lacked a corresponding moulding at its base, and this may reflect the fact that the *tufo giallo* from which it was cut held a carved decoration only with difficulty. Notably, however, the stone of the temple's exterior and that of its interior are a different quality of *tufo giallo*, and this is readily apparent in the differential level of decay between the disaggregating stone of the interior of the temple's podium and the still intact exterior.[655] With the exterior showing more hardness, the stone was purposefully chosen for this location in the temple by the builders who had intentionally sought quarries of harder *tufo giallo* in the lower Tiber Valley. The combination of stones in Temple C, with both harder and softer types of *tufo giallo*, shows a rationale behind the building process and a rising awareness of the physical properties of different types of building stone.

A progression of altars and sarcophagi from the middle third century show how quickly architectural moulding took on complexity at Rome. The first two sarcophagi from the Scipio tomb and the monument of Fulvius Flaccus in front of the Temples of Mater Matuta and Fortuna (264 B.C.) are of *peperino di Marino*. The Barbatus sarcophagus of sometime around 270 B.C. has a high-quality Doric entablature with

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[655] Some differential preservation is probably due to the plastering of the exterior face of the podium wall, but there is still substantial disagreement about the identification of the exterior stone and its phasing. Merritt *ERRM*[2] identifies the exterior stone as Monteverde tuff perhaps following Blake (1947: 30) probably to differentiate it from the stone comprising Temple C's podium interior, but it is in fact quarried from the same stratum of *tufo giallo della Via Tiberina*. Jackson *et al.* 2005: 504-5 think that the harder *tufo giallo della Via Tiberina* represents two phases of Temple C prior to the paving of *Largo Argentina*, but from a building perspective it is hard to see how an integral cladding of ashlar blocks was added on to the temple's podium at a later date; see the more reasonable discussions concerning the architectural history by Blake and Coarelli, *locc. citt.* I follow the most recent identification of the stone by Jackson *et al.*, but the phasing of earlier authors.

flowers in the metopes.[656] The Flaccus monuement preserves a fine egg-and-dart

moulding above a broad *cyma reversa*. We have no preserved evidence of similarly

adorned stone superstructures from temples of this period, but we know from these

examples that Roman masons were beginning to use the harder stone for more than just

foundation courses.[657] It seems likely that at least one of dozens of temples of third

century date may have displayed Rome's earliest architectural order carved into a hard

stone.[658]

The newfound awareness of sources for lithoid tuff and of the physical properties

of the harder material can be seen leading to a more judicious employment of different

building stones in Roman architecture. The pattern of mixing various stones in a single

structure is absent in the fourth century circuit wall and the late fourth century podium of

the Temple of Portunus. But it has already been seen developing in the case of Temple

C, where a stronger *tufo giallo* was employed for the moulded podium and a softer

variety was reserved for the interior. This becomes standard over the course of the third

and second century. More friable stones such as *tufo del Palatino* or *tufo giallo* are

moved towards the bottom of buildings where they were less susceptible to the damaging

effects of water.[659] Lithoid tuffs such as *tufo lionato* were reserved for those sections of

buildings requiring architectural moulding or for more exposed public areas such as

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[656] See discussion in Coarelli 1996aa: 181-88.

[657] See the discussion of the *Tullianum* in the catalog.

[658] The Temple of Victory on the Palatine was suggested as just such a candidate in a AIA talk entitled, "On the Introduction of Stone Entablatures in Republican Temples in Rome" given by P. Davies in January, 2009 (abstract online searchable at: http://aia.archaeological.org). This is speculative as only two sides of the first phase of the temple's platform are legible (Pensabene 1998: 28 and fig. 8, however he, too, restores the entire plan of the earliest temple on speculation), but I am inclined to agree with her that such a transition to all-stone superstructures began in the third century.

[659] At about this point, *tufo del Palatino* becomes the preferred stone for subterranean sewers and aqueducts at least through the time of Sulla (Blake 1947: 24).

pavings.[660] This targeting of different building stones for different parts of buildings becomes a hallmark of architecture in Rome of the later Republic.[661]

This use of different building materials is the earliest physical manifestation of the sort of theoretical and technical knowledge described by Vitruvius and other Roman authors interested in ashlar construction.[662] At 2.7, Vitruvius discusses the physical properties of various building stones and their inherent appropriateness to different types of structures. Vitruvius' text represents technical knowledge from the early Augustan period, but there are anachronisms that suggest that his description of Italian building stones dates back to the Mid-Republic. For example, he describes *lapis Pallenses*, probably to be identified as *tufo giallo della via Tiberina*, as suitable for ashlar masonry as well as for aggregrate in cement; however, *tufo giallo* had almost entirely been phased out from Roman ashlar masonry by the Sullan period, and its peak use in ashlar goes back to the fourth and third centuries.[663] Notably, the passage of the *De Architectura* discussing building stones limits itself exclusively to Italian building materials, never mentioning limestone or marble that were the materials of his Hellenistic Greek sources—instead, at this point he appears to represent a truly Italian knowledge base. He

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[660] Exposed *podia* of the late third century are consistently of lithoid tuff: the twin temples at San Omobono sat on *tufo rosso a scorie nere* podia in the late third century; the podium of the original structure of Temple A at Largo Argentina was in the same material (Jackson *et al.* 2006: 432 for the identification, though they mistakenly refer to them as "cella walls"; Coarelli 1981: 16 identifies them correctly as the podium of the original tetrastyle temple, but wrongly as *tufo giallo della Via Tiberina*). Pavings: both third century pavings of the *area sacra* at San Omobono are of *tufo lionato* from Monteverde, clearly preferred to the non-lithoid *tufo giallo della Via Tiberina* paving of the early fourth century. The paved area of Coarelli's phase I in front of Temple A at Largo Argentina is of *tufo lionato* from Anio, 1981: 16.

[661] Jackson *et al.* 2005: 506-7, who focus on the construction of the Fora of Caesar and of Augustus.

[662] Earlier, the podium of the fifth century Temple of Apollo Medicus was built of *tufo del Palatino* clad *tufo lionato* from Monteverde, our earliest instance in Rome (1997-98). While this suggests protecting the internal friable *tufo del Palatino*, a similar platform under the San Omobono temples was built a half century afterwards entirely of the friable *tufo giallo della Via Tiberina*.

[663] The last building employing a quantity of ashlar blocks of *tufo giallo* that I am aware of is the Sullan rebuilding of the Temple of Veiovis on the Capitoline, but even there the *tufo giallo* is restricted and mixed with Anio tuff and travertine.

cautions that the softer tuffs from the Tiber Valley such as *Pallenses*, which was probably

tufo giallo della Via Tiberina, are easily handled (*habent utilitatem*) but friable (*friantur*),

and are only to be used in covered parts of buildings (*in locis tectis*). However, an

Anician stone, probably *peperino di Viterbo*, is impervious to the elements and can be

used more broadly in construction.[664]

This passage in Vitruvius represents a sort of technical knowledge that was not

only Italian, but specifically Roman, for it was only at Rome that monumental building

drew from such a wide variety of imported stone.[665] The normal building practice in

Mid-Republican Italy involved a reliance on local stone, usually quarried from under the

feet of those who intended to adorn their towns with monumental architecture.[666] The

judicious use of different stones shows an awareness of the physical properties of those

stones and the start of a school of technical knowledge on volcanic building stones that

was consummately Roman (as opposed to Italic or Greek). This is not surprising,

because it was predominantly to Rome that foreign workers were moving, and, by doing

so, they could supplement the Roman building industry with their own locally developed

knowledge base, and their specific know-how on working stones outside the city.

Such technical knowledge was also moving to Rome along different lines than it

had in the early fourth century: we must note that any close connection between conquest

and material rapidly disappears. When *tufo giallo della Via Tiberina* began to appear in

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[664] Jackson *et al.* 2005 for the geological identification of Vitruvius' stones.

[665] Did Vitruvius here follow a body of technical written material—presumably in Latin—or an oral tradesman's tradition of acquired technical knowledge supported by his own native? I lean towards the latter. Vitruvius names no pre-extant source on such a topic and in his history of architectural writing in the preface to book seven, he names only the enigmatic Fuficius and Publius Septimius, along with the better known Varro, as predecessors in the Roman tradition (7.*pr*.14; also cf. 7.*pr*.18).

[666] For the norm in Italian temple construction, compare the examples listed in the catalog in Nielsen and Poulsen 1992: 118-32.

Rome (after 378), it did so closely on the heels of hegemonic expansion into the quarry region of Veii (396). The historically recorded enslavement of Veii's population closely matches this technical innovation, and it can be argued that Veian slaves provided the mechanism for transferring this knowledge to Rome. This cannot be said of the third century. Quarries providing third century Rome with stone from the Anio and Tiber Valleys or in the Albani Hills were not recently conquered territory, but were assimilated into the Roman sphere of influence much earlier. The same can be said for travertine quarries at Tivoli that would be used in the following century. Contrary to the situation in Veii, these new quarries were not opened immediately following the arrival of Roman political domination. With the establishment of a firm control over Italy after the Battle of Sentinum (295), Rome's military focus in the third century was in the Western Mediterranean, in Sardinia, Sicily, Africa, and Spain, none of which was providing Rome with building material. Technical information regarding sources of stone and their properties was no longer moving to Rome from new imperial possessions or with newly enslaved populations. Instead, these new building materials at Rome can be read as proxy evidence for a movement of builders that was at least to some degree free.

Conclusions

The first half of this chapter demonstrated the feasibility of a labor market through mobility and wages; the previous two sections have endeavored to show how pervasive and significant the labor market was once it had formed. Workers were coming to Rome where they could expect cash wages: they were participating in the balance of supply and demand provided by a functioning labor market, but they were also

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spending those wages within a nascent commercial landscape. Of all of the demands for

labor during this period, the largest that we can detect was the construction and upkeep of

Rome's new public works. This is not only demonstrable in the number of new buildings

built during the period, but it quickly became the senate's largest domestic expense, as

the oft-cited Polybius 6.13.3 suggests. The development of a purely Roman architectural

style in the strategic use of different building materials was the crowning achievement of

the city's builders, who competed and innovated in the dozens of projects over the

century.

The third century forms a seminal point in the development of Rome as a

functioning city in both the formation of public architectural fabric, as well as in its

transformation into an urban society and economy. It is interesting that Roman historians

almost unanimously circle a similar time period as one of profound change in Rome's

political culture, even if they differ in the details of and the underlying explanation for

such change.[667] That is, the start of the third century saw a disintegration of some of the

old bonds in Roman society; this was the setting in which the *Lex Poetelia* was

promulgated and in which *nexum* became obsolete, to return to our point of departure..

As Polanyi noted, once societies begin to subject labor to the forces of a market, an end is

implied to earlier non-contractual kin- or clan-based organizations;[668] the mechanism of

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[667] Was this the period of the rise of the nobility (Hölkeskamp 1987), a new phase to the conflict of the orders (Raaflaub 2005), or the consolidation of popular power (Millar 1989)?

[668] Polanyi 1944 (2001): 171, "To separate labor from other activities of life and to subject it to the laws of the market was to annihilate all organic forms of existence and to replace them by a different type of organization, an atomistic and individualistic one…In practice this meant that the noncontractual organizations of kinship…were to be liquidated since they claimed the allegiance of the individual and thus restricted his freedom." See also the same conclusions drawn, perhaps less polemically, by Braudel 1992 (1979): 479.

this shift was located by him, as by Tönnies and Marx, in urbanization.[669] It is not

impossible that the political changes of the late fourth and early third centuries had their

origins in a developing urban economy, and a rising presence of market-based labor.

Within the city, this transformation was marked by a higher degree of

monetization, a higher and more diverse population, and a more complex economy. If

the displeasure among Roman society with debt bondage in the late fourth century can be

situated in the context of a nascent urban labor market, then rising wages—the rising

value of labor—will have made coercive labor forms no longer possible. Institutional

change helped, and the beginning of contractual construction in the late fourth century

was also a factor. But under market pressures, we must figure that rising demand helped

to raise the price of labor. This is in evidence in the building programs of the third

century. Can we explain the underlying cause of this increased demand, i.e., increased

construction? Part of it was in tandem with the infrastructure needs of a larger urban

society: aqueducts, bridges, roads, and public offices. But part of it was uniquely Roman:

triumph and aristocratic competition formed the financial and social engines behind

Roman public construction and fueled the demand; this will be the topic of the next

chapter.

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[669] Tönnies 1887 (2002): 233 "In the earlier period, family life and home (or household) economy strike the keynote; in the later period, commerce and city life…During the period of Gemeinschaft this younger principle of space remains bound to the older principle of time. In the period of Gesellschaft they become disconnected, and from this disconnection results the city…In this sense, the whole continual development may be considered as a process of increasing urbanization. [Citing Marx:] 'It may be said that the whole economic history of Gesellschaft…is in essence summarized in the relationship between town and country.'" On this, see Temin 2004: 513-14.

CHAPTER FOUR
The Triumphator and the Censor: Sources of Demand for Public Architecture and their Impact on the Roman City up to 167 B.C.

Up to this point, we have been primarily occupied with issues that fall on the

supply side of Rome's public construction industry, namely the formation of the contract,

the management of labor, material, and technologies. This chapter will trace the demand

side of the equation that served as the catalyst behind all of this; I will then examine the

specific ways that such demand changed both architectural and urban forms at Rome in

the early second century B.C. In introducing this topic, I begin with a sketch of public

wealth in the early second century. How was public wealth entering Roman society in

this period, who was responsible for its collection and allocation, and why was such a

large part of it assigned to the construction of public monuments? Furthermore, why

were certain types of public monuments built? In the final analysis, the answer to these

questions begins in the economic world and ends in the socio-historical, with the

spending decisions tied to certain deeply-seated Roman social institutions.[670] As will

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[670] Goldthwaite's conception formed from his observations of *Quattrocento* Florence is relevant, 1980: 67: "The economy determines the context in which spending is possible…Demand itself rises from other sources. Men build because they have need for specific kinds of enclosed space, and the appearance of the buildings they put up is very much a matter of taste. Needs and taste can obviously be measured by their economic results on the supply side, but the forces determining needs and taste are generally considered under the independent categories of psychology, social conditions, and, more broadly, culture."

also be argued, the Roman attitudes shaping this demand had a profound impact on the architectural forms and urban configuration of the Republican city.

Behind public building in the Roman city was the disposal of large amounts of public income particularly in the first half of the second century B.C.; but as will be argued here, much of the demand for construction in the city was conditioned by the *structure* of that income. Above all, during the second century, the revenue producing system of the Roman state that supported this surplus was focused on war and its consequences: war produced immediate spoils, and its 'consequences' refer to those taxes and tribute available to the Roman state as a result of military victory. Building meant long-term, large-scale expenditure that was increasingly dependent on coinage-payments in this period; therefore, I am particularly interested in those sources of cash revenue or metallic revenue that could be converted into cash, so-called *argentum publicum*,[671] available to the Roman state from the military process.[672] In the first place, this meant tribute from allies and defeated parties as stipulated in treaties.[673] However, war-profits were not infrequently put towards the cost of continued campaigning. The cost of the

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[671] On the issue of a stock of "public silver" from which coins were struck, at least eight *denarii* were struck with some abbreviation of the phrase *ex argento publico*, as see *RRC* II 605. The argument of Barlow 1977 that this phrase refers to money taken from the *aerarium sanctius* depends on his interpretation of the monograph of *RRC* 298 as intending the same phrase, but Crawford's comments on *RRC* 298 indicate that this is by no means certain.

[672] There may also have been some gains in access to building materials in this period, especially timber, although this fact is hard to detect in our sources. Archaeology shows little change in building materials other than the advent of concrete (see the appendix to this chapter), which made use of local Italian materials. The beginning of the use of Greek marble in 146 and onwards as a sign of imperial expansion is beyond our current scope but see Bernard 2010.

[673] Third century examples include 100 talents, metal not specified, which was promised annually to Rome in the treaty with King Hieron II of Syracuse beginning in 263 (Polyb. 1.16.9). Similarly, the treaty that ended the first Punic War specified the payment of 3200 Euboean talents over the course of 20 years (Polyb. 1.62.9 with 63.4). In the treaty ending the Illyrian war, Queen Teuta promised to pay Rome tribute, but neither the amount nor the material are specified (Polyb. 2.12.3)

Second Punic War strained reserves accumulated in the prior century, and in 214, we hear of an *inopia aerarium* and an inability to pay censorial contracts.[674]

Along with Rome's military fortunes, however, the recovery of the *aerarium* was quick, and from 211 and onwards Rome began to mint the silver *denarius* annually, suggesting that the state no longer had trouble with incoming metallic resources.[675] The reason for this change during the course of the Second Punic War is not readily apparent. Crawford pointed to innovations in credit.[676] Equally important was the opening of Spanish mines to Rome after 206, another result of military success. These mines were producing a considerable amount of gold and silver, much of which returned to Rome as part of commanding magistrates' triumph.[677] After the conclusion of the war, indemnities from Carthage were shortly supplemented by others, normally divided into immediate and annual payments.[678]

Table 4.1: Indemnities from Carthage to the Third Macedonian War

Year	Party	Amount	Terms	Source
201	Carthage	10,000 Euboean talents of silver	Equal installments over 50 years	Liv. 30.37.5, Polyb. 15.18, Plin.

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[674] Liv. 24.18.2

[675] At least down to the Sullan crisis and so relevant for our period. See, e.g. Pliny's account of the state of the *aerarium* in 157 B.C. (*NH* 33.55).

[676] *RRC* I p. 33 and II p. 635.

[677] Cf. the table of reported metallic incomes from Spain from 206-168 B.C. in Van Nostrand *ESAR* III 129; the totals amount to 6,316 pounds of gold and a whopping 364,694 pounds of silver. Van Nostrand draws from Livy, but there is much more evidence besides: from Polyb. 34.9.8 (=Strabo 3.2.10), Richardson 1986: 120 calculates that the area of Cartagena alone could produce 10,800 pounds of silver *per annum*. Much of these instances cited by Van Nostrand are amounts carried in triumph, especially prior to Cato's reorganization of the mines in 178 (Liv. 34.21.7), and they also included local *argentum oscense*, which has led to discussion of the existence of an annual tax of some sort from either from the origins of the province in 206 or, as more have tended to suggest, from the praetorship of Ti. Sempronius Gracchus, that is, following 178 (Richardson 1986: 92-93). For our purposes here, the revenue whether considered tax or tribute reached the *aerarium*. If prior to 178, however, the funds would have been considered part of the governing magistrate's *praeda*, as a result the issues of *manubiae* discussed below would be applicable also to these metallic revenues from 206-178. Only from 178 onwards would they then have been part of a provincial *vectigal* and thus became more directly available to censorial expenses.

[678] That these indemnities were specified as cash payments is made clear by the not infrequent addition of other amounts payable in grain, as e.g. Polyb. 21.42 on the treaty with Antiochos III. Orlin 1997: 128 considers these the greatest source of income to the Roman state in this period.

				NH 33.51.
196	Philip V	1,000 talents	Half at once, half in installments over ten years (cancelled in 191: Polyb. 21.3)	Liv. 33.30.7, Polyb. 18.44.
195	Nabis of Sparta	500 talents of silver	100 at once, 50 a year for 8 years.	Liv. 34.35.11.
189	Aetolians	500 Euboean talents	200 at once, 50 a year for 6 years	Liv. 38.9.9.
189	Antiochos III	15,000 Euboean talents	500 at once, 2,500 on ratification of the treaty, 1,000 for 12 years.	Liv. 37.45.14

 Frank suggests that the immediate payments were often carried as part of the general's

triumph, and *praeda* at this point contained significant amounts of cash.[679] At the end of

the Third Macedonian War, L. Aemilius Paullus triumph deposited such a great amount

of cash into the *aerarium* that thereafter *tributum* was suspended in Italy until the

triumviral period.[680] Continuing income from those indemnities was supplemented by

annual tribute in large part in cash[681] in 178 onward from Spain,[682] and in 167 onward

from Macedonia.[683] Of course, the line between indemnities and tribute was not often

clear; the collection of both was probably the initial responsibility of the governing

provincial magistrate.[684] Alternatively, tribute as *vectigalia* could be farmed out to the

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[679] Frank *ESAR* I 127-38 for both the statement that first-payments of indemnities were carried in triumph and for amounts of *praeda* in this period. This is supported by, for example, the procedure recorded against Antiochos III by Appian 11.39 where Scipio Africanus takes personal possession of the first installment.

[680] According to Liv. 45.40.1, the total was 120 million HS; Polyb. 18.35.4 records Perseus wealth at 6,000 talents; see further in *ESAR* I 137. Crawford 1977: 44 doubts that the single event could have in and of itself suspended Italian *tributum*, and believes that the consequent annual Macedonian tribute was just as much behind this.

[681] As compared to the incoming grain taxes from, for example, Sicily governed by the *Lex Terrentia Cassia frumentaria* of 73 B.C. and detailed by Cicero (*Verr.* 2.3.163).

[682] Appian 6.43 notes Ti. Sempronius Gracchus' establishment of treaties with Spanish tribes, certainly the origin of what Cicero would note as a *vectigal certum* (*Verr.* 3.6.12). Florus 1.33.7 attributes this same organization to Scipio Africanus, but this is hard to believe: Richardson 1986: 115-16.

[683] Plut. *Paul.* 28.3 states that the amount was 100 talents a year. Crawford 1977: 44, who believes that the suspension of *tributum* must have resulted from this rather than from a single windfall represented by L. Aemilius Paullus' triumphal *praeda*.

[684] See, *infra alia* Polyb. 21.40.7, where Cn. Manlius Vulso arrives as cos. in Asia to inform Antiochos that the treaty had been ratified and to collect the next installment (2500 talents) stipulated in the terms of surrender. In the same episode, we see him sending his brother L. Manlius Vulso as lieutenant with 4,000 troops to Oroanda to collect promised tribute.

societates publicanorum by censorial contract, and this was becoming more and more common.[685]

In discussing Rome's revenues and expenditures in the first half of the second century, one is drawn into the very large topic of the organization and administration of Rome's early overseas empire. Without digressing too far, however, it is apparent how wealthy Roman society was becoming in the first half of the second century B.C. At the same time, Rome's public construction industry continued, as far as our literary sources tell us, with great energy. Nineteen projects are known in the first twenty years of the century; twenty-one in the 170s alone.[686] Coarelli brilliantly used coin-strikes to show how vital the construction industry remained into the central decades of the century.[687] Perhaps the greatest evidence to this effect comes to us from Polybius' description, often cited here, of the financial duties of the senate (6.13.3). Let us finally quote this in full:[688]

> Τῆς τε παρὰ πολὺ τῶν ἄλλων ὁλοσχερεστάτης καὶ μεγίστης δαπάνης, ἣν οἱ τιμηταὶ ποιοῦσιν εἰς τὰς ἐπισκευὰς καὶ κατασκευὰς τῶν δημοσίων κατὰ πενταετηρίδα, ταύτης ἡ σύγκλητός ἐστι κυρία, καὶ διὰ ταύτης γίνεται τὸ συγχώρημα τοῖς τιμηταῖς.

> The senate is also in charge of that which is by far the greatest and most considerable expenditure, namely what the censors contribute every five years to the construction or upkeep of public works, and for this expenditure the concession is made to the censors.

Building and upkeep were by far the largest public expense overseen by the senate, the largest domestic expense. Polybius stresses the same point a few sections later when he

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[685] See Polyb. 6.17. It was already present in the early century, as see Liv. 39.44.7 on Cato's censorship in 184: *vectigalia summis pretiis…locaverunt*. On this, Badian 1972: 35-44.
[686] Confer the individual entries in the catalog.
[687] Coarelli 1977.
[688] Polybius claims at 6.11.2 to describe circumstances on the eve of the Hannibalic War, but as has been pointed out by Walbank 1957: 692 *ad Polyb*. 6.17, he seems to describe the financial situation at the time of his writing, thus around the mid-point of the second century B.C.

refs to the number of contracts on construction and upkeep of public works throughout Italy as "something that cannot easily be tallied."[689]

The goal of this chapter is to understand why such incoming wealth was targeted at construction by examining the structure of demand. In particular, two sources of demand feature prominently at this time: the triumphant general and the censor. The former contributed in some manner to the delivery of revenues to the state by conquest; the latter collected and assigned those continuing revenues after conquest by overseeing state contracts. That is, these two roles constituted a structural duality to the acquisition of wealth between war spoils and post-war income derived from empire.[690] Livy records an inscription in the Temple of Mater Matuta that was set up as a dedication to Jupiter in 174 by the triumphant Tiberius Sempronius Gracchus. It read as follows, "With public revenues restored to order, he brought the army back home safe and sound, and full of loot," *vectigalibus restitutis exercitum salvum atque incolumen plenissimum praeda domum reportavit.*[691] Bringing the spoils (*praeda*) to Rome was the prerogative of the triumphant general. Collecting the post-war revenues (*vectigalia*) was the prerogative of magistrates or of *publicani* who purchased such revenues on contract from the censors. The triumphator and the censor: it was through these two figures that the large quantity of

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[689] 6.17.2: τὰς ἐπισκευὰς καὶ κατασκευὰς τῶν δημοσίων, ἅ τις οὐκ ἂν ἐξαριθμήσαιτο ῥαιδίως.

[690] I leave out a number of other sources of income here that I consider either to be of considerably lesser magnitude or to be less frequently paid in cash. Probably most considerable was the *tributum* in Italy until 167. For a summary of such other sources of state revenue, see Frank *ESAR* I 138-41; most of these as *vectigalia* could become the prerogative of the censors anyway and so make little difference to the overall argument here.

[691] Liv. 41.28.8-10. *Restitutis* because Ti. Sempronius Gracchus was responding to a revolt of a province that had already previously been paying *tributum*, and so he restored rather than established the *vectigal*. Of interest, the inscription also included a map of Sardinia showing all his battles thereon.

public wealth was moved through Roman society. We have now sketched out the means available to them, but why in particular were they investing in public architecture?[692]

Source of Demand I: The Triumphant General and Temples

Romans considered the link between a triumphant general and a resulting public monument as essential and archaic: the annalists saw the kings of Rome at the head of an ancient practice as old as Rome itself. Romulus allegedly vowed a *templum Statori Iovi* during a battle with the Sabines;[693] Livy thought that Tarquinius Superbus built the Capitoline from the *manubiae* taken from Suessa Pometia.[694] When Livy wrote, the connection between war spoils and *monumenta* was clearly expressed.[695] However, even disregarding the troublesome narrative of Archaic Rome, it is not difficult to see an authentic connection going far backward in time: the weight of triumphal temples among public monuments in the catalog to this dissertation is evidence enough.[696]

Financially, triumphal generals involved themselves in Rome's public monuments by means of their *praeda*, and most detailed accounts of triumph from the Second Punic War onward include tabulations of the sums of cash deposited into the *aerarium*. In particular, there has been a great amount of discussion over the possibility that a

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[692] Because so much discussion has taken place on the religious motivations and also on the political nature of the process as it particularly applied to temples (no less than four monographs: Pietilä-Castrén 1987, Ziolkowski 1992, Aberson 1994, and Orlin 1997) I feel that I have little further contribution to make. Instead, I want to focus in this chapter on the urban change that happened as a result of such demand, and my discussion of triumphal construction especially is more summary than the sources cited above.

[693] Liv. 1.12.4-6.

[694] Liv. 1.55.7, his source may have been Valerius Antias, as see Plin. *NH* 3.70 = Peter *HRR* Val. Antias fr. 11, although there are some differences in the language.

[695] See, e.g. Cic. *Leg Agr.* 2.59: *Aurum Argentum ex praeda ex manubiis ex coronario ad quoscumque pervenit neque relatum est in publicum neque in monumento consumptum, id profiteri apud X viros et ad eos referri iubet*, on which see Aberson 1994: App. 1. Additionally, see Shatzman 1972: 182 n. 23 for more citations of Cicero to this same regard.

[696] Note Ziolkowski 1992: 7 where he states that his initial intention to write a book on Middle Republican urbanism turned into a study of temples because they so overwhelm our evidence of the period.

particular portion of those spoils termed the *manubiae* were spent as the general's own prerogative. As public temples were often vowed over the course of a triumphators campaign, it is argued that the cost of this obligation could be defrayed by such *manubiae*. Problematically, debate concerning the definition of *manubiae* already circulated among the writers of the early imperial period, and the various attempts in antiquity to define the term are difficult to reconcile.[697] While scholars in the mid-twentieth century believed that the highly contradictory literary evidence could be reconciled into a single constitutional definition, applicable in all cases, recent opinion has moved towards a more agnostic view of *manubiae* or at least has seen it as a flexible classification.[698] This is in keeping with a general trend beginning the late 1960s, which views Republican legal procedure as forming around *ad hoc* applications of law based on contemporary interpretations of how it ought to be or how it was (*mos maiorum*), rather than applied out of any static constitutional practice.[699]

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[697] This is best evinced by a lengthy passage of Aulus Gellius 13.25.1-32 citing Favorinus and Cicero in debating the term, though it seems that Favorinus' term (*manubiae* are those part of *praeda, quae manu capta est*) could be a pre-monetized version of the Ciceronian version relating to the sale of the *praeda* (*manubiae vero appellatae sunt pecunia a quaestore ex venditione praedae redacta*), and so these two differing definitions can feasibly rest on a chronological/monetary basis. Still, it is clear from texts other than Gellius that even in Cicero's day, the Favorinan definition persisted: Ps. Asc. *ad Cic.* Verr. 2.1.154, *manubiae autem sunt praeda imperatoris pro portione de hostibus capta*, and Cicero himself in the *Leg. Agr.* 1.fr. 4 states that the *praedam, manubias…Cn. Pompei sedente imperatore Xviri vendent*. Clearly in this case, sale was not an issue, as the decemviri would not have sold the cash from a previous sale of *praeda*. So, we must admit that between these sources, some irreconcilable differences arise concerning the term's meaning. Either we may exclude one or more definitions as inaccurate in search of the 'true' definition, as was done particularly by Shatzman 1972, or we may seek a more flexible definition, as do Aberson 1994 or Orlin 1997, whose positions I favor.
[698] Important earlier scholarship includes Bona 1960, and particularly Shatzman 1972, who established the field. More agnostic positions include those of Aberson 1994 and especially Orlin 1997; an article by Churchill 1999 admits to flexibility in the term, but still strives to give a unified definition based on the literary evidence in the model of, but arguing against the definition of, Shatzman.
[699] Most recently Holkeskamp 2010 who sees Meier 1966 as foundational in this regard: the dilemma was not, as Mommsen saw it, that Romans had an oral constitution that surfaced only occasionally in written accounts and was waiting to be collected into written form (*StR*). Rather, the absence of a written constitution was more culturally driven and indicative of the gulf in Roman law between procedure, which

For our present concerns, the argument is mostly moot. If these funds were in fact considered in all cases the private possessions of triumphant generals—this was Shatzman's position—the resulting construction projects remained *monumenta publica*.[700] Either way, militarily-acquired monies were directed towards building. Orlin has argued that other funds were applied to the cost of building so-called manubial temples.[701] Considering the expensive and extended process of construction, I would tend to agree. We know detailed reports of three major steps to many temple construction projects—the *votatio*, the *locatio*, and the *dedicatio*.[702] It is clear in many cases that all three steps of this process from vow, to contract, to dedication required funding. This could delay a temple's construction, often for the timespan of generations.[703] There are multiple instances where the same individual continued his attachment to the construction of a temple, which he had originally vowed, during later magistracies. The involvement, for example, of so many censors in dedicating temples that they had vowed as curule magistrates suggests that projects often remained incomplete until the man responsible for vowing them could achieve another position that allowed him access to public funds.[704] In such cases, it would be difficult to argue that an initial fraction of the spoils of a single campaign sufficed to pay for the entire construction of a monument. Rather than argue over the technical nature of *manubiae*, which may have only sufficed to initiate construction, it would serve our purposes instead

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was debated as if there were certain norms, and practice, which formed from the *ad hoc* application of interpretation of custom (*mos maiorum*).

[700] Shatzman 1972; the argument of Churchill 1999 that *manubiae* were not inheritable speaks against this.
[701] Orlin 1997: 127-39.
[702] Detailed discussion of these steps in Ziolkowski 1992 and Orlin 1997.
[703] This is best exemplified by the Temple of Quirinus, vowed in 325 and completed by the vower's son in 293. The Temple of Mars Ultor in the Forum Augustus took 40 years to go from vow to dedication, so this phenomenon was by no means restricted to the earlier periods of the city.
[704] Cf. examples at tb. 4.3.

to consider *why* generals attached themselves to the building process—only then can we understand how *manubiae* may have played a role.

All of our evidence that *manubiae* were applied to building costs in the earlier part of the Republic is of a later date. In a passage discussed at length in Ch. 2, Livy reported that in 293 B.C. the consul Sp. Carvilius Maximus built the *aedem Fortis Fortunae de manubiis* (Liv. 10.46.14). In the same year, Livy describes the other consul, L. Papirius Cursor, as dedicating the Temple to Quirinus adorned with the spoils of the enemy (10.46.8: *dedicavit exornavitque hostium spoliis*), a much more deliberate description of the process which applied spoils to architecture. Livy also notes in that passage that he has trouble finding information on the Temple of Quirinus in his sources. Does this mean to the contrary that he *had* documentary evidence of Carvilius' dedication, and that his formulaic mention of *aedem de manubiae* in 293 stems from some archival source? I have argued in Ch. 2 that this is not impossible, although Orlin is skeptical.[705] Still, there is very little contemporary and especially documentary evidence for manubial construction in the earlier part of the Republic. The phrase *de manubiis* does not have an early epigraphic record: most examples are late Republican,[706] and the only inscription mentioning manubial construction dating from the 2nd century refers to a wall, not a temple.[707]

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[705] 1997: 127, he points out that Carvilius' temple is the only one of nine in the decade to be specified as manubial despite the great victory at Sentinum.

[706] *Aedem de manubiis* is seen twice in the *Res Gestae*, and earlier on the *tituli* of Marius (*CIL* XI 1831) and L. Munatius Plancus (*CIL* VI 1316= X 6087). A round marble base, presumably for a statue, records the dedication of Cn. Domitius M.f. Calvinus *de manubiis*, but lacking an accusative object the dedication was more likely whatever sat on the base rather than any temple (*CIL* VI 1301 with 31592).

[707] CIL I² 635 firmly dated to 135 B.C., the earliest inscription containing the phrase *de manubiis* of which I know.

Instead, the link between war income and construction appears much more organic in our earliest evidence. This is best exemplified by the coupled mention of both triumph and construction in the *elogium* on the sarcophagus of L. Cornelius L.f. Scipio from the Tomb of the Scipiones: *Hec cepet Corsica Aleriaque urbe / dedet Tempestatibus aide mereto(d).*[708] Scipio's victory was in 259; the Latin text here is probably not later than 200, though it may very well reflect an earlier document.[709] There is no mention of *praeda*, *manubiae*, or any other class of spoils, but the coupling of two acts—military success and public construction—make the connection plain.

Even in Rome's pre-monetized or monetizing economy, war spoils often went towards adorning architecture, and display of captured arms or shields affixed to structures had wider Greco-Roman precedent.[710] Aberson has argued elegantly for the origins of Roman practice within this context. In its original and archaic conception, this relationship between precious objects and sacred spaces for the gods was simple to conceive because the structures themselves were not particularly complicated: "Il pouvait s'agir de simples cabanes, et les bras des members de la gens devaient suffire à leur construction." That is, when temples were less grand structures, architecture was a by-product of the process of dedicating spoliated objects to the gods—the simple and easily erected huts formed a sort of frame on which to hang or display captured material.[711]

Aberson goes on to relate this practice to the evolving conception of *manubiae* as follows: *manubiae*, which had its etymological origins in *manus + habere*, was related in

[708] *CIL* VI 1286-87 = *ILS* 3.
[709] See Zevi in *LTUR* IV "Sepulcrum (Corneliorum) Scipionum" 284-85 as well as my entry on "259: *Aedes, Tempestas* or *Tempestatas*" in the catalog.
[710] Rawson 1990; several articles in Dillon and Welch, ed. 2006 discuss this phenomenon, cf. there the contribution of Hölscher 30-31 for the earlier Greek precedents to Roman practice.
[711] Aberson 1994: 85-101, the quotation is from p. 100.

its technical sense to those spoils of war that were able to be seized and were non-perishable—thus in the earliest *gens*-based society of archaic Latium, that meant precious and especially metallic goods, rather than wealth in the form of grain, cattle, and slaves. Relating this to the Homeric concept of λάφυρα, he argues that a portion of the spoils normally went to the *gens* chief, and that chief could be obliged through custom (*mos maiorum*) to dedicate those spoils to his supporting deity as part of a temple. In this way, we can recognize a long-standing and archaic custom of applying certain types of war spoils towards religious architecture, and as Aberson argues, this can easily be seen to have evolved into the process of targeting incoming spoils of war for the construction of public temples.

Such an evolution, however, does not fully account for the demand for public monuments in the Middle Republic when temples were no longer "*simples cabanes*." Nor does it sufficiently explain the rising rhetoric that began to surround such monumental construction in the second century. I can illustrate this shift by comparing L. Cornelius Scipio's *elogium* cited above to an inscription on the Temple of the Lares Permarini dedicated by M. Aemilius Lepidus in 179. The inscription is lost to us, but Livy quotes from a text (40.52.5-6), which he claims hung over the doors of the temple (*supra valva templi*):[712]

> *duello magno dirimendo, regibus subigendis, + caput patrandae pacis haec pugna exeunti L. Aemilio M. Aemilii filio + auspicio imperio felicitate ductuque eius inter Ephesum Samu<m> Ch<i>umque, inspectante eopse Antiocho, exercitu omni, equitatu elephantisque, classis regis Antiochi antehac inuicta fusa contusa fugataque est, ibique eo die naues longae cum omnibus sociis captae quadraginta duae. ea pugna pugnata rex Antiochus regnumque <…> eius rei ergo aedem Laribus permarinis uouit.*

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[712] I print the edition of Briscoe's Teubner 291. The passage, coming towards the end of the entire extant manuscript, is highly corrupt in several places, and there is extreme variance from edition to edition, although the general sense of the passage is the same.

For the purpose of ending this great war, of conquering kings, and of achieving piece, with L. Aemilius son of M. Aemilius setting out for this battle…by auspices, by command, by good fortune, and by his leadership, with Antiochos himself looking on, by means of the entire army, the cavalry, and elephants, the royal fleet of Antiochos, before that time unconquered, was shattered, battered, and scattered. And there on that day, 42 long ships were captured with all their crews, and when the fight was fought, King Antiochos and his kingdom…thereupon for this matter, he vowed a temple to the Lares Permarini.

Here there is an intense focus on advertising the military skills of Aemilius Lepidus. Note that his success comes by *auspicio imperio felicitate **ductuque eius***—the emphasis here is my own but is not lost in the Latin itself through the asyndeton contrasted with the final conjunctive -*que*. Dedicating a temple out of *mos maiorum* would by definition not be exceptional; instead, Aemilius Lepidus focuses on those exceptional qualities to his dedicatory act as part of his military achievements. Instead of the more prosaic *elogium* of L. Cornelius Scipio, this verbose type of dedicatory inscription becomes the rule rather than exception as the Republic continues.[713]

It is important to note that this public monument in this way and at this moment served a strongly personal goal.[714] Aberson picks up on this, and notes that many public temples can be attributed in their various construction phases to either a similar figure holding different magistracies, or to members of the same *gens* as the magistrate who initially vowed the temple.[715] Exceptions prove the rule: the Temple of Iuventas, vowed by M. Livius Salinator in 207 was contracted for by the same man as censor in 204; the temple was not finished until 191 at which point it was dedicated by *IIviri*, but only because it seems that the elder Salinator had died and his homonymous son was out of

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[713] As for example in the dedicatory inscription to Hercules Victor by L. Mummius *CIL* I^2 626, where action happens *duct*(*u*) *auspicio imperioque eius*. See further Aberson 1994: 33-38.

[714] It would be wrong to call it a "private" goal. Although we may speak of "private ambitions" the arena in which a Roman noble expressed those personal ambitions was very public.

[715] 1994: 134.

Rome, commanding the navy in the east.[716] Aberson mentions several similar cases and notes that in all situations where the dedicator is different from but related to the vower of a temple, we never hear more of the vower and can safely presume that he had died.[717]

This growing personal (or, as Ziolkowski says, "individual") quality to public monuments as expressed through triumphal building had much to do with a rising demand for public architecture in the second century. The Republican political landscape was becoming increasingly competitive in the early second century when individual magistracies meant the prospect of increasingly lucrative commands, and several scholars have seen the first decades of the century as marked by the rise of personal ambitions in the political arena.[718] In Rome, monuments became a viable tool of self-aggrandizement, a way of making manifest the *gloria* of individual generals in military campaigns.[719] Returning to the question of *manubiae*, if *manubiae* could have been construed as that part of the spoils controlled or even owned by a general,[720] then the rise of the practice of manubial construction especially in the later Republic made the publically financed temple construction appear all the more individual.

This change in the structure of demand may have resulted from increasing competition for public office and fierce competition among the *gentes*, but it may also

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[716] Temple of Iuventas: catalog no. 88.
[717] 1994: 125-26; see details in my catalog entries for Honos and Virtus (no. 72), Venus Erucina (no. 64), and Pietas (no. 94).
[718] Patterson 2000 gives an overview. Brunt 1988 43-44 points to the *lex Villia annalis* of 180 as legislating against just such rising personal ambitions. Also indicative of the increasingly competitive environment was the trial against Scipio in 187 and the historical tradition surrounding it, e.g. Liv. 39.6.8 with Feig-Vishnia 1996: 165; more recently, see Morstein-Marx and Rosenstein 2006: 634, as well as Flower 2010: 61-79 who also views the *lex Villia* as indicating the opening of a new historical phase.
[719] Gloria: Harris 1979: 17-27; Orlin 1997: 70 argues that temples may have been the most efficacious way to preserve long-term *gloria*, whereas *ludi* instead provided instantaneous but short-term effect.
[720] This definition was at least part of the ancient debate on the valence of the word *manubia*, as see Ps.-Asc. on Cic. *Verr.* 2.1.154: *manubiae autem sunt praeda imperatoris pro portione de hostibus capta*.

have had a model from which to work. It is in this period that Rome came into contact

with the Hellenistic kingdoms of the east, not only in terms of trade and economic

connections that had previously existed, but diplomatically in terms of personal contact

between Roman magistrates and Hellenistic dynasts. M. Aemilius Lepidus, for example,

was himself part of an embassy to the Ptolemaic court in Alexandria in 201; the trip also

brought him to Athens, Pergamon, and Rhodes.[721] In the east, Romans encountered a

world of royal capitals such as Alexandria, Pergamon, Antioch on the Orontes, and

Rhodes, all of them adorned with impressive and monumental architecture. This

architecture was a product of martial society governed in part by the spear-won principle

of military conquest. There was a symbiotic relationship in these Hellenistic capitals

between grand architecture and military conquest, as several historians have commented

upon.[722] Bringmann suggests that royal liberality (εὐεργεσία), the act of distributing

wealth in part by granting monuments to men and gods in the hope of gaining good will

(εὔνοια) from the king's subjects, was an aspect that separated Hellenistic rule from

other forms of kingship, and this behavior placed building into the greater category of

euergetism and of a ruler's beneficent relationship with his subjects.[723] Take, for

example, the description of the Seleukid dynast Antiochos IV Epiphanes given to us by

Polybius: Polybius' characterization of him is primarily focused on his eccentric personal

habits and is thus predominantly negative. However, the one positive characteristic

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[721] Sources in Broughton *MRR* I 321.
[722] Overview from the literary sources at Rostovtzeff 1953: vol. II 1230-38 §Building and Military Industries. More recent bibliography at Aperghis 2004: 207-10.
[723] Bringmann 2000: 205.

offered as balance to his negative aspects is his status as a builder of public monuments.[724]

As a competitive world of vying rulers who could promote their legitimacy through major public monuments, the Hellenistic East furnished certain parallel forms of behavior similar enough to be mapped onto Roman practice. We find, for example, an inscribed architrave of some unidentifiable smaller monument from the area of the Dionysios sanctuary at Pergamon that reads,[725]

> Βασιλεὺς Εὐμένης ἀπὸ] τῶ[ν γενομένων ἐκ τ]ῆς στρατείας λαφύρων
> Ἣν ἐστρατεύσατο μετὰ Ῥωμαί]ων κ[αὶ τῶ]ν ἄλ[λων] σ[υ]μμάχων ἐπὶ Νάβιν τὸν
>   Λάκωνα,
> καταστρεψάμενον τοὺς Ἀργε]ίου[ς καὶ] Με[σ]σ[η]νί[ου]ς, ἀ[π]αρχὴν Ἀθεναῖ
>   Νικηφόρωι
>
> King Eumenes dedicated [this] to Athena Nikeforos, from the spoils arising from the war, which he fought along with the Romans and the other allies against Nabis the Spartan, having defeated the Argives and the Messineans.

The account of the war here is less detailed and the resulting monument smaller than Aemilius Lepidus' dedication of the Temple of Lares Permarini, but the historical account of the military success that led directly to Eumenes' financing of this monument communicates a direct link of spoils-into-architecture not unlike that in second century Rome.

Such Hellenistic practice is germane to our discussion of Rome's demand for public architecture, but it did not serve as an exact model. This is not a question of 'influence' or 'Hellenization,' concepts that flatten what are much more complex processes of cultural exchange. Roman triumphant generals were now participating in a

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[724] Polyb. 26.1; the same sentiment at Liv. 41.20, who is likely following Polybius. Antiochos IV is a good example to focus on not only because of these two explicit references to building, but because of the links to the Roman builder Cossutius both in Athens and in Antioch, as see Rawson 1975.

[725] *Insc. Perg.* 60. For the events behind the inscription, the war against the Spartan tyrant Nabis (195) after the conclusion of the Second Macedonian War, see those sources collected by the edd. of *Insc. Perg.* as well as Broughton *MRR* I 341 §T. Quinctius Flamininus.

greater global phenomenon, but the product remained expressly Roman: this is particularly true, as I shall discuss shortly, in new but totally Roman architectural forms such as the arch that developed in this same period. There are also differences between Hellenistic dynasts and Rome's rotating magistrates, or between Hellenistic construction throughout a kingdom as compared to the focus here on Rome itself.[726]

Instead, what I argue for by raising similarities with the behavior of Hellenistic kings is that, in the early second century, demand for public architecture at Rome as it related to military conquest was a phenomenon undergoing change produced in part by the interlay of external (Hellenistic) models onto existing local (archaic/gentilician) practice.[727] While not identical, the *euergesia/eunoia* and *manubiae/gloria* relationships were close enough that the latter could be productively aligned with the former. To return to the evidence from which we began, this helps to explain the shift from the elogium of L. Cornelius Scipio with an organic but unstated relationship between conquest and war, to the fuller and more grandiose text of M. Aemilius Lepidus at the Temple of the Lares Permarini.

To sum up, in the first half of the second century, we can see that Roman elites were helping to marry an old custom to new purposes—in this case, a fine line between the tradition of *mos maiorum* and the seemingly contradictory promotion of exceptionalism was found in public monuments that promoted personal achievements. The usefulness of public architecture in such a way led to great demand for such

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[726] Although in the early second century it also became increasingly common for the censor to involve himself in construction in Italian *coloniae.*

[727] This belongs to a greater cultural trend of similar direction in Latium, of which the site of Lavinium is probably our best evidence: there, a *heroon* or tomb site of an archaic date was easily linked to a later legend of Aeneas, and the entire site with an early Iron-age valence of hero-worship developed a larger connection to the mythology of the greater Greek world after the fall of Troy. A summary of scholarship on Lavinium in Cornell 1995: 66ff.

monuments from those Romans who had gained high magistracies and the consequent

financial wherewithal to promote public building projects.

Sources of Demand II: The Censor and Sarta Tecta

The demand for buildings by triumphant generals by-and-large promoted construction *ex*

novo. Of course, a building once built required maintenance, so a by-product of the

societal demand for public architecture was the secondary production of high demand for

upkeep of that new architecture. Climactic or other external factors produced such

demand: floods and fires were common in the Republican city (tab. 4.2).

Table 4.2: Attested catastrophic fires and floods in Middle Republican Rome[728]			
Event	*Date*	*Source*	*Area affected*
Flood	363	Liv. 7.3.2	Circus Maximus
Flood	241	Aug. *De Civ. Dei* 3.18; Oros. 4.11.6.	Aug.: *paene omnia urbis plana* including Forum
Fire	224-21[729]	Liv. *Per.* 19.14	Forum
Flood	215	Liv. 24.9.6	(not specified)
Fire	213	Liv. 24.57.15-16	Forum Boarium
Fire	210	Liv. 26.27.1-10	Forum
Fire	203	Liv. 30.26.5	Aventine (Clivus Publicius)
Flood	203	*ibid.*	(not specified)
Flood	202	Liv. 30.38.10-12	Circus Maximus
Flood	193	Liv. 3f5.8 p.2-3	Area around the Porta Flumentana
Flood	192	Liv. 35.21.5-6	Area around the Porta Flumentana
Fire	192	Liv. 35.40.8	Forum Boarium
Flood	189	Liv. 38.28.4	Campus Martius
Flood	181	Pl. *Num.* 22.4	At the foot of the Janiculum

The table contains only those fires recorded specifically to have damaged architecture; if

we were to consider every time lightning struck a temple in the prodigy lists of Livy or of

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[728] I exclude the *incendium Gallicum* as per the discussion in the second chapter.
[729] Cf. catalog no. 56. Besides the devastating conflagrations in the table, lightening strikes or other seemingly supernatural destructive omens are attested.

Julius Obsequens, the list would grow considerably. Beyond this, however, natural wear

and tear were liable to produce eventual cause for repair.[730]

All of these causes fell under the censors duties for the upkeep of public

monuments. Cicero gives us the full citation of such censorial responsibility: *sarta tecta*

aedium sacrarum locurumque publicorum tueri (*ad fam.* 13.11.1). When and how such

responsibilities devolved upon the censor is difficult to tell. The phrase *sarta tecta* as it

applies to upkeep is already current by Plautus' time[731]; however, it is not attested in any

Republican documentary evidence of which I am aware.[732] Festus affirms the specificity

of the phrase in its relationship to public construction, a connection still felt in his time,

but he is similarly unhelpful as to its earlier development.[733] Mommsen saw this as one

of the earliest censorial responsibilities with the divide between *aedes sacrariae* and *loca*

publica in the censorial formula deriving from the original Romulean division of Roman

territory into *ager privatus*, *publicus*, and *sacer*.[734] In the same passage of Dionysius of

Halicarnassus cited by Mommsen as evidence of this origin, Romulus also divides the

Roman people into *tribus* and *curiae*, and it seems more likely that the censorial duties of

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[730] The need for repair is implied, e.g., by Augustus' statement in the *Res Gestae* that he did not omit any temples *quod eo tempore refici debebat* (1.20).

[731] The remark in the *Trinummum* from Lysiteles that he has *sarta tecta tua praecepta usque habui mea modestia* (Pl. *Trin.* 317) must be considered a pun on the more official sense of the phrase. A similar use of the phrase is found at Cic. *Ad Fam.* 13.50 = 266 (Loeb) §2: *hoc mihi da atque largire, ut M'. Curum sartum et tectum, ut aiunt, ab omnique incommodo, detrimento, molestia sincerum integrumque conserves*.

[732] *CIL* I² 2093 = XI 6959 = *ILS* 5437 from Luna reads *L. Titinius L.[f.] / Petrin(us) Duo Vir / signa ahenea public(a) / sarsit et reposit et basis / quae derant de suo* (*pecunia*). This is at first an intriguing instance of *sarcio* used for the repair of public monuments by a local official—not a censor. Neither Dessau nor the editors in *CIL* attempts a date, and *CIL* I² prints the inscription in an older and possibly Republican script. However, I think the inscription ought to be Neronian: it was reused in S. Marco in Luna, and other members of the *gens Titinia* are attested in Luna prominently in the late Julio-Claudian period, as see *PIR* VIII.1² T 256.

[733] Fest. Paul. 323 L: *Sarte ponebant pro integre. Ob quam causam opera publica, quae locantur, ut integra praestentur, sarcta tecta vocantur. Etenim sarcire est integrum facere*. Festus seems to suggest here that the verb came from the adjective, but as its original use was as a past participle, this is hard to believe.

[734] Momm. *StR* II³ 451 n. 5 citing Dion. Hal. 2.7 when Romulus also purportedly divided the *populus Romanus* into classes. Suohlati 1966: 65 seems to follow Mommsen here without comment.

the *lustrum* and *sarta tecta* were retroactively placed onto Rome's first king than that

they should have devolved from him. If we can find an origin, I would think that the

oversight of the land-based *lustrum* meant that the censor was subsequently in charge of

tabulating private and public land,[735] and hence logically in charge of the upkeep of

buildings on *ager publicus*. Whether or not this competency related back to the Archaic

period is immaterial, as the tradition surrounding the laying out of the Villa Publica in the

fifth century probably shows that the censors had such responsibility near if not from

their very inception.[736]

Also fundamental in this process was censorial oversight of state-let contracts, the

process of *ultro tributum*; like *sarta tecta*, this too may have ultimately derived from the

lustrum, even if the development is not entirely understandable.[737] As discussed in

previous chapters, the censorial contracting process applied to building contracts

probably originates in the third century and not earlier. By the second century, censorial

contracting was then in a more developed form and appears widespread.[738] In devising

and selling these contracts, the censors appear to have been free as far as the limits of the

budget apportioned to them. External oversight extended as far as the original

dispensation of cash—only a consul and quaestor could withdraw money from the

aerarium—but once that money reached the censors, it was under their charge.[739] The

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[735] Suohlati 1966: 60-61.
[736] The Villa Publica laid out by the first censors in 443, Liv. 4.22.7. I have argued elsewhere following
Richardson 1976a that the Villa at this point was probably little more than designated *ager publicus*.
[737] Varro sees the connection, even if it is not a clear one, *DLL* 6.11: *lustrum nominatum tempus
quiquennale a luendo, id est solvendo, quod quinto quoque anno vectigalia et ultro tributa per censores
persolvebantur.*
[738] Polyb. 6.17.
[739] Suohlati 1966: 65.

Senate could oppose their building projects, but apparently only after they had been

built.[740] In this way, the latitude afforded them as builders was as wide as their budget.[741]

The money dispensed to the censors often amounted to a great deal of ready cash.

In 179, the entire *vectigal* was apportioned to the censorial budget; in 169, we hear that

the censors received half of the *vectigal*.[742] The former may represent the arrangements

of a particularly influential pair of censors,[743] but the latter may be a more customary

division of state funds, though we are not otherwise told how much of the budget was

appointed to the censors.[744] Dionysius of Halicarnassus gives us our only contemporary

figure: citing C. Acilius, he states that the repair of the water system in 184 by the

censors M. Porcius Cato and L. Valerius Flaccus cost 1,000 talents.[745]

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[740] Stories of ineffectual senatorial opposition to censorial building projects surface in relation to Appius Claudius Caecus (e.g. Front. *De Aq.* 1.5 where he extends his position by *tergiversationibus*) and also to M. Porcius Cato, whose Basilica on the Forum met senatorial distaste, Plut. *Cat. Mai.* 19.2. This fact becomes most explicit in 154, when we hear in the *Periochae* that the censors built a theater that was deemed inappropriate by the senators and consequently destroyed (Liv. *Per.* 48.25): *Cum locatum a censoribus theatrum exstrueretur, P. Cornelio Nasica auctore tamquam inutile et nociturum publicis moribus ex S.C. destructum est.* See further Suohlati 1963: 65.

[741] M.' Curius Dentatus forms an exception to this as Frontinus *De Aq.* 1.6 states that in 272 he began work as censor on the Anio Vetus *ex manubiis*, using those finances from his victories in the Pyrrhic War. This is the only time that a generals manubial wealth was specified for his censorship, and it is also of note that manubia here is dedicated to a secular building, rather than a temple. Aberson 1994: 193-98 notes the impressiveness of Curius Dentatus' *praeda* described by Flor. *Epit.* 1.13.25-27 and suggests an intriguing hypothesis: Curius Dentatus could have deposited his *praeda* into the *aerarium* in the expectation that he would be allowed to use it during an upcoming censorship, which he stood a good chance of winning after his success against Pyrrhus. The short time-lapse between the *lustrum* in 275 and the censorship of Curius Dentatus in 272 shows that the latter was formed most likely with the specific intention of allowing the construction of the aqueduct (there was no *lustrum* in 272). By this political maneuvering, Curius Dentatus could use his *manubiae* on a secular work, an aqueduct probably much needed at the time, and do so within the constitutional abilities of the censor.

[742] 179: Liv. 40.46.16; 169: Liv. 44.14.

[743] During his censorship, M. Aemilius Lepidus was able to appoint himself *princeps senatus*.

[744] Frank, *ESAR* I 144 suggests that half the *vectigal* was standard. How much this was in real terms is also unclear: we are not told what the annual *vectigal* was until 62 B.C. when we have a figure of 50,000,000 denarii (Plut. *Pomp.* 45). This is too high; Frank estimates that a tenth was a more appropriate a figure for 179, thus 5 million denarii; this, he thinks, represented a great deal of purchasing power, as he estimates that the Basilica Fulvia, built in that year, would have only cost 12,000 denarii, but see below at n. 760.

[745] A talent was 6,000 drachms, and if Dionysius is equating the drachm to the denarius here, then the cost for the project was 6 million denarii.

This financial latitude meant that the censors, after they had tended to the requisite *sarta tecta*, could effectively invest in new architecture, although we will shortly return to the question of just how *new* this architecture could be.[746] In the first decades of the second century, after the *inopia aerarium* of the Second Punic War was no longer an issue, Roman censors constructed new buildings more and more frequently. Why they did so seems empirically clear: they controlled but did not possess the funds under their discretion and so could not directly profit from their censorship. However, they aimed to use those funds to promote themselves as prominently as possible, and here the same power of architecture employed by triumphal generals comes into play. Remember that censors themselves had more often than not held successful military commands. Of those eighteen censors holding office from the *lustra* of 209-169, we know a full seven who were otherwise responsible for triumphal temples.

	Table 4.3 Censors involved in triumphal construction, 209-169 B.C.	
Year	***Censors***	***Triumphal Aedes***
209	M. Cornelius Cethegus	-
	P. Sempronius Tuditanus	Vows *Fortuna Primigenia* in 204.
204	C. Claudius Nero	-
	M. Livius Salinator	Vows *Iuventas* in 207, *locatio* in cens.
199	P. Aelius Paetus	-
	P. Cornelius Scipio Africanus	-
194	Sex. Aelius Paetus Catus	-
	C. Cornelius Cethegus	Vows *Iuno Sospita* in 197, dedicates it in cens.
189	M. Claudius Marcellus	Dedicates *Honos et Virtus* in 205.
	T. Quinctius Flamininus	-
184	L. Valerius Flaccus	-
	M. Porcius Cato	-
179	M. Aemilius Lepidus	Vows *Diana* and *Iuno Regina* in 187; dedicates those along with *Lares Permarini* in cens
	M. Fulvius Nobilior	Dedicates to *Hercules et Musarum* in cens.
174	Q. Fulvius Flaccus	Vows *Fortuna Equestris* in 173
		-
	A. Postumius Albinus	
169	C. Claudius Pulcher	-
	Ti. Sempronius Gracchus	-

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[746] Mommsen, *StR* II[3] 453 recognizes that the right to build new buildings evolved from that of *sarta tecta*.

Making the connection stronger is the fact that several of them took the opportunity of their censorship either to push through a phase of the construction process of their own former vow or that of a relative, or they took care of the dedication of a formerly vowed manubial temple. In the case of the particularly productive census of 179, we see both events. In this way, censorial construction in these years was affected and effected by the same structural demand shaping the triumphal dedication of public monuments.

Inasmuch as the censors formed part of the Roman office-holding nobility, the senatorial class, they were part of the same competitive environment. However, the censors position extended as far as their budget and their traditional roles under *sarta tecta* would allow, just as triumphators were constrained (if we can call it such) toward those edifices resulting from vows to deities on the battlefield in keeping with *mos maiorum*. This meant that "new" structures built by the censors in these years were new, but only insofar as they augmented already existing structures. Previously, the censors had leeway to build new infrastructural projects—mostly roads and aqueducts—but the need for these was punctuated: such projects were not normally undertaken in every census. In the case of Rome's second two aqueducts, it appears from our sources that they were built reactively rather than proactively, and it is doubtful that an option for new construction work on this scale was available to any censor.[747] Instead, censors of the second century built and attached their names to "new" structures only in relation to their

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[747] Ap. Claudius Caecus' projects represent an early exception, but in the cases of the next two aqueducts, it is clear that they were brought about by extreme need for new or restored water sources at Rome. In the case of the Anio Vetus in 272, the censors of that year were elected after a short period of three years following the last *lustrum* in 275; they did not take the *lustrum* in 272, but another more normal censorial college was formed in 269 for that purpose, and for this reason the census board of 272 appears to have been brought about specifically and irregularly for the purpose of building the Anio Vetus, something that Suohlati has noted, 1963: 261. In the case of the next aqueduct, the Aqua Marcia of 144, Frontinus *De Aq.* 1.7 makes it clear that it was direly needed at the time due to the poor condition of the previous two aqueducts as well as illegal diversion of water from them, and the rising urban population.

ability to restore older public monuments—*basilicae* such as the Porcia, Fulvia, and Sempronia along the sides of the Forum, *porticus* like the Porticus Aemilia along streets and promenades, and stone versions of wooden bridges such as the Pons Aemilia. Just how important this phenomenon was to the shape of the Middle Republican city will be discussed shortly.

In sum, we can see in the role of the censors a change-over-time in demand through the course of the Middle Republic not unlike the changing demand behind triumphal monuments. The old role of *sarta tecta*, of the upkeep of public monuments, was expanded on by the censors of the era following the Second Punic War so that they could effectively promote their own ambitions through programmatic building projects. This pattern was not without precedent: in particular, the censorship of C. Maenius saw an expansive attachment to several Roman monuments, and lacking Livy's text after 293, we probably are unaware of several other such instances.[748] However, over the course of the second century, this practice became more frequent and more visible in new construction by censors and other non-curule magistrates. In 114/3, the first Roman coin was minted bearing an image of architecture on its reverse, a *denarius* by the moneyer Mn. Aemilius Lepidus (fig. 4.1). Its reverse depicts three vaulted arches under an equestrian statue with *L E P* in each arch with *AEMILIO* in the field: whether this was an aqueduct or, more likely, a bridge, the reference is to a censorial monument built by the moneyer's ancestor, M. Aemilius Lepidus in his censorship of 179.[749] Censorial public construction continued to be ready material for personal promotion.

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[748] Maenian public works described at catalog nos. 12-16.

[749] Crawford in *RRC* I 305-6 follows Stuart 1945 in identifying the building as an aqueduct. We have no evidence that the censors of 179 built an aqueduct: rather, we only hear that their project to build an

Figure 4.1: *RRC* 291 minted in Rome in 114/13 by Mn. Aemilius Lep(idus). From www.coinarchives.com.

Sources of Demand III: Aediles and the Senate

Triumphant generals and censors formed the two largest sources of demand for public architecture during this period; demand arising from other sources either behaved in a similar manner to what has just been outlined or was highly sporadic in nature. In the former category falls aedilician construction, which comes to some prominence in this period, but probably because it formed a parallel alternative to censorial building. In Cicero's time, the office of the aedile could be summarized as *curatores urbis annonae ludorumque sollemnium* (*Leg.* 3.7); the Caesarian *lex Iulia de municipalibus* defines their role as those magistrates *qui vieis loceisque publiceis urbis Romae propriusve urbei*

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aqueduct was successfully blocked. I cannot see this as the start of the Aqua Marcia *pace* Crawford, as Front. *de Aq.* 1.7 suggests instead that the Aqua Marcia was begun in 144 because of the very lack of any attention towards Rome's water supply for 128 years. I am more inclined to view this as the Pons Aemilia, as does Coarelli 1988: 143-44. The similar denarius, that of the moneyer Philippus struck in 56 (*RRC* 425), depicts an equestrian statue above a five-arched structure, which is labeled in the arches "AQUAMRC" or on some dies "AQUAMARC." The architecture of a bridge and of the arches of an aqueduct may look similar, but as the latter case is identified as an aqueduct, there is little reason to assume the earlier example, not specified as such, was in actuality also meant to depict the start of some otherwise unknown aqueduct.

Romae passus M purgandeis praerunt.[750] Cicero elsewhere speaks of his duties during

his own aedileship in 69: *mihi sacrarum aedium procurationem, mihi totam urbem*

tuendam esse commissam.[751] Varro, who notes an aedile as *procuratio* of the Temple of

Tellus, also confirms that aedilician duties extended beyond roads to the upkeep of public

temples (*R.R.* 1.2.2). In all the later Republican evidence, then, there is definite overlap

here between aedilician *totam urbem tuendam* and censorial *sarta tecta…tueri*. Was

there any earlier distinction?

In *Staatsrecht*, Mommsen presents an interesting thesis as to how such duties

developed from the earlier period of the Republic: originally, the aedileship was a

plebeian office intended to aid the tribune as the quaestorship served the consul. In this

capacity, aediles oversaw those public works whose construction or whose upkeep relied

on corvée plebeian labor (*Frohnarbeit*) in the early Republic.[752] Certain types of

structures that made more frequent use of this type of labor source, such as paving and

street maintenance in Mommsen's view, thus came to be overseen by aediles as an

indication of their original competency.[753] In particular, Mommsen turned to the position

of the aedile in certain passages of the Urso Charter, the Caesarian-era *Lex coloniae*

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[750] This lengthy title comes from the *Tabula Heracleensis*, full citation at Crawford *et al.* 1996 *RS* I n. 24 ll. 50-51; see also *StR* II³ 505 n. 1. For all the talk of the concept of a suburb as a modern one, does this phrase not seem to indicate a definite suburban boundary beyond the wall?

[751] *Verr.* II.5.14

[752] He saw early evidence for this in Livy's mention of the aediles' function as such in the rebuilding of Rome after the *incendium Gallicum*: while we might prefer better evidence than this especially in light of the discussion of Livy's text in Ch. 1, his later evidence, discussed in following, is more promising, but to this regard the role of the censors in the wall corvée at Liv. 6.32, discussed in Ch. 1, is confusing. If anything, this is further evidence that Livy's knowledge of pertinent magistrates and details from the 5th and 4th centuries is not always historically sound.

[753] *StR* II³ 477-79, 489: as opposed to early mentions of aedilician involvement in the *annona* or in policing, which Mommsen saw as anachronistic retrojections, the building-oversight was held by him as authentically ancient. From the frontage-arrangements seen not uncommonly in street maintenance even in the Middle Republican period (e.g. Cato *De Agr.* 2.4 as well as the *viasei et vicani* in the *Lex Agraria*), Mommsen's idea that streets were always the responsibility of the plebs has merit.

genetivae, which described the authority of the aedile over public works *munitiones* decreed by the *Decemviri*.[754] Following another Caesarian-era inscription, the *Lex Iulia de municipalibus*, he noted that the aediles had longstanding oversight over streets, and that typical regulation of street maintenance by those with fronting properties seen in later evidence meant that the aediles could have easily expanded their authority, originally related to works built by corvée, to those buildings adjacent to such works— typically those temples or porticoes located along on public streets.[755]

Mommsen's thesis is attractive and would help to explain the seemingly overlapping authority over public works by the censor and by the aedile as originating from two initially different sources. He would also be supported by an initially antagonistic thread to our historical examples of aedilician oversight in the earlier parts of the Middle Republic: the notorious episode of the plebeian Cn. Flavius attempting to build the Temple of Concord in 304 but being thwarted by an angry senate is a good example.[756] Along with Flavius' temple, whether or not it was actually built, we can cite twelve attested examples of aedilician construction from our period (tb. 4.4).

Table 4.4 Middle Republican Public Construction Involving Aediles

Date	Magistrate	Monument
304	Cn. Flavius (Plebeian)	*Aedicula of Concord*
296	Cn. and Q. Ogulnius (Curule)	Street-paving
294	L. Postumius Megellus (Curule)[757]	Temple of Victory
291	Q. Fabius Maximus Gurges (Curule)[758]	Temple of Venus Obsequens
238	L. and M. Publicius (Plebeian)	Street paving
238	L. and M. Publicius (Plebeian)	Temple of Flora
238	C. Fundanius and Ti. Sempronius Gracchus (Plebeian)	Temple of Libertas
194	Cn. Domitius Ahenobarbus and C. Scribonius Curio (Plebeian)	Temple of Faunus
193	M. Aemilius Lepidus and L. Aemilius Paulus (Curule)	Porticus
193	M. Aemilius Lepidus and L. Aemilius Paulus (Curule)	Porticus

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[754] *StR* II[3] 478 nn. 2-3. The inscription's text has been cited above at p. 79.
[755] *StR* II[3] 505-7.
[756] See catalog no. 20.
[757] Ziolkowski especially has doubted this aedileship; for more on the temple see below at catalog no. 26.
[758] Another tradition holds this as a consular vow, see catalog no. 30.

The prevalence of temples in this list should not necessarily detract from Mommsen's

theory, as temples fronted public streets without exception, and in some case street and

temple projects appear topographically linked, as for example the Clivus Publicius and

the Temple of Flora on the Aventine.[759]

What the list in table 4.4 would suggest is that any evolution of the aedile's

position vis-à-vis *curator urbis* happened very early. The plebeian character of the office

is emphasized by the actions of Cn. Fulvius in 304 and remains apparent in the aedileship

of the Publicii in 238, when the aediles built a temple and a street on the Aventine.

However, already by the third century we know both plebeian and curule aediles

repairing streets, and we can no longer see this as simply a plebeian prerogative derived

from *munitiones*. Furthermore, in his list of censorial building projects in 174, Livy

attributes a street-work project in the *urbs* to the censors, and so there is by that point a

high degree of overlap between those duties of the censor and those of the aedile by the

Middle Republic.[760] It is just this overlap that underlies modern confusion over the

identity of the aediles who restored the Temple of Apollo Medicus in the early second

century: the pertinent inscribed mosaic floor is broken before where their names would

be found. Nonetheless, while the inscription still clearly states *aidiles curules*, more than

one scholar has proposed attributing the repair project instead to the censors of 179.[761]

In the fourth-through-second centuries, if something distinguished between

aedilician and censorial oversight of public monuments, it rested in the allocation of

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[759] See catalog nos. 52-53.
[760] For this censorial streetwork, see catalog no. 110.
[761] *CIL* I² 2675c = *ILRRP* 45. Further discussion of this debate with citations at catalog no. 107.

income from which they could draw rather than the scope of their duty. While the censors were allotted part of the year's *vectigal* by the senate, the aediles could not rely on senatorially dispensed money. In the case of Cn. Flavius, his appeal for money from the *aerarium* was denied by the senate, and he turned instead to another source: fines.[762] Eleven of the twelve examples cited in table 4.4 are specified in our sources as having been paid by money raised through fines. This includes the inscribed mosaic floor from the Temple of Apollo Medicus, which contains the archaic ablative *moltaticod*, giving documentary evidence to this relationship by the early second century.[763]

The fines collected by the aediles did not rival in magnitude the full *vectigal* available to the censors of 179, but they still sufficed in many cases to undertake public construction.[764] This probably points to the real difference between aedilician and censorial oversight as well as the need for the former in the face of the latter: the censors were accorded more money but only every five years, and their 18 month term could be insufficient even to complete their targeted projects.[765] This being the case, an annual office of aedile to watch over the city's monuments becomes a necessary supplement. By drawing their resources from fines that they themselves imposed, the aediles were able to operate more regularly and almost self-sufficiently as far as the *aerarium* was concerned, albeit on a smaller scale.

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[762] Plin. *NH* 33.19: *cum ad id pecunia publice non decerneretur, ex multaticia faeneratoribus condemnatis aediculam aerea fecit.*

[763] *CIL* I^2 2675c = *ILRRP* 45. Only the Temple of Venus Obsequens (catalog no. 30) does not explicitly mention fines as the source of the construction project, but there is no reason why we should assume that the financing of Venus Obsequens was different.

[764] Amounts are rarely given, although we often here of the sources for the fines; the Temple of Libertas resulted from a fine of 25,000 *asses*, Aul. Gell. 10.6.5. We do not know of any other aedilician projects in this year: was this roughly the cost for the temple?

[765] For example with the building projects of Appius Claudius Caecus, where the censor was forced to prolong his office, or with the Anio Vetus when the censor Papirius Praetextatus died in office, and the senate arranged for a board of *IIviri* to complete the task.

The typical source of fines was illegal land encroachment, a topic that surfaces so often in our historical sources that it seems low-hanging fruit for an aedile seeking funding.[766] This meant that by the second century at least but probably earlier, control over the collection of fines allowed the aedile a certain degree of financial latitude in his duties in the city. The openness of the magistracy to the plebs was less important at that point: the censorship had been opened in 351, and the Licinio Sextian laws created curule aedileships for the patricians. The aedileship, as a low position in the *cursus* and as an annually elected magistrate, was more easily attainable, and magistrates who obtained an aedileship were keen to use their position to further advantage.[767] Given his financial and administrative ability to expand his position *curator urbis*, the aedile's interest in building public architecture is logical and could bring positive results; in our period, three of the five temples that had been started (always *faciendam curavit*) by an aedile with recovered fines were dedicated by the same man during a later consulship.[768] These aedilician monuments could represent an individual's *gloria* much as any other monument.[769] After his victory at Beneventum in 214, Ti. Sempronius Gracchus placed a triumphal painting in the same Temple of Libertas on the Aventine that his father had built *ex multaticia pecunia* 24 years prior: the aedilician construction remained a touchstone for the ambitions of the *gens Sempronia*.[770] In this way, aedilician construction was privy to the same structure of demand as other building projects.

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[766] Examples include those cited at Liv. 10.33.9, 10.47.4, and 33.42.10.
[767] After the *Lex Villia annalis* of 180, it is argued that the entry-age was 36 as Astin 1958: 32.
[768] The Temple of Victory dedicated in 294 (catalog no. 26); the Temple of Venus Obsequens in 291 (catalog no. 30); and the Temple of Libertas in 238 (catalog no. 54).
[769] Besides architecture, the aedilician oversight of *ludi* deserves to be considered in this light.
[770] Liv. 24.16.19.

The senate is the final source for public construction in our period.[771] In a way, their powers were interjected into the domain of the triumphator, himself a member of their rank. They possessed the important ability to create *IIviri* to complete a languishing temple project when the original vower or members of his *gens* was no longer available due to death or other extenuating circumstances. In this capacity, however, the senate did not create new construction in and of itself, but only perpetuated projects that had been started by other means.

The senate's ability to generate public construction was in the rare case of extraordinary emergency. We have four clear examples in this entire period, those temples dedicated to Aesculapius, two dedicated in the aftermath of the defeat at Lake Trasimene, and that dedicated to Magna Mater towards the end of the Second Punic War:[772]

1. Aesculapius.[773] A plague in Rome in 293 led to the consultation of the oracular books; in the following year, a board of *Decemviri* were formed *ex senatus consultum* to transfer a cult statue of the healing god from Epidauros to Rome, although the details of the construction of the temple itself are not known.

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[771] On the role of the senate in construction by triumphant generals, see Ziolkowski 1992: 235; *contra* Orlin 1997: 4-5

[772] This topic is discussed at length by Orlin 1997: Ch. 3. Earlier examples include temples to Ceres, Liber, and Libera in 493, and that to Apollo Medicus in 453. Orlin discusses three other examples from our period, which I consider less clear cut. 1) the Temple of Flora (catalog no. 53): Pliny says that the *Floralia* were instituted following a plague, and Orlin *loc. cit.* argues that Flora was a similar case, but as the funding appears to have been provided through a more typical route (aedlilician fines), I do not regard it in this category. 2) The Temple of Summanus may very well have been related to a plague in 276 as Ziolkowski has argued (1992: 154-55), but there is too little evidence to state this with confidence, and we simply have the note of a plague and, independently, of the temple dedicated around the same period. 3) Finally, the problematic issue of a precedent to the Sullan Temple of Hercules Custos prompts many scholars to regard the temple as a product of the consultation of the Sybilline books in the third century lacuna in Livy's text (sources in Petruccioli "Hercules Magnus Custos" in Haselberger *et al.* 2002: 137); Ov. *Fast.* 6.209-12 still proves to my mind that Sulla was responsible for the structure.

[773] Catalog no. 31.

2. and 3. Mens and Venus Erucyna.[774] The Second Punic War cases are better

documented. After the Battle of Lake Trasimene in 217 when Hannibal had

destroyed the armies of both consuls, killing one of them, the senate appointed

decemviri to consult the oracular books. The books prescribed that whoever held

highest authority at Rome should vow two temples, one to Mens and one to Venus

Erucyna, and both temples were built within two years. Two imperium-holding

officers were responsible for the actual vows in 217: the dictator Q. Fabius Maximus

Verrucosus and the praetor T. Otacilius Crassus, in effect the commanders of Rome's

land and sea forces for much of the early war. But the senate's hand in these temples

is made clear by the fact that both men are seen dedicating the temples two years later

as *IIviri aedes dedicandae*, appointed by the senate despite the fact that both men

were also invested with *imperium ex officio* in the year 215.[775] These temples, then,

could have followed the normal rungs of their vowing magistrates' careers (in fact but

not in law, they did so), but their attachment to the senate was made clear following

their prescription in the oracular books.

4. Magna Mater.[776] The transfer of the black rock from Pessinos to Rome in 205 was in

response to the consultation of the Sybilline books in correspondence with a favorable

oracular pronouncement from Delphi (Liv. 27.10.4-8). Interestingly, it is the censors

M. Livius Salinator and C. Claudius Nero who let the contract for the construction of

the temple itself in 204, but Livy specifies that they did so *ex senatus consulto,* and

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[774] Catalog entries for Mens, no. 63, and Venus Erucina, no. 64.
[775] Fabius was suffect consul, and Otacilius was made propraetor immediately after dedicating the temple, see Broughton *MRR* I 254.
[776] Catalog no. 87.

the movement of the stone is handled by senatorially appointed legates.[777] This is one instance that exemplifies the constitutional flexibility of censorial public construction, and it does not seem that either Salinator or Claudius Nero ever had much personal attachment with the temple. The temple is dedicated 13 years later by M. Iunius Brutus, then the *praetor urbanus*. The role of the senate in this case is less obvious than the fact that the temple with its varied responsible magistrates takes a sort of exceptionally communal nature and never becomes attached to any single individual.

In all four of these examples, we see demand for temples circumventing the sort of personal ambition that can otherwise be seen underneath much activity in this period. While the senate is initially responsible, it often made use of more normative means (*imperium*-holding magistrates or the censor). However, these four examples are by definition exceptional as they all represent reactions to exceptional circumstances. In this way, they relate more toward a more regular series of actions on the part of various priestly colleges to ward off plague, bad prodigies, etc. Most of the time, resolution was obtained via apotropaic offerings or rituals; very infrequently and only in the gravest circumstances listed here did Rome resort to building actual monuments.[778] In other words, the temples were among those pious acts meant to have apotropaic effect: out of *mos maiorium*, they were effected through normal channels as far as possible, but as exceptional circumstances, their impact on the greater scheme of demand would have been negligible.

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[777] Broughton *MRR* I 304.
[778] From our period, e.g., in 180 when a plague then raging for 2 years takes the life of one of the consuls among many others, the books are consulted, and gilded statues to Apollo, Aesculapius, and Salus are set up in the city along with a *biduum valetudinis causa*.

Demand for public construction: conclusions

By and large, then, demand for public architecture was intrinsic with larger social

concerns, especially with the growing competitive environment surrounding magistracies

that were becoming increasingly lucrative in a period of successful conquest. In regard to

this structure of demand, perhaps what individuates the Roman situation most is the fact

that power in Republican society was shared by rotating magistrates: the struggle

between noble *gentes* meant that power of sufficient duration to build a public monument

was not guaranteed. In the vicissitudes of the period, the Aemilii were worthy of note for

their lasting efforts to shape the Middle Republican *urbs*,[779] and equally noteworthy is the

fact that one of the greatest individual figures of the Middle Republic, Scipio Africanus,

never himself dedicated a public monument.[780]

It would be interesting to compare this demand within Roman society to other

historical periods. Did this competitive structure of demand produce more or less

architecture or consume more or less of Rome's annual budget? Unfortunately, to answer

questions like these, one would need a way to quantify both the state's financial position

as well as the cost of construction. During the first half of the second century, we simply

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[779] Wiseman 1993.

[780] Valerius Maximus notices a discrepancy when he remarks that Scipio never triumphed after his Spanish victories much as Marcellus did not receive a triumph after Syracuse. The names of the two men are like great eternal triumphs *quorum ipsa nomina instar aeterni sunt triumphi* 2.8.5. Scipio did build an arch, but not a triumphal arch as it was built *before* he set out for his province (Liv. 37.3.7), and see discussion below in this chapter. However, the elevation of Scipio to the triumphator of triumphatores, and the consequent search for Scipio's arch as a monument of proto-imperial standing in Rome in the medieval and early modern period would be a topic of an interesting study; see, for example, the *Graphia Urbis Romae* in Valentini and Zucchetti III p. 104, where we see Augustus *triumphans…ad imitationem victoriae Scipionis*.

lack the evidence to do this.[781] Even if we had some idea of annual income at least on an

order of magnitude, we encounter great difficulty in arriving at any figure for the cost of

building.[782] Coinage, which has ably been used to do just this in the later part of the

century, is not closely datable before 157.[783] We can simply return once more to

construction's place in the overall annual budget emphasized by Polybius (6.17) and by

Livy (40.46.16, 44.14).

What we *can* detect is a qualitative effect of this high level of demand having a

strong hand in shaping the Roman *urbs*. For the remainder of this chapter, I will examine

how the unique nature of demand for public architecture at Rome helped to create the city

of the Middle Republic as it existed in its later years, that is around the mid-point of the

second century B.C. when Polybius composed his *Histories*. It goes without saying that

Rome in the time of Polybius bore little resemblance to Rome in the time of Camillus,

where this study began. Still, one should not speak of a total transformation: the Rome of

the mid-second century was above all an eclectic landscape. Even in the following

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[781] Similar skepticism towards quantification found in Harris 1979: 68 c*ontra* the efforts of Frank *ESAR* I.
[782] Frank *ESAR* I 153 tries to arrive at a figure of 12,000 denarii for the Basilica Fulvia by estimating the
cost of a slave at 12 *asses* a day (from where he derives this figure is unclear) to cut eight blocks of tuff
(Plaut. *Capt.* 724). But his figures for transport, laying of the stone, and constructing the elevation and roof
are complete guesswork. Also, it has to be noted that this particular building had carved columns of *tufo
giallo della via Tiberina* as well as simple ashlar blocks, so that an extrapolation as such does not follow. I
would add that we know almost nothing about the construction of the superstructure of buildings in this
period, and any notion of costing is impossible.
At very best, I can find only four figures relating to building cost in the mid-second century and they vary
wildly: 1,000 talents spent by Cato to restore Rome's waterworks (Dion. Hal. 3.67.5), the sum of 130,000
asses spent by Lucretius Gallus to build an aqueduct from Loracina to his estate in Antium in 170 (Liv.
43.4.7-8), the 180 million HS spent by Marcius Rex on the Aqua Marcia in 144 (Front. *De Aq.* 7.4), and the
possible direct correlation between the fine of 25,000 *asses* levied by the aedile T. Sempronius Gracchus
and the Temple of Libertas built thereafter (cf. catalog no. 54). Unlike the wall discussed in Ch. 2, which
was a repetitive and modular project, censorial building in the third and second centuries was simply too
variable in form and thus cost to make any sensible estimate possible.
[783] Denarii from 211-157 have very similar obverses and reverses; they are arranged only by relative
chronology in Crawford *RRC* (in fact, there is no fixed point in the chronology until 118), and within those
strikes the die counts range from less-than-ten to over one hundred (cf. *RRC* II p. 677), so we are left
without the ability to make the sort of estimates offered by Coarelli 1977 for the Gracchan period.

decades, public monuments were varied in nature: witness, for example, the contrast

between the marble temples that make their appearance at Rome in 146 onward[784] and the

temple on the Via di San Gregorio with its terra cotta pedimental sculpture that ought to

date from around the same time.[785] In 182 B.C., the Macedonian prince Perseus could

still taunt his brother Demetrius, a staunch *philôromaios*, with the fact that Rome was

nondum exornata, not yet urbanized to the extent of the great Hellenistic capitals.[786] The

transition in the Middle Republican city was not a wholesale change, brick to marble, as

with the city of Augustus, but we can sense more organic changes both to architectural

forms and to the *forma urbis* that, it is argued here, were strongly shaped by the particular

structure of demand for public architecture at Republican Rome.

The Result of Demand I: Innovative forms and secular architecture[787]

M.' Curius Dentatus' decision in 272 to use his *manubiae* toward the construction of an

aqueduct, the *Anio Vetus*, represented an important turn.[788] He would not live to see the

aqueduct's completion, and for this reason it was never called the Aqua Curia, but he

seems at least to have recognized that secular architecture could also serve the triumphant

general. Frontinus refers to the aqueduct's *gloria perducendae* (*De Aq*. 1.6): the

individual honor for the construction of a utilitarian public structure. We have seen

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[784] I have recently looked at this phenomenon in Bernard 2010.
[785] Ferrea 2002: 61-69 for the date and possible identification of this temple, whose terra cotta pedimental sculpture is now on display in the Musei Capitolini.
[786] Liv. 40.7.5, see Haselberger 2007: 40-41.
[787] We see triumphant generals personally involved in the groundplan of their monuments, as in the case of M. Claudius Marcellus and the Temple of Honos and Virtus (cf. catalog under the year 205), or in the hiring of architects for their monuments (e.g. Hermodoros of Salamis, see discussion below). I therefore think it reasonable to assume an agency to the vowing magistrate in the decision-making process about sighting and architectural form. I will say, however, that such a relationship is almost always assumed in literature without much regard for the evidence.
[788] Aberson 1994: 193-98.

above how the censors of the second century built utilitarian works that promoted their *gloria*. What is interesting to consider in this sense is the expansion of architectural forms to meet the needs of a changing competitive demand.

An aqueduct was a rare project especially in this period, when only two were built. However, we see other non-temple architecture developing as well. The triumphant general was the first to participate in such innovation: just before Curius Dentatus, C. Maenius' *Rostra* in the late fourth century already had set a precedent for the use of military spoils in secular public monuments.[789] The *rostra* are never specifically mentioned as *manubiae*, though Varro does describe them as *ex hostibus capta* (*DLL* 5.155). Similarly, two generals who triumphed during the First Punic War built columns instead of or along with their triumphal temples and adorned them with *rostra* in imitation of Maenius' own *Columna Maeniana*.[790] These innovations of the third century would become all the more marked in the early second when, in particular, three new and notably secular forms of architecture appear in Rome in the opening decades of the century: the *fornix*, the *porticus*, and the *basilica*. All three were innovations closely connected to the triumphator and the censor and to their need for public monuments that promoted their individual *gloria*.

1. The Fornix.

Gros has rightly stressed the architectural difference between the *fornices* of the early second century and the *arcus* of the imperial period: the latter were free-standing portals, which Pliny calls *novicio invento* and relates to triumphal columns (*NH* 34.27). By

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[789] Catalog no. 12.

[790] Cf. catalog entries for the *columnae rostratae* of Duillius (no. 42) and M. Aemilius Paullus (no. 45).

contrast, the early *fornices*, four of which appear at Rome for the first time in the early second century, were more likely monumentalizations of existing gateways. They were not freestanding.[791] In this sphere, there are precedents for gateways decorated with war-trophies in the Hellenistic world; in particular, Gros cites Pausanias' description of a gateway into the Athenian Agora decorated with trophies put there after the cavalry defeat of Pleistarchos, brother of Kassander (1.15.1).[792]

In Rome, we have three *fornices* built by L. Stertinius in 196 built *de manubiis* and another *fornix* built by Scipio Africanus in 190 on the Area Capitolina before he departed as a legate to his brother, consul L. Cornelius Scipio Asiaticus. Their exact form is never specified, but they were most likely monumental arcuated entranceways. From a procedural point of view, the origin of these new architectural forms presents great interest as all are related to war-spoils but do not result from triumph *per se*. When Stertinius and Cn. Blasio, coss. of 197, returned from campaigns in Spain, Blasio was only awarded an *ovatio*, and Stertinius seems not even to have sought a triumph in the first place. Stertinius' original command was unusually proconsular by plebiscite, so there may have been some dispute as to the legality of his victory, as Briscoe has argued.[793] That the *fornices* were built *de manubiis*, as Livy specifies, suggests that the general may have tried to circumvent senatorial deliberation.[794] Like the *fornices* of Stertinius, the *fornix Scipionis* visibly displayed Africanus' military success: it was adorned with seven gilded bronze statues, two more of horses, and two large marble urns,

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[791] Gros 1996: 56-57, although he takes as fact from this Coarelli's identification of the *fornices Stertinii* as the *porta triumphalis*, but this is rightly disputed, e.g., by Wiseman 2009.
[792] Gros 1996: 57.
[793] Briscoe 1973 *Comm. ad Liv.* 33.27; for the original command, see Broughton *MRR* I 334;
[794] Aberson 1994: 151-54.

the first explicit use of marble in Roman architecture, even if only ornamentally.[795] Still, it was not even properly a public monument as it was built *before* rather than after the campaigning season. Furthermore, at the time Scipio was a *privatus* and only a *legatus* to his brother. It stands to reason that he was here using wealth from his previous consular campaigns—included in front of his *fornix* were two marble basins that we can presume were taken from an earlier military campaign—although he had not received a triumph in 194, and now in 190 there was no chance that he, as legate, could have even vied for one.[796]

The development of the *fornix* in the early second century at Rome, then, approaches but does not entirely align with triumphal construction. Seeking a monumental alternative to the triumphal temple from which to participate in the display of military success, Stertinius and Scipio Africanus brought a new form to Rome that could in other (namely Hellenistic) contexts be a vehicle for presenting the trophies of war. The *fornix* once generated in Rome moved to the Roman colonies, but again not directly in the guise of triumphal construction. The remains of a triple-bayed *fornix* at Cosa in *opus incertum* with limestone quoins and arches of vuossoirs was built on the Forum c. 175 spanning an entranceway between two buildings.[797] We know nothing of its builder, but the excavators note that, at about the same time, the censors of 174

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[795] Liv. 37.3.7: *signis septem auratis et equis duobus et marmoreal duo labra ante fornicem posuit.* This is the only mention of the arch, although it becomes a touchstone monument for the Republican city in later authors, for example the edition of the *Mirabilia* by Magister Gregory (13th century) mentions the arch in relation to Scipio's defeat of Hannibal, cited at Valentini and Zucchetti *Codice* III §26. It would make an interesting study in the reception of the Mid-Republican city, although little has been written on it other than the topographical dictionaries and Spano 1951; Coarelli 1972 (1996): 208; Orlin 1997: 71-72.

[796] Indisputably, the victory at Magnesia brought wealth to both the cos. L. Cornelius Scipio (who triumphed the next year) and his brother Africanus, as both names show up in dedicatory lists at Delos, see discussion at *I.Delos* II 166ff.

[797] Brown, Richardson, and Richardson, Jr. 1993: 123-28; Gros 1996: 58 dates it to 170-50.

constructed *tris iani* in the fora of Pisaurum, Potentia, and Fundi, which could have been

similar monumental entrance *fornices*.[798] The fact that the *fornix*, which seems to have

originated in the hands of Roman generals, was replicated here by censors highlights its

flexibility as an architectural form in satisfying current sources of demand for public

architecture .

2. The *Porticus*

Semantically, *porticus* is widely ranging in architectural terms: it can extend to any

hypostyle colonnaded structure, from a street arcade, to a monumental square enclosure,

to the columned porch of a temple.[799] It is not so much the origins of the *porticus* itself,

therefore, that interests us here as it is the evolution of that form in the early second

century. Where we catch a glimpse of a defined public space from the third century B.C.,

we already see colonnaded arcades delimiting its edges.[800] In Rome, however, the

construction of *porticus* becomes a main prerogative of the aedile and censor starting in

the very early second century. Four portico projects, all involving multiple porticoes, are

mentioned within the scope of two decades: first, by the curule aediles of 193, again in

192, then by the censors of 179 and of 174.[801] Gros calls this "*le veritable laboratoire

des portiques*." Here, he argues, the form took on a monumental character previously

unseen in Rome but well documented in the diadoch kingdoms of the east—the porticoes

of Attalos or Eumenes at Athens, or of Atigonos Gonatas at Delos come to mind. We do

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[798] Liv. 41.27.13 and Brown, Richardson, and Richardson, Jr. 1993: 128. This seems preferable to the Loeb translation as "three statues of Janus," which makes little contextual sense.

[799] Gros 1996: 95-96.

[800] For example, at Paestum, see Greco and Theodorescu 1987: 17-18. Gros 1996: 97 claims wooden porticoes in the original forum plan at Cosa, but they are not discussed in Brown, Richardson, and Richardson, Jr. 1993.

[801] For citations, see entries under these dates in the catalog.

not have physical evidence of those Roman projects in the early second century, but we do have details of a grand if slightly later example from Pliny: the *porticus Octavia*, begun in 167 B.C. as a triumphal monument was a *porticus duplex* with bronze Corinthian capitals (*NH* 34.13). The once utilitarian form now took on an ideological purpose related to its builder's Greek triumph.[802] This was also the case in the *quadriporticus* built by Metellus Macedonicus (146 B.C.), again *ex manubiis* and surrounding not only a newly built marble temple (visibly a monument of his Greek triumph) but also serving as an architectural frame to the Granikos monument, the famous bronze sculptural group of Lysippos, commissioned by Alexander himself and brought back as a masterpiece of Hellenistic work now housed in a sort of imperialist museum in the lower Campus Martius.[803]

However, even before the *porticus* served such a purpose for the triumphators of the middle century, it already can be seen fulfilling the ideological purposes of the aediles and censors. Those porticoes of the censor M. Fulvius Nobilior in 179 ran in the area near the Temple of Apollo Medicus at the turn of the Circus Flaminius, and another portico connected to the *fanum Herculis* could have linked to his triumphal dedication to *Hercules et Musarum* in the Circus, though the topography in this case is not entirely clear.[804] Moreover, a censorial (or aedilician) impetus behind the developing function of the *porticus* that evolved into an ideologically-useful structure makes sense: functionally, the *porticus* was not self-standing but existed as an augmentation of adjacent space. It

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[802] Gros 1996: 98 suggests tentatively that the columns could even have been among Cn. Octavius' *spolia* from Pydna or from Samothrace.

[803] Vell. 1.11. As C.B. Rose points out to me, simply by shifting its context, the Granikos monument changed its function from commemorating Macedon's military victory to commemorating Macedon's defeat at the hands of the Romans.

[804] Cf. catalog no. 98.

was, in this way, perfect for those censors working on new projects under the auspices of their role *sarta tecta tueri*; the development of a secondary architectural form into something with its own sense of grandeur represents the censorial enlargement of obligations of upkeep to meet the more competitive environment of the second century.

3. The *Basilica*

The origins of the Roman *basilica* have been much debated, but our literary evidence makes it clear that the structure's evolution belongs in the period from 184-69 when three censors built *basilicae forenses* along the sides of the Roman Forum. Plautus, who died in 184, mentions a *basilica* on the Forum in both the *Captivi* and the *Curculio*, whereas Livy states that in 210 there were not yet *basilicae* on the Forum, and our sources indicate that the Basilica Porcia in 184 was the first of its kind. While this had produced a great deal of confusion, Gaggiotti and Gros have found a plausible solution, followed now by most scholars: the Plautine passages refer to the popular name for the *Atrium Regium* (in Greek, the *Aulé Basiliké*), which burned in 210.[805] Instead, the Roman *basilica* as typified by the description of Vitruvius in 5.1.4-5, a hall or *spatium medium* twice or three times as long as wide with colonnaded *porticus* on either side, appears for the first time in three examples of the early second century: the Basilica Porcia (184), the Basilica Fulvia (179), and the Basilica Sempronia (169).

      All three were censorial projects, and the building was well suited to this role as it was in essence an augmentation of pre-existing space. As Vitruvius states, basilicas belong in *loca adiuncta foris*. In the Roman Forum there is even some archaeological

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[805] Gaggiotti 1985; Gros 1984: 69 n. 76; followed by Zevi 1991, Gros 1996. Further discussion of this in the catalog no. 70.

evidence that the Basilica Fulvia represented a unification of various structures

previously standing in that area--the *tabernae argentariae* whose stalls fronting the

Forum piazza easily fit into the rhythm of the open *porticus*, and the *atrium Regium* as a

sort of hall in that area again linked to the Forum.[806] Similarly, Livy says that Cato

purchased the *atrium Maeni* to provide space for his Basilica Porcia and that Cato

replaced an old house of Caius Maenius in the northwest area of the Forum. This appears

to mean that the Basilica Porcia superseded the *maenianae*, an earlier longitudinal space

given over to spectators for games in the central piazza.[807] The act of building new

basilicae along the sides of the Forum here logically devolved from those forms and

functions that already existed on those sites, and in so doing it conformed neatly to the

role and powers of the censor.

The *basilica* also, however, afforded the censor an opportunity for individual

promotion. First of all, the three censorial *basilicae* remained associated with the name

of the responsible censor. In these three cases, furthermore, it is worthwhile noting that it

was *one* censor's name, not that of the censorial college, that signified the structure.[808]

Scholars long ago noted that Cato had named the building type after the Greek word for

king, and had proposed a model for the basilica from the Hellenistic monarchies. While

this would lend support to an attachment of this architectural innovation to personal

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[806] See Freyberger 2007 with catalog no. 95.
[807] Liv. 39.44.7 with catalog no. 92.
[808] Individual association between structure and responsible censor was such that the repair of the basilica of M. Fulvius Nobilior by a member of the *gens Aemilia*, that is, of the *gens* of Fulvius Nobilior's censorial colleague M. Aemilius Lepidus (who, according to Livy, was not initially behind the structure in 179), has given rise to confusion on the part modern scholars as to what exactly the *basilica* on the north side of the Forum was called in antiquity: *Basilica Fulvia, Basilica Fulvia et Aemilia*, and *Basilica Aemilia* are all found in our sources. Sources at catalog no. 95.

ambitions, the idea is not unproblematic.[809] The great royal *stoai* of the Hellenistic world

(in particular, one thinks of those of Eumenes and Attalos at Athens or Antigonas

Gonatas at Delphi) conform better to the Vitruvian plan of a *porticus* rather than that of a

basilica.[810] Properly, the *basilica* was a hall with *porticus* on either side, clerestory

structures with central halls roofed on internal colonnades; these Hellenistic stoai were

porticus duplex.[811] If one seeks a simple importation to Rome of a Hellenistic building

type associated with royal *euergetism*, it will not be found here. In fact, Vitruvius

himself makes this very clear: the Hellenistic Greeks bounded their *agora* with the

porticus duplex (like the Stoa of Attalos at Athens). After him, Romans did not follow

the same model because of the function of their *fora*, but they instead preferred the

basilica with its elevated central aisle and clerestory.[812] The innovation of Cato's

structure was likely to have been more complex than simple borrowing; he perhaps drew

on the associations of a toponym of a building already in that area (the *Atrium Regium*),

but he also may not have denied associations with Hellenistic royal practice—there was

only benefit in doing so. Even if architecturally speaking there was a formal difference,

[809] Early twentieth century hypotheses on the Greek origins of the *basilica* are discussed by Gros 1996: 235-36.

[810] Also problematic is the fact that these Pergamene examples may in fact postdate Cato's Basilica at Rome. I am indebted to Dr. Gary Farney for mentioning the possibility that a new prototypical basilica of early date with a more appropriate Vitruvian plan has been found at Delos, and I look forward to publication of this important site. See also below for discussion of the Thersilion of Megalopolis.

[811] See the comments of Richardson, Richardson, and Brown 1993: 227-29, who start with the basilica at Cosa but then move quickly to a discussion of the *Basilica Fulvia* at Rome. This interpretation follows closely on the previous work of Richardson 1979 and includes the idea of a street between the separate *tabernae argentariae novae* and the *spatium medium* of the first *Basilica Fulvia*, of which I am no longer convinced based on the more recent architectural study of Freyberger 2007.

[812] 5.1.1, he goes on to discuss the *basilica* and gives the reason as follows: Romans were accustomed to hold gladiatorial shows in their *fora*, and in need of viewing space, the *basilica* with its clerestory (and possibly vantage point from the upper gallery) was more functional than the *porticus duplex* which, with a flat slanted roof supported on two rows of columns, would not have allowed such an upper viewing gallery. Considering his description, I wonder if the Thersilion at Megalopolis, which was a rectangular colonnaded hall fronting onto a theater from the fourth century, might be relevant as a building-type, and I am not sure it has been mentioned before in such connection. On the Thersilion, see now Lauter and Lauter-Bufe 2004.

confusion over the Greek origin of the structure prompted by a Greek name may have been welcome if not deliberate in an attempt to align the author of the structure with notions of individual *euergetism* and beneficence.

To conclude this discussion, with the appearance of the *fornix* and *basilica*, and the functional expansion of the *porticus*, the first decades of the second century constituted a particularly fertile period at Rome for the genesis of new, public architectural forms. What ties these innovations together, above all, is that they were secular. Orlin has noted that the fact that such monuments were *not* temples, and thus not connected to the communal nature of religious structures, afforded more opportunity to their creators for self-aggrandizement.[813] Surely he is correct: the competitive nature of demand for architecture in Rome in this period pushed Roman elites involved in public construction to innovate. Structured as this demand was to channels confined by the customary practices of military generals and censors, these three new forms were in a way derivative: the *fornix*, the *porticus*, and the *basilica* all merely augmented pre-existing structures and spaces. However, they expanded this role of augmentation as far as could possibly be taken in seeking to promote individual *gloria* through enduring monuments.

The Result of Demand II: Demand and clustering, and the forma urbis

As has been stressed, this discussion of individual building types in the previous section reveals an interesting trend: all three new structures represent architectural

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[813] 1997: 71-72.

agglomeration onto or at least adjacency with sites that held pre-existing architecture.[814] That is, if we turn from single building types to the form of the city itself, we see that censorial building promoted urban clustering. The rules of the game dictated that the censor could build extravagantly but only within a role of upkeep (*sarta tecta*). But the competitive nature of demand for triumphal monuments also had a similar effect. Areas of the city that were more visible or more attached to the ideology of the triumph, and especially the triumphal procession, were consequently more desirable as building sites.[815] Demand in this period focused construction within specific areas which were already urbanized. For this reason, public construction was less likely to expand the city's urban reach as it was to intensify distinct spots of urbanization.

Merely in terms of urban concentration, most of the centers of building activity over this period are expected. The Forum and its surrounding regions (the Velia, the Velabrum, the upper Sacra Via, the Argiletum) receive nearly constant attention, as does the Campus Martius from the Circus Flaminius northward starting from about 300 B.C.[816] Both of these areas served obvious ideological purposes for those considering building sites. The Forum Boarium, from the area to the south of the Porta Trigemina to the Forum Holitorium, also saw steady work, first in terms of religious architecture in the Forum Boarium proper, and then in the second century in concentrated work in the

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[814] A theoretical apparatus here would be beneficial, but I can mostly find discussion of urban clustering primarily in relation to the formation of urban nodes within larger (mostly national or transnational) spatial networks, as for example the deep bibliography to be found in Portnov 2006 with respect to the modern world, or the work of Roderick McIntosh with respect to the pre-modern. Instead, here in these next two sections, I am concerned with an *intra-urban* phenomenon whereby factors determining the allocation of space within a city give rise to repetitive functional tendencies of architecture, a sort of natural formation of zoning.
[815] Discussed in part by Hölkeskamp 2006, who emphasizes the role of collective memory.
[816] Temple C is one of the earliest middle Republican temples in the Campus Martius, and from then on, work is continuous with Temple A, probably Temple D, and then the Circus Flaminius and its related buildings.

Emporium and Tiber Port for obvious infrastructural needs. They were low-lying, and we can imagine that they were privy to heavier urban traffic, as well as being more accessible to the necessary supply chains for construction.

The hills also saw frequent building: the Capitoline, in particular, had been a popular locus for construction since the Archaic period, and such activity there slowed only when it slowed in the city as a whole. What is more interesting in the Middle Republican period is the monumentalization of the lesser hills—the Aventine and the Caelian—which evince different topographical histories. The Aventine maintained a limited prominence as a destination for temple construction: Camillus' temple to Juno Regina, for example, was placed there after the sack of Veii.[817] Infrastructure projects in the third century located on or around the hill (e.g. the Aqua Appia, the Clivus Publicius, the Piscina Publica) opened it up to increased traffic and consequently made it a suitable location for more ideological architecture. The third and early second century then saw no less than six triumphal temples built on the Aventine, most favoring a position on the west or north faces of the hill where they could be more highly visible.[818] The result may have appeared similar to the situation today where the same area of the hill is crowned by a series of churches (S. Anselmo, S. Maria del Priorato, S. Alessio, and S. Sabina) most of which have late antique or medieval origins.

The Aventine sat over the river port to its southwest and the circus valley to its north: because demand for public construction in this period was dictated to a large degree by a competitive class of elites, these were desirably visible locations. The city's

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[817] S.v. M. Andreussi. "Iuno Regina." *LTUR* III, pp. 125-26.
[818] Temples to Venus Obsequens (catalog no. 30), Consus (no. 26), Vertumnus (no. 31), Flora (no. 53), Iuppiter Libertas (no. 54), Iuventas (no. 88).

north and east hills, on the other hand, were the sites of substantially fewer public projects. The Quirinal, which had held a certain prominence in the Archaic period, saw a handful of temples closely associated with the areas around city gates.[819] The Esquiline is a surprising case: the outflow tank of the Anio Vetus was close by the Porta Esquilina, and so this area of the city had the capability to support a dense urban population already by the early third century.[820] Instead, it saw almost no other public construction in the entire Middle Republic, and the most notable Middle Republican finds in the Esquiline area come from the vast necropolis there with origins in the Archaic period.[821] The Esquiline *agger* would become by Horace's time a popular place to live and walk, but it had not become so yet.[822] It may have been precisely the combination of certain urban amenities (water, streets) with a lack of clear ideological centers that opened up the Esquiline to higher residential density—think of the later character of the Subura—and made it available as an eventual new urban center in the Augustan period and beyond.[823]

The Caelian lacked the water source that was at least present on the Esquiline, and we cannot identify a single public construction project there during our period.[824] Archaic remains on the Caelian are scarce even in light of recent excavations.[825] In this case, the fourth century wall itself seems debatable, seen only in one possible place *in*

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[819] For the Archaic Quirinal, Carafa 1996. For Republican examples, the Temple to Fortuna Primigenia by the Porta Collina, or the Temple of Salus by the Porta Salutaris, or the Temple of Quirinus by the Porta Quirinalis.

[820] Santa Maria Scrinari 1979 on the Anio Vetus outflow tank beneath S. Vito.

[821] On these *necropoleis* and their finds, see Taloni in *Roma Medio Repubblicana* 188-96.

[822] Hor. *Sat.* I.8 with Wiseman 1998.

[823] The construction of the *Macellum Liviae* just beyond the Porta Esquilina by Augustus represents, to my mind, such a transformation. On this change, see the aptly titled article "The suburb as center" by Malmberg and Bjur 2009, a result of long-standing project by the Swedish Institute in Rome to map urban change in the Via Tiburtina region.

[824] However, an impressive Middle Republican chamber tomb was excavated there in the 1960s, see Santa Maria Scrinari 1968-69.

[825] Pavolini 2006: 12, 70.

situ, where it may have been built into a pier of the Aqua Claudia. Colini suggested that the wall was already destroyed (intentionally) by the Augustan period.[826] Like the Esquiline, this dearth of public monuments may have opened up the Caelian to private structures, and instead of any public building we hear of residential *insulae* there by the later second century.[827] It is not coincidental that the Caelian, like the Esquiline, received a massive public center suited to economic functions only in the Julio-Claudian period with the Neronian construction of the *macellum magnum*.

The phenomenon seen here in terms of the topographical distribution of public construction projects in the Republican period is one of natural zoning, not imposed but rather arising organically as a product of the factors of demand. One detects a growing density of new buildings in pre-existing urban centers, construction which continued the functions of prior architecture in the same place: the *forum* stayed the *forum*, residential centers remained residential, etc. Conversely, what does not appear to have happened was the creation of new centers for public monuments. Such activity brackets our period: the Archaic creation of the Forum in the sixth century B.C. between the settlements on the Capitoline and Palatine, and on the other hand the *Forum Esquilinum* or the *Macellum Liviae* of the Early Empire forming a new hub for economic activity on the city's eastern border. Instead, the *urbs* of the Middle Republic developed along the repetitive rhythms controlled by a demand formed between *mos maiorum* and competition.

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[826] Colini 1944: 31.

[827] The house of Claudius Centumalus was ordered torn down because its height was impeding the augurs' view from the Capitoline, see Cic. *Off.* 3.66, Val. Max. 8.2.1. He sold the house without disclosing this order to P. Calpurnius Lanarius, whom we can date either as the moneyer of 133 (*RRC* 247) or the legate of 81; as Valerius tells us, Calpurnius Lanarius appealed to the father of Cato Uticensis to try Claudius Centumalus for fraud, and thus we are somewhere around the beginning of the first century B.C.

Patterns in the transformation of land from private to public

This urban clustering on the citywide scale that we have just discussed had further profound effects on the shape of the city. One trend in particular that can be seen to have occurred as a result in the second century is the increasing deprivatization of space.[828] By "deprivatization" I refer to the process by which formally private land, normally at the margins of public land, was transferred or incorporated into public land. On the whole, the presence of such a process should not surprise us: construction of public monuments entailed the creation of structures, which were separate from the private sphere and dedicated instead to the functions of the *Res Publica*. However, the transformed status of land before and after a construction project was not always as distinct. For example, public building efforts on the Campus Martius throughout the Republic did little to change the balance of public and private space in the city, as the Campus Martius had already been designated as *ager publicus*. Such a process does emerge, however, in the Middle Republic especially in several building projects that expanded the margins of the Forum.

Before looking toward the city center and the Forum, however, I note that a similar trend has been suggested for the city's periphery, although I find the evidence less convincing as a whole. Coarelli in particular has detected an association between Mid-Republican family tombs and the site-selection of extra-mural triumphal temples.[829] Archaeologists have recently noted the correspondence between family burial areas and

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[828] I lay out here the basis for what would be an interesting self-standing study on its own in expanded form.
[829] Coarelli 1972 (1996): 208-9, accepted by Zevi in *LTUR* IV 284-85.

domestic structures in Rome's hinterland.[830] That is, there seems to be a link between

land ownership and the tombs of the proprietors on the periphery of the archaic city of

Rome and in southern Etruria. If this is the case then a connection between those tombs

and consequent public monuments would mean that Roman triumphators were in a sense

giving their own private land to the construction of public monuments. This is an

attractive thesis, but as it stands the evidence may be insufficient to prove it.

This idea rests on three examples: the first is the connection between a large

alabaster urn, now in the Louvre but found in 1615 at the foot of the Capitoline near the

Theatre of Marcellus. The urn was originally inscribed with the name of a late-kingdom

Egyptian priest, but it was repurposed in the early imperial period to bear the inscription

as well as the ashes of P. Claudius Pulcher, son of Cicero's nemesis.[831] Claudius Pulcher

was of the same stem of the *gens Claudia* as the progenitor, Ap. Claudius Pulcher, cos.

249 and grandson of Appius Claudius Caecus. The large urn cannot have moved very far

from its original location, and its position may mark a greater funerary complex of the

Claudii Pulchri (and perhaps Claudius Caecus as well?) adjacent to the Temple of

Bellona, vowed and dedicated by Appius Claudius Caecus in the early third century.

Combine this with Suetonius' mention that the Claudii received *locumque sibi ad*

sepulturam sub Capitolio publice accepit (*Tib*. 1), and we may connect the Temple of

Bellona, an extramural dedication, to Appius Claudius Caecus' family tomb. This is not

impossible, but as the connection rests on imperial sources, it is just as plausible that

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[830] See most recently Cifani 2009: 320; the thesis is developed with the discovery of tomb/settlement patterns in the area of Crustumerium, Fidene, and Ficula, and was most strongly promoted by the work of L. Quilici and S. Quilici-Gigli, as see cited by Cifani. Cifani is optimistic about the idea that private land was a concept in Archaic Rome, an argument that I am less sure that archaeology is qualified to make.
[831] *CIL* VI 1282.

these pieces of evidence represent the apocryphal attempts to align later Claudii with the

most famous Republican progenitor rather than a historical situation of the fourth and

third centuries B.C.

The second example is more tenuous. At issue is a passage of Asconius

commentary on Cicero's *In Pisonem*:[832]

> *Fortasse quaeratis quem dicat Marcellum. Fuit autem nepos M. Marcelli eius qui bello Punico secundo Syracusas vicit et quinque consulatus adeptus est. Hic autem Marcellus de quo Cicero dicit naufragio ad ipsam Africam periit paulo ante coeptum bellum Punicum tertium. Idem cum statuas sibi ac patri itemque avo poneret in monumentis avi sui ad Honoris et Virtutis, decore subscripsit: III MARCELLI NOVIES COSS.*

> Perhaps you might ask which Marcellus he speaks of. In fact he was the grandson of the Marcellus who conquered the Syracusans in the Second Punic war and attained five consulships. This Marcellus about whom Cicero speaks perished in a shipwreck off Africa itself a little before the start of the Third Punic War. The same man, when he placed statues to himself, to his father, and to his grandfather in the monument of his grandfather at the temple of Honor and Virtue, had inscribed in fitting fashion: "Three Marcelli, Nine Consulships."

Coarelli argues for a particular reading of the phrase *in monumentis avi sui ad Honoris et*

Virtutis, translating "*nella tomba di suo nonno presso (il tempio) dell'Onore e della*

Virtù."[833] He points out that Livy calls the *sepulchrum Corneliorum Scipionum* a

monumentum, making his interpretation of the word *monumentum* plausible.[834] From

here, he argues for another example of a family monument beside a triumphal (public)

temple. Two facts argue strongly against this: first, Cicero, when elsewhere listing those

tombs of famous Roman families outside of the Porta Capena, does not mention a tomb

of the Claudii Marcelli (*Tusc.* 1.7.13): this is an *argumentum ex silentio*, but a family that

gained nine consulships in three generations would merit inclusion in Cicero's otherwise

full list. Even more problematic is the fact that the Temple of Honos et Virtus was not

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[832] 12C = Clark p. 24 *ad* Cic. *in Pis.* 44.
[833] Marshall 1985: 102; *contra* Coarelli 1996aa: 209.
[834] Coarelli *loc. cit.* on Liv. 38.56. See furthermore *TLL* "monumentum" 2.β *aedificia sim. ad memoriam mortuorum…sepulcrum sim*.

entirely *ex novo*, but was an expansion of a Temple of Honos vowed not by the Claudii Marcelli, but by Q. Fabius Maximus Verrucosus—the Claudii Marcelli took over the project *in medias res* and had nothing to do with its initial location.[835]

A third case linking public monument to family tomb is more intriguing as it does rest on contemporary evidence: the *aedes* to Tempestas or the Tempestates, dedicated by L. Cornelius Scipio, son of Scipio Barbatus.[836] The temple is securely located outside of the Porta Capena, and in this case it was very close to the location of the tomb of the Cornelii Scipiones on a *diverticulum* off the Appia about a kilometer outside the gate. Furthermore, in 1956 at the intersection between Via Cristoforo Colombo and Via Marco Polo, excavators found a tufo sarcophagus inscribed "*P. Cornelio P.f. Scapola / Pontifex Max.*" along with the lid of another inscribed "*C]ornelio Cn.f*" on the side and "*L. Cornelio Cn.f.*" on the front.[837] These are suggestive evidence of the burial grounds of another branch of the Cornelii just over half a kilometer's distance from the Scipiones. Cornelius Scapula and L. Cornelius Cn.f. are not otherwise known, but Blanck has convincingly connected Scapula with the otherwise unknown P. Cornelius Calussa, *pontifex maximus* around 332 (Liv. 25.5.4), and the letter forms of the inscription suggest an earlier date than the Barbatus inscription, perhaps the late fourth century.[838] All of this is suggestive of the fact that this area of the city in the fourth century and probably in the third belonged to the Cornelii family. Therefore, the choice on the part of L. Cornelius

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[835] Catalog no. 72 and cf. Cic. *Nat. Deor.* 2.61.
[836] Catalog no. 43.
[837] Blanck 1966-67, the sarcophagi are now on display in the Museo Centrale Montemartini.
[838] The argument is that Calussa is otherwise unknown, and that this Scapula who is listed only in the inscription as *pont.max.* must not have held a curule office. He therefore becomes a good candidate to have been the Cornelius whom Livy says was the only *pontifex maximus* to have held that office without obtaining curule magistracy in the 120 years prior to the same feat achieved by P. Licinius Crassus in 212, Blanck 1966-67: 72, but see Broughton in *MRR* Suppl. 19 for a later date. Zevi in *RMR* 241 accepts Blanck.

Scipio to build an *aedes publica* in the vicinity of his family tomb also meant that he may have dedicated family land to be consecrated to the use of the *res publica*.

If the example of the Scipios is attractive, the other two examples, the Claudii and the Claudii Marcelli, are less so. While it would not be surprising if more evidence of such a trend emerged, the thesis remains largely speculative at this point. We can at least posit a possible association between some extramural triumphal temples and gentilician monuments, and this seems well suited to the rising inter-family competitiveness of the Mid-Republican period. In terms of an urban phenomenon with larger topographical implications, however, a transformation from private land to public domain is more clearly recognizable in the case of houses on the forum.

There seems to be a shift in Roman attitudes towards private houses in the area of the Forum between the Early and Middle Republic. The tradition as we have it for the period between c. 500-350 B.C. records several examples of houses (and thus private property) being seized from those who led failed attempts at tyranny. This includes examples such as the seizure and destruction of the house of Sp. Cassius in 485,[839] that of Sp. Maelius in 439,[840] that of M. Manlius Capitolinus' in 384,[841] and that of Vitruvius Vaccus in 330.[842] Most of these lots remain empty for some time; in the case of Vitruvius Vaccus, one would remain empty until Cicero's time as the *Prata Vacci* (Cic. *de Dom.* 101). In the other cases, we hear how the vacant lots where the houses had stood were eventually reused for public monuments: the house of Cassius became the area of the temple of Tellus in 268; the house of Maelius became the Aequimelium that

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[839] *MRR* I 20.
[840] *MRR* I 56 under Servilius Ahala.
[841] *MRR* I 101-2.
[842] Liv. 8.20.7-8.

was built up in 189; and the house of Manlius became the temple of Juno Moneta in 345.[843] In most cases, private property seized as *ager publicus* in this early period was not built-up with public monuments for well over a generation often longer. This trend itself continues the general topographical evolution of the Campus Martius set out in our sources who identify the land as being that of the Tarquins prior to their expulsion: seized as *ager publicus* at the start of the Republic, it remained open for a long time and only slowly acquired a monumentalized aspect, really not until the very late Republic.[844]

This slow transfer from PRIVATE LAND > PUBLIC LAND > PUBLIC MONUMENT over the early Republic accelerates by the second century, however. We now see a more rapid transition of status especially in the area around the Roman Forum. This is particularly notable in terms of the basilicas that appear on the Forum in the first half of the second century.[845] The Basilica Porcia, built in 184, involved the purchase (rather than seizure) of two "*atria*," those of Maenius and Titus.[846] The construction of the Basilica Sempronia was made possible by the purchase of the *aedes* of P. Scipio Africanus, of which some archaeological trace may remain.[847] The Basilica Fulvia was built in 174 over the Atrium Regium, and Zevi has argued persuasively that the Atrium Regium was, like those *atria* of Maenius and Titus, some sort of originally private house on the Forum's edge in the Argiletum that had by that time taken on a more public character.[848]

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[843] For these sites, see the catalog references under the years.
[844] For sources on the early Campus Martius s.v. T.P. Wiseman "Campus Martius." *LTUR* I, pp. 220-2.
[845] This is the beginning of a process that continued with great energy into the Late Republic and Early Principate in the evidence for the purchase of land for the Forum of Caesar (Cic. *Ad Att.* 4.16.8) and the expropriation of private land for the Forum of Augustus (Suet. *Aug.* 56.2; *RG* 21); see on the latter the contributions of Delfino to Meneghini and Santangeli Valenzani 2010.
[846] Catalog no. 92.
[847] Catalog no. 116.
[848] Zevi 1991, and on the atrium regium see catalog no. 70.

All in all, this is evidence of a trend.[849] The cause behind this shift is probably to be found in the general rise in wealth and demand for public construction. Rather than seizure, sale had become, by the second century, the operative means of acquiring space for more construction. Because of the nature of that demand, the practice seems to have concentrated on the margins of a major public space, in this case the Forum, in keeping with the clustering nature of architectural expansion already discussed in this chapter. Further urban changes stem from this trend. There has been a great deal of discussion about the blurring between public and private in Republican architecture around *fora*. This has especially been occasioned by the excavation at the Republican colony at Cosa of an elite house opening immediately onto the Forum.[850] It is clear that Roman institutions such as the *salutatio* or the ideological valence of the display of *imagines maiorium* in one's atrium meant that wealthy Roman elites expected a certain public value to their private space. We should not be surprised to encounter houses along the Roman forum, as we see attested in the archaeological record of Cosa, and we are reminded of Livy's belief that Tarquinius Priscus divided up the area around the forum into private lots (1.35.10).

This being the case, Romans of the second century did not simply lose their need for private housing adjacent to public spaces. On the contrary, with the expansion of client-patron relationships into the provinces and with increasing competition for elected magistracies, the value of house-oriented display such as the *salutatio* or the *imagines* would have only increased. This deprivatization process especially along the Forum in

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[849] There is also probably some continuation of this shift from house-to-public space in the evidence from Carandini's excavations on the upper Via Sacra, but I am among a majority who finds his reconstructions problematic: recent criticism in Wiseman 2008a: 271-92, Sewell 2010: 125-27.

[850] See excavation reports on the 'House of Diana' in Fentress 2003: esp. 23.

the early second century B.C. was not mere replacement of one structure with another; it would have had significant consequences for the city's urbanism. The Forum's outlying areas now became more densely filled with the residences of the elite, who were themselves being pushed out by the expansion of public construction along the forum itself.

One major consequence, I would argue, was that the Palatine became a highly desirable area for elite Roman housing in this period. Prior to the fourth century, there is far less record of the Palatine as such.[851] By the first century, Cicero's *de Domo Sua* is a litany of the other houses of wealthy Romans amongst which the orator had the pride of living when his Palatine house still stood. It is not an understatement to say that the major portion of the important actors in Roman history from the Gracchi onward called the Palatine home.[852] There is further archaeological evidence for this in early and mid-second century houses covered over by the later imperial construction such as the *Casa dei Grifi*, a Republican house beneath the so-called House of Livia, or another large complex under the platform of the Temple of Apollo Palatinus.[853]

If we are seeking very long-term effects of demand and consequent land-status change of the Middle Republic, we can even point to the selection by Augustus of the

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[851] Except, of course, for Romulus. Sewell 2010: 146 suggests that Vitruvius Vaccus was alone on the Palatine in the mid-Republic, but this is not true, as we know a house of the Valerii, for example, there since the fifth century (Dio. Hal. 5.39.4).

[852] Besides Cicero, examples include, among others, Gaius Gracchus, Crassus, the orator Hortensius, the plebian tribune Livius Drusus, Lutatius Catulus cos. 102, M. Aemilius Scaurus cos. 115, and Mark Anthony. Citations in those respective entries under their *domus* in *LTUR* II.

[853] *Casa dei Grifi* of a early-to-mid-2nd century date: Dumser "Domus: Palatium (2)" in Haselberger *et al.* 2002: 112, but a fuller discussion of the dating based on masonry style can be found in Blake 1947: 250, which has not been significantly superseded. Earlier structures dating to around 100 B.C. under the 'House of Livia' noted by Claridge 2010: 136. The complex underneath the platform of Apollo Palatinus, the so-called southeast court of the 'House of Augustus' is not well-published, but I thank Stephan Zink for showing me his ongoing mapping project of this zone. The heavy use in this complex of *tufo lionato* from Anio suggests to me a date in the late 2nd/early 1st century.

Palatine for his own house and the consequent decision by the emperors to turn the hill into their palace. Here, we are getting ahead of ourselves, but the movement of elite domestic housing to the Palatine, an area strategically positioned near the Forum but not on it, does at least seem to correspond chronologically to the transformation of those private spaces on the forum itself into public spaces by the early second century B.C.

Conclusions

Wealth and demand described in this chapter were having profound and distinct impacts on the public buildings of Rome as well as on its collective urban fabric. During our period, an elite class of Romans handled the state's incomes and expenditures through an attachment to specific magistracies. We have focused on triumphant generals and censors, with discussion of aediles and the senate as well. To this class, architecture was seen as useful increasingly towards political ends as competition for recognition and wealth began to rise. As Sallust wrote, this period witnessed the beginning of a strong desire for glory, "*tanta gloriae cupido incesserat*" (*Cat.* 1.7).[854] Because of the pervasive influence of this political culture in the decisions of this elite, demand for public monuments stemming from Roman society was not only high; it spurred development of new and distinct building forms. In particular, an interplay between the repetitiveness of custom (*mos maiorum*) and the innovativeness behind successful self-promotion helped structure demand for public monuments. This structured demand supported the innovation of new types of buildings as expressions of individual *gloria*, and it also

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[854] Cf. Harris 1979: 17.

promoted urban clustering in pre-existing spaces, an attitude toward construction that had a remarkable impact on Rome's urban outlook during this period and later.

These changes impacting the city were substantial, and I think it would be fair to say that the early second century with its rapidly increasing public income witnessed an unprecedented expansion in Rome's public building industry. The second century is when we see Rome's first celebrity architects—celebrated insofar as we know for the first time their names—moving both eastward in the figure of Cossutius who worked in the employment of Antiochos IV Epiphanes, and westward from the Greek East in the figure of Hermodoros of Salamis who designed public monuments at Rome for Q. Caecilius Metellus Macedonicus and D. Iunius Brutus Callaicus.[855] Builders were experimenting for the first time in this period with new architectural forms as with new tectonic materials including concrete and eventually marble.[856]   The city of the middle Republic was by then in the process of becoming a grand and markedly complex urban space: to turn around the words of King Perseus, if Rome in 182 was still an *urbs nondum exornata*, by the mid-point of the second century it was really an *urbs exornanda*.

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[855] On Cossutius and Hermodoros and their buildings see now Bernard 2010.
[856] Concrete: Coarelli 1977; marble: Bernard 2010.

CHAPTER FIVE
Conclusion: **Building and Society in Roman Terms**

In Book One of the Aeneid, Vergil has Aeneas encounter the Carthaginians for

the first time (*Aen.* 1.421-37). Upon seeing them hard at work in building their city,

Aeneas is stupefied, and marvels at the city's imposing mass, which was recently nothing

but huts, *miratur molem Aeneas, magalia quondam*. The *moles* at Carthage recall that

which the hero will endure in his struggle to found Rome (1.33: *tantae molis erat*

Romanam condere gentem). Vergil's meaning is clear: Aeneas is watching the

foundation of a city that is Carthage, but has the potential to be Rome. The focus is on

the construction process itself, detailed on either side of a line's description of the

Carthaginian political system (1.423-29):

> *instant ardentes Tyrii: pars ducere muros*
> *molirique arcem et manibus subvolvere saxa,*
> *pars optare locum tecto et concludere sulco*
> *iura magistratusque legunt sanctumque senatum*
> *hic portus alii effodiunt; hic alta theatri*
> *fundamenta locant alii, immanisque columnas*
> *rupibus excidunt, scaenis decora alta futuris.*

The Carthaginians zealously pressed on: part laid out the walls; they labored upon the *arx*
and they rolled along stones with their hands; part selected a place for building and
defined it with a furrow. They were choosing laws, magistrates, and an inviolable senate.
Here some excavate out the harbor; here others place the high foundations of the theater,
they carve out massive columns from rocks, lofty ornaments for the future stagebuilding.

Carthaginian society can be discerned in the building of Carthage, just as Roman society will eventually be founded by Aeneas in the building of Rome (actually, Lavinium). Aeneas cannot help but be jealous: the fortunate Carthaginians possess *walls* (1.437: *o fortunati, quorum iam moenia surgunt*).

The connection between city-building and society-formation that Vergil depicts here was a common trope in the culture of the Augustan age. The Julio-Claudian friezes from the Basilica Aemilia (née Fulvia) depict scenes from the foundation legends of Rome; among them is one scene of men building a wall (Lavinium or Rome) of large ashlar blocks.[857] The same scene of wall building is seen repeated, again in the same context of a foundation cycle, on the painted walls of an Augustan-era *columbarium*. I have already shown in Ch. 2 how Livy, an author of the Augustan court, worked the construction process into his narrative of Rome reborn (*urbs renata*) after the Gallic sack. According to Vitruvius 2.1.6, the making of buildings (*ex fabricationibus aedificiorum*) advanced humans from a wild and rustic existence to gentle humanity (*e fera agrestique vita ad mansuetam perduxerunt humanitatem*).

Such emphasis on the socializing role of building was not merely confined to the intellectual and cultural circles of the early Principate: it was rooted in a real and essential quality to the construction process, what I would call the social dimension of Roman architecture. The relationship between construction and society was obvious in the pre-industrial world when building required so much manual effort. In the Augustan age, when the emperor claimed to have rebuilt 82 temples, omitting nothing that required attention (Aug. *RG* 20), the Roman audience would have been receptive to the

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[857] Carettoni 1961; Kränzle 1991.

intellectual positioning of construction as a positive force for social cohesion. DeLaine

has described similar views of monumental architecture as a civilizing force in the entire

Empire, from the Augustan evidence discussed here to the scenes of Romans soldiers

building camps on the Column of Trajan.[858] However, while the relationship between

construction and society was grounded in reality, it was not always viewed so positively

in Roman eyes. Witness Pliny's account of Tarquin's construction of the *cloaca maxima*

at *NH* 36.107:

> *Cum id opus Tarquinius Priscus plebis manibus faceret, essetque labor incertum maior an longior, passim conscita nece Quiritibus taedium fugientibus, novum, inexcogitatum ante posteaque remedium invenit ille rex, ut omnium ita defunctorum corpora figeret cruci spectanda civibus simul et feris volucribusque laceranda. quam ob rem pudor Romani nominis proprius, qui saepe res perditas servavit in proeliis, tunc quoque subvenit, sed illo tempore inposuit iam erubescentibus, cum puderet vivos, tamquam puditurum esset extinctos.*

> When Tarquinius Priscus was carrying out this work with the labor of the plebs, and it was doubtful whether the work would be greater or longer, since the Romans were escaping the exhausting task by committing suicide, this king came up with a novel remedy never devised before or afterward, that he would fix to a cross the bodies of all those who died to be watched by their fellow citizens and mangled by beasts and vultures. On account of such a thing, shame, so particular to the Roman name and a thing that often saved matters lost on the battlefield, then too came to their aid, but this time, it set upon them already shamefully blushing, since they felt ashamed when alive, just as they would feel shame when dead.

Pliny compares the shame felt at seeing their crucified fellow citizens with the shame that

galvanized Romans on the battlefield: this brutal story is no less about a social formation

than Vergil's account of Carthage. In Roman terms, the connection between building to

society, born of the simple fact that monumental construction implied a collective (and

often quite large) workforce, was real, but it could cut both ways.

  This dissertation has sought to highlight the social dimension to Roman

architecture and its role in the formation of Mid-Republican Roman society: the complex

relationship between architecture and society had the potential to effect socioeconomic

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[858] DeLaine 2002: 218-21; Wolfram Thill 2010.

change. No single monument has demonstrated this better than the circuit wall begun in 378. In the aforementioned examples from Vergil or from Augustan art, the construction of a wall marked the presence of a new society; it was symbolic. In the fourth century, the 11 km circuit wall was itself a catalyst for the formation of Republican society. Prompted by the defenseless manner in which the city was taken by raiding Gauls in 387, the new wall was outsized and required massive amounts of unskilled labor. Its construction cost, exacted from the Roman citizenry as compulsory labor, plunged Rome into crisis, and out of this crisis a new approach to monumental construction was born.

In the case of the wall, Roman construction helped to bring about a new society, but not within a vacuum: this was not a matter of the transformation from *fera vita* to *mansueta humanitas*, à la Vitruvius. The wall was the last project of an Archaic society that had constructed the *grande Roma dei Tarquini* of the sixth century; but, in the passage of Pliny just cited, we see how Rome built its Archaic public monuments. There is little reason to trust Pliny's account as historically accurate, but this hardly matters: even if Tarquin didn't crucify plebs, his use of compulsory labor would appear to fit with what we know of Archaic Rome. Rome of the kings, as with other city-states in Archaic Latium, was a society based around kin or clan organizations, social structures whose rise in 8th century Latium has been demonstrated in the archaeological work of Bietti Sestieri at Osteria dell'Osa.[859] The labor cost of the wall, arranged on corvée, shows that these older, non-contractual forms of social organization still existed. However, the debt crisis following the wall's construction suggests that such means of labor organization were, by the fourth century, only applied to large-scale public works projects at great social cost.

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[859] Bietti Sestieri 1992; Smith 1996.

The wall provoked a profound crisis at the beginning fourth century; this experience helped to shape economic changes over the next several generations. Chief among these changes were the appearance of Roman coinage by the late fourth century, and, with it, the ability to build on contract. Ch. 3 has argued that coinage, which appeared in Rome two centuries later than in the Greek East, was by no means a simple matter of societal evolution, of rising Hellenization of the Roman economy, or of the natural increase of economic complexity over time. Seen in context, monetization at Rome was conditioned by the difficulties presented by non-contractual transactions (the debt brought about by the wall's construction) and the search for a means to avoid such difficulties by future generations: experience provoked economic change.[860] Some historians have gone so far as to argue that Rome minted its first silver coin in 312 as a targeted form of payment for the Via Appia. While the evidence of coin hoards, on which such a chronology depends, cannot make this connection absolutely certain, I would at least note that the building history of Rome from the wall to the censorship of Appius Claudius presents a parallel to the increasing environment of monetization in fourth century Rome.

The shift from non-contractual forms of construction labor to contracting happened, as this dissertation argues, at the end of the fourth century B.C.; evidence for earlier contracting is thin at best. The transformation occurred within a context of great societal change, which some have explained as the rise of the senatorial nobility (Hölkeskamp), and others as the increasing political power of the Roman populace

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[860] This is what an evolutionary biologist might call Lamarckism, cf. Gould 1996: 221-22 based on the fact that cultural evolution, but not natural evolution, has the potential to be Lamarckian, that is, to show the heredity of traits acquired during an individual's lifetime, to learn by experience. North raises similar issues concerning economic change (though does not call them explicitly Lamarckian) at 2005: viii.

(Millar). The *Lex Poetelia*, which ended *nexum*, a form of debt-bondage, in 325, and the

prosecution of Lucius Postumius Megellus in 291 for using compulsory labor on his

Gabine estate were signals of the rising value of an individual's labor, which was no

longer so easily coerced. The background to these events was the increasing economic

complexity brought on by monetization: the case has been presented that innovations and

rising specialization in the building industry can be linked to market pressures on Rome's

urban workforce. This had a direct impact on the way buildings were being constructed,

but it also came to alter the urban appearance of the city. The labor market attracted

people to Rome; rising population necessitated new infrastructure, new aqueducts, roads,

law-courts, money-changing stalls, etc. Building contracts, which were purchased from

the state at great expense but ultimately were paid in piecemeal to individual laborers by

contractors, were a necessary manner of circulating Roman coinage to individual

consumers. This in turn brought about new economic spaces in Rome: the *macellum*, the

Forum Piscatorium, the *emporium* by the Tiber.

Ultimately, this is the history not only of Roman construction, but of Rome's

construction *industry*, because the sustained demand for architecture beginning c. 300

B.C. gave building and builders a permanent presence in the city. In a list of reasons why

it was so difficult to find space in which to compose poetry in the city of Rome, Horace

would later complain that he was constantly disturbed by a building contractor with his

machines and his workmen. The next bothersome event passing outside his window is a

funeral procession.[861] We say, "Death and Taxes." Horace griped about, "Death and

Construction." The origins of this lasting demand and its implication on the city were

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[861] Hor. *Ep.* 2.2.72-73.

addressed in the fifth chapter. In the Mid-Republic, public monuments offered a lasting

gloria—the word is specifically used in such a manner by Frontinus to refer to the fame

that eluded M'. Curius Dentatus when he died before his aqueduct, the Anio Vetus, could

be completed (*De Aq.* 6.4). Demand buoyed by a recognition of this fact, combined with

an increasingly competitive environment, helped contribute to the spike in the production

of public architecture in the early third century. Such demand also supported innovative

architecture, as magistrates such as the censor and aedile pushed the definition of their

jurisdiction to include the creation of new forms of public architecture (the *basilica*, the

porticus, the *fornix*).

The narrative presented here has been that of the emergence of the Republican

city in both human and architectural terms; it was a process rooted in the creation of an

urban society and economy, and also in the production of the new physical infrastructure

to support the new interactions between them. By way of conclusion, what did the city of

the Mid-Republic look like, once established by these processes? In 167, Aemilius

Paullus triumphed through the streets of the Roman city with 120 million HS (or more,

says Liv. 45.40.1); there could be no confusing the cityscape he saw with the city of the

Early Republic. Plutarch tells us that every temple in Rome was opened in celebration

(*Aem.* 32); it is worth asking whether any of those temples still appeared as they had at

the time of the Gallic sack. Even the Capitolium, in which he would conclude his

procession with a sacrifice, had changed significantly: acroterial sculpture from the third

century, triumphal shields decorating its exterior from the early second century, and a

façade and columns whitewashed, perhaps in an early imitation of marble, by the censors

of 179.[862] Vitruvius would deride the building (which, anyway, had burned in 83) as an example of the top-heavy, lowly Tuscan order (3.3: *barycephelae, humilis*), but at the time of Aemilius Paullus, it must have appeared as a large but not otherwise extraordinary Mid-Republican temple.[863]

By 167, building-types that were innovations in the Mid-Republic now started to feel like part of the Roman architectural canon. This trend could be noted particularly in replication and refurbishment: the Via Appia, a first in its time, was joined by a half-dozen other trunk roads connecting Rome to Italy.[864] The Aqua Appia and the Anio Vetus were starting to appear shabby by 144, when the praetor Q. Marcius Rex took the opportunity of the construction of a third aqueduct, the Marcia, to revamp the previous two (Front. *De Aq.* 7). On the other hand, the trend could also be recognized in abandonment. The wall was still being maintained during the Second Punic War, but it appears already in the 2nd century to have been neglected in the area of the Forum Boarium.[865] For Aemilius Paullus, even since his last triumph in 181, certain architectural forms like the basilica (in 184, there was one, by 167, three) or the porticoes in the *emporium* area (the first in 193, several more in the next decades) had quickly changed from novelties to repeated standards.

A new city of the Roman Republic was not only measurable in terms of new architecture—as Mumford writes, "We beg the whole question of the nature of the city if

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[862] On the plastering of the temple as imitation of marble, see Zevi 1997, 110.
[863] Cf. Tagliamonte, "Iuppiter Optimus Maximus Capitolinus, Aedes (Fasi tardo-repubblicani e imperiali)" in *LTUR* III 144-48.
[864] Wiseman 1970: 140.
[865] Coarelli 1988: 36ff. argued that a stretch of *tufo giallo* ashlars in the Forum Boarium excavated in 1969 and covered with burned soil and black-gloss ceramics suggested that the wall there was destroyed by the late 3rd/early 2nd century. It was certainly dismantled in many places in the Late Republic and Early Empire, as is suggested *infra alia* by the position of the "Auditorium" of Maecenas.

we look only for permanent structures huddled together behind a wall."[866] In 167,

Aemilius would have known a different urban society as well, one in which his triumph

represented the capstone on an enormous accumulation of wealth. Spending this new

income was not difficult. Once contracting proved an alternative to kin- and client-based

labor organization, and once the apparatus to support contracting solidified, there was

little going back to previous social structures. Payment in coin was no longer an issue:

beginning in the middle years of the Second Punic War, Rome would use the silver

denarius, and Republican moneyers would continue to strike this coin nearly

continuously until the end of the Republic. Labor that could be bought was now

plentiful, as was slave labor: as Strabo famously noted, 10,000 slaves were sold on Delos

in a day (14.5.2).

How popular had contracting become in the less-than-two centuries since it had

been applied to Roman construction? By their fiscal weight, contracts were enormously

popular: good evidence of this is the claim of Polybius 6.13.3, frequently cited in this

dissertation, that the upkeep and construction of public monuments was the single

greatest item of the senate's annual domestic budget. In 179, the whole of the year's

vectigal was applied to the cost of censorial construction contracts. Contracting had

become so common in Polybius' time—let us not forget that he was a peer of Aemilius

Paullus' son Scipio Aemilianus—that the historian furthermore stated that tax-farming in

Italy involved the majority of the citizen population (6.17.2-3):

> πολλῶν γὰρ ἔργων ὄντων τῶν εκδιδομένων ὑπὸ τῶν τιμητῶν διὰ πάσης
> Ἰταλίας εἰς τὰς ἐπισκευὰς καὶ κατασκευὰς τῶν δημοσίων, ἅ τις οὐκ ἄν
> ἐξαριθμήσαιτο ῥαδίως, πολλῶν δὲ ποταμῶν, λιμένων, κηπίων, μετάλλων,
> χώρας, συλλήβδην ὅσα πέπτωκεν ὑπὸ τὴν Ῥωμαίων δυναστείαν, πάντα

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[866] Mumford 1989 (1961): 5.

χειρίζεσθαι συμβαίνει τὰ προειρημένα διὰ τοῦ πλήθους, καὶ σχεδὸν ὡς ἔπος εἰπεῖν πάντας ἐνδεδέσθαι ταῖς ὠναῖς καὶ ταῖς ἐργασίαις ταῖς ἐκ τούτων.

> Because many contracts are given out by the censors across all of Italy for the construction and upkeep of public monuments, the amount of which cannot easily be reckoned, and also revenue from many rivers, harbors, gardens, mines, lands, in sum as much as is under the control of the Romans. It so happens that the all the plebs, as has been mentioned, are engaged in this, and roughly speaking, everyone is implicated by the purchasing of contracts and by the work that results from them.

That is, by the middle of the second century, it appeared to Polybius that all Romans were either contractors, or earning their living working for contractors.[867]

This is the city and society of Rome with which this study ends. The city of the central decades of the second century was not born overnight, as perhaps can be said of other Western cities in other periods: the Athens of Perikles, the Rome of Augustus, the Florence of Cosimo I Medici, the Paris of Hausmann, the New York of Robert Moses; the list goes on. Who would deny that, by the time of Aemilius Paullus, a Republican Rome distinct from an Archaic city had emerged? Nonetheless, it is impossible to put one's finger on a single individual, a great patron or builder, behind this process. For this reason, the study presented here has taken a longer view, concentrating on mostly authorless developments over a period of more than two centuries. Even the innovations of Appius Claudius Caecus, discussed in Ch. 3, elude such a reading. The process that created that city may have been shaped by the demands of an elite and paid for by the wealth of imperial expansion. Ultimately, however, Republican Rome's origin was brought about by an investment in human capital, and this was comprised of a class of

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[867] Walbank *comm. ad Polyb.* 6.17.2 takes *tais ergasiais tais ek touton* here as "the profits from the [contracts]," but *ergasia* much more often connotes work or labor, than profit (see *LSJ* ἐργασία II.3.b where the idea of "earnings" is a rare variant to the main meaning). Recently regarding the coterie of individuals who accompanied a *publicanus*, see van Nijf 2008.

anonymous builders.[868] These men at work applied themselves to the building of a wall; their efforts were compelled or compensated, they participated in Rome's markets; they specialized and helped to innovate new technologies. These builders were drawn from and formed a large segment of the city's urban society, and they are now included in Republican Rome's history.

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[868] The anonymity of Rome's building class is reinforced even at the upper levels, as our only surviving source for Roman architecture, Vitruvius, emphasizes that, despite some being great builders, even Roman architects were by-and-large anonymous (7.*pr*.18).

APPENDICES

Appendix 1:
Archaeological Dossier to Ch. 1.

The eleven kilometer circuit of the wall remains visible in stretches around the modern Roman city. In particular, the use of the *tufo giallo della via Tiberina* is indicative of remains of the fourth century phase, and sections employing this material are catalogued below. This appendix contains descriptions divided by the city's topography and moving clockwise around the circuit starting from the *Porta Collina*, the NE most corner of the wall. The goal here is to record those sites available for autopsy rather than to give a comprehensive account of all reports of the wall, but at several crucial points I include discussion of sections of the wall either unrelated to the fourth century circuit or no longer visible.

Quirinal, Viminal, Esquiline and *Agger*

Porta Collina
Rectangular bastion with one side measuring 7.50 m; primarily tufo del Palatino with a small amount of tufo giallo della via Tiberina both cut on the same module, .40-.45 m x .55-.65 m x 1.02-1.50 m.

Excavations in 1996 in conjunction with the laying of new electrical wires in the area gave archaeologists the opportunity to re-investigate a large rectangular base predominantly in *tufo del Palatino* with some *tufo giallo della via Tiberina* blocks mixed in that had been discovered and buried by Lanciani in the 19th century.[869] The blocks of both stones are cut on an unusual module, taller than normal *tufo del Palatino* and shorter than *tufo giallo*. If it weren't for the location of this structure at the known spot of the *Porta Collina*, the fact that it had an earthen mound built against it, and the fact that imperial-era buildings were found directly abutting it,[870] it would be possible to interpret the entirety as a separate

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[869] Fogagnolo 1998.
[870] It is common in other parts of the wall to find late-Republican buildings abutting the wall as it went out of use as a defensive structure and became a zone of habitation in the Augustan city, as see the comments of Thein in Haselberger *et al.* 2002: 170 and also Haselberger 2007: 230-31.

rectangular structure of uncertain purpose. Fogagnolo identifies the structure as the base of a defensive bastion that protected one side of the *porta*. The mixed use of materials but with only a very limited amount of *tufo giallo* and the strange module make the structure difficult to date. Fogagnolo dates the complex to the Archaic period based on the *tufo del Palatino* and on the mention of the *Porta Collina* in an episode in Livy dated to 508 B.C. where Valerius Publicola ambushes Porsenna's force outside the gate (2.11.7-10).[871] In that case, is the *tufo giallo* representative of later repair or reconfiguration in the Mid-Republic? The Livian passage is hardly firm evidence, not only for five-hundred year-old topographical details, but also for the episode itself, which is dated by Dionysius to a later point in Publicola's career, showing as Ogilvie notes, that it was a "fluid incident" and untrustworthy in its details.[872]

1. **Via Carducci and via Salandra (ex-Villa Spithöver)**
Two sections both about 11.50 m long bisected by a road and thus once max. length 32 m, though a notice in NSc 1909: 221 reports 36 m; 3.70-3.30 m thick tapering upwards. Tufo del Palatino on a caementicium foundation, the blocks being .27 x .57 x .85 m avg.

A significant section of the wall now bisected into two roughly equal sections by the modern via Giosuè Carducci. Reused in the substructure of the Villa Spithöver and before that in the Vigna Barberina, it was already well known in the 19th century.[873] 12 courses are visible. The blocks are entirely of *tufo del Palatino* on the smaller module, with Säflund suggesting that the intended average was quarry-units of 2:3:6 Roman feet. They are disposed in rows of either all headers or all stretchers; predominantly courses of stretchers are seen. Curiously, the entire ashlar wall sits on a 2.80 m tall core of cement, which formed the wall's subterranean foundation. Because of this, Säflund suggested that the entirety belonged to the Sullan repair of the walls. The stones, however, have a curious finish also found on *tufo del Palatino* from the podium of the Temple of Jupiter Optimus Maximus: several stretches of the lowest four courses show a raised horizontal ridge that extends over several blocks. The effect is not *anathyrosis*, as the stone is not worked away at the horizontal joins, but is only trimmed back at the bottom and top of the block's unworked surface forming a central, horizontal band on the exterior of the block. Cifani tentatively suggests that this may have been for guide lines in the construction process, but it is unclear what benefit this would have held in laying squared ashlar blocks, especially as the ridges are at the middle rather than at the seams of each course. I have also seen the same feature on blocks from the podium of the San Omobono temples, this time in *tufo giallo della via Tiberina* and from a period closely contemporary to the fourth century wall (see catalog no. 1).

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[871] 1998: 387.
[872] Ogilvie 1965: 261 *ad* Liv. 2.11.
[873] Säflund 1932: 80-81.

All of this suggests that this section of wall shares distinct features with construction of the latest sixth-to-early-fourth century. The fact that the horizontal finish often extends over two or three laterally proximal blocks also suggests that the blocks were not rearranged after this feature was added. Therefore, if we attribute this feature to the early-to-mid Republican period, the presence of cement underneath is inexplicable. If, as Cifani does, we suggest that the cement represents a later project to shore up the archaic wall reusing the older material, we give enormous credit to those later builders for placing the blocks almost exactly back in their original position almost like a jigsaw puzzle.[874]

2. **Ex-Ministero dell'Agricoltura (a) and the ex-via Delle Finanze now via Antonio Salandra (b)**
Now destroyed, originally max. length 12 m, thickness 3.25 m. Reportedly of tufo giallo della via Tiberina with block hts. .55-.67 m, thickness .60-.63 m, length 1.57 m. Displayed five masons' marks, two "T"s and three simple crosses.

Section 2a was uncovered in 1907 in what was then the via delle Finanze (now the via Salandra). The wall stood to a height of 5 courses and rested on virgin soil. The position of the wall as indicated in the drawing from *Notizie degli scavi* suggests it was the immediate continuation of the wall now across the street between via Salandra and via Carducci (**Section 1**). In 1883 while laying the course of the via delle Finanze, the intermediary section was found (**Section 2b)** and was reported to have been built in two materials: an interior core of "tufi giallognoli di S. Saba" (*tufo giallo della via Tiberina*?) and an exterior rivetment of "pietre di Vigna Querini" (*tufo del Palatino*?).[875] As Lanciani's sketch of the excavtion shows, the exterior blocks were smaller (course heights ranging from .24-.27 m) than the interior core, which showed a module of about one block to two of the revetment blocks, hence ~.58-.64 m.[876]

For this reason, Lanciani assumed that the wall to the north (**Section 1**) was originally a revetment of a *tufo giallo* core, and that the section to south, that under the ex-Ministero dell'Agricoltura here under consideration, represented only the core of the wall lacking its *tufo del Palatino* revetment.[877] This is of

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[874] Admittedly, this section presents a problem in general for dating masonry of this type, and hence presents importance to the study of the most important archaic structure, the Temple of Jupiter Optimus Maximus. Cifani offers frustratingly little in support of his argument: he suggests that the cement foundations of the wall can comfortably belong to a restoration "come abbiamo visto" but nowhere else confronts the problem, and he cites only very general discussions of the wall in Coarelli's *Roma* guidebook and in Coarelli 1995. I remain unconvinced that it was possible to situate a massive ashlar wall on a cement foundation without removing the wall itself. See Blake 1947: 138-39 who recognizes the importance of the cement but suggests a date of the first century more broadly.

[875] Lanciani himself discovered and recorded the quarries at Vigna Querini, 2 km beyond the *Porta Esquilina*; the stone, part of the same geological formation as *tufo del Palatino*, is common in archaic architecture, cf. Cifani 2008: 221, 229.

[876] Lanciani's drawing is reproduced by Säflund 1932: 81, "Quir. *f*."

[877] Säflund reports an excavation journal entry concerning the ex-Ministero dell'Agricoltura section: "Ai quali si deve aggiungere il rivestimento di nenfro (=cappellaccio)." In his search for a full archaic Roman circuit wall, Cifani misinterprets this egregiously, suggesting that Lanciani's sketch shows that the *tufo del*

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utmost importance in reconstructing the nature of the Republican wall as it appears likely in this spot that blocks of both modules were used in tandem. Moreover if the *tufo giallo* formed the interior of the wall, it cannot have been earlier than the *tufo del Palatino*, but rather was either contemporary or an earlier phase.

Finally, it is from the *agger* material of this wall that Boni recorded the find of a single fragment of a nondescript Attic red-figure vase, which Gjerstad suggested dated the entirety to the early fifth century.[878]

3. **Giardino ATAC in Largo Montemartini (Agger)**
Max. length 24 m; ht. 2.75 m; w. 1.50 m; entirely in tufo del Palatino but reinforced with later cement pilasters; the blocks are .24-.27 m high, .49-.60 m wide, .70-.89 m wide and twelve courses remain.

A large wall entirely of *tufo del Palatino* forms here the interior casement wall of the *agger*, an extension of the same wall seen underneath Termini (**Section 5d**).

4. **Corner of Via Volturno and Via Enrico de Nicola**
Max. length 2.40 m, five courses all of tufo giallo della via Tiberina; block hts. vary from .54-.58 m; Säflund 1932: 68 reported seeing four masons' marks, but none is still visible.

Corresponding to interior wall of the *agger* (**Section 3**) is the nearby wall that formed the exterior casement of the *agger* at this point. The wall is badly conserved, but obviously continues **Section 5c.**

5. **Piazza dei Cinquecento (Stazione Termini)**
At the N end of Piazza Cinquecento and within Stazione Termini are four relevant sections of the wall:

Section 5a
Max. length 30 m; ht. 3.12 m; 3.00 m thick. Some blocks show anathyrosis. No masons marks; sparse lifting tong holes. Four building stones are used indiscriminately: pietra sperone (Lapis Gabinus), peperino (Lapis Albanus), tufo giallo della via Tiberina, and tufo lionato (Anio).[879] Courses are about the same height as for other tufo giallo sections if only slightly smaller (.52-.60 m).

Palatino was reinforced (Cifani of course presumes a later date) with the *tufo giallo*. But Lanciani clearly wrote above the smaller blocks "*restauro*" interpreting them as a later phase to the *tufo giallo*. Furthermore, Lanciani's sketch also shows the *tufo giallo* bedded directly against the earthen *agger* so that if indeed the *tufo giallo* represented a reinforcement, as Cifani would have it, the builders would have needed to carve out the entire *agger*, remove all the wall, then rebuild everything from the start. Instead, Lanciani's sketch if accurate is strong evidence against Cifani's construction here of an archaic wall later rebuilt in *tufo giallo*.
[878] Gjerstad 1953 I: 414-15 with illustration, see Appendix 4; see also *id.* 1954.
[879] This is now very well illustrated in table II included with Barbera and Magnani Cianetti 2008.

The northernmost extension oriented southwest to northeast of the wall in the piazza is built with four small spur-walls extending to the northeast, or to the exterior face of the wall. Also interesting is the presence on Lanciani's notes, as published by Säflund, of another stretch in this immediate vicinity of a wall with an interior hemicycle extending into the *agger* and not unlike that found in Piazza Manfredo Fanti (**Section 6**). Säflund convincingly argues that the hemicycle is not this section but rather an adjacent destroyed section probably to be located where the modern road passes west of Piazza dei Cinquecento.

As for the stretch in question, the four spur walls extend on average 2.50 m from the wall face and are otherwise unparalleled. The wall section, too, with its mix of no less than four building stones is equally unique and in all likelihood belongs to later restructuring of the wall perhaps related to the construction of the Aqua Marcia (see **5b**).

Section 5b The *Porta Viminalis*[880]

Two sections are in lapis Gabinus with large blocks: I) Max ht. 2.48 (3 courses = avg. ht. .83 m), block lengths range from 1.20 to 1.75; II) Max ht. 1.25 (2 courses, .50 and .75 m), one large block measures .75 x 2.15 x .91 m. In these sections, ferrei forfices holes are seen positioned correctly in three places on section 1, and the holes are also very deeply cut. The third section is of tufo giallo della via Tiberina and reaches a max l. of 5.42 m, but is very poorly preserved, rising only in a single course fragmentary above ground.

The *porta* is seen in three small sections of wall, the most SE located 28 m from the end of **Section 5c**.[881] Together, the three fragments form both of the interior walls of the gate as it moved through the *agger*; Lanciani's excavation report recorded silex paving stones in the gap between the fragments.[882] The actual paved road bed was only 3.25 m across, but the gap between the fragments of the wall at this point are 13 m distant to allow for the passage not only of the road but also for the remains of an aqueduct. The aqueduct, probably the Aqua Marcia,[883] postdates the construction of the first *porta Viminalis* in the fourth-century wall: could it be that the wall at this point was fully restructured to allow for the path of the aqueducts?[884] This would explain why the stone of two fragments in *lapis Gabinus* at this point is dissimilar to that of the long wall section to the S (**Section**

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[880] The most recent mapping attempt of this gate in Barbera and Magnani Cianetti 2008: tb. 1 is, as far as I can tell, completely wrong, putting the *Porta Viminalis* to the NW of **Section 5a** rather than in between the two. In this way, the gate no longer relates at all to these three wall fragments, which are left unexplained, and instead floats arbitrarily in the topography. This change is unexplained in the text.

[881] On the name see Coarelli in *LTUR* III "Porta Viminalis" p. 334 as well as the famous altar to Verminus (*CIL* VI 3057).

[882] *Bull.Com.* 1876 210.

[883] The Aqua Marcia, Rome's third aqueduct and of a mid-second century B.C. date, is the earliest candidate; see Noreña in Haselberger *et al.* 2002, "Aqua Marcia" p. 48; for a review of the archaeology see Gautier di Confiengo 2007: 226-27.

[884] The *Anio Vetus* may have instead been tunneled under the *agger*, see Gautier di Confiengo 2007: 223-24 on the *Porta Collatina* for a discussion: its specus was found by Lanciani 16m below (whether below ancient or modern ground level is unclear) in the area between the *Porta Viminalis* and *Porta Esquilina*.

5c), and it also may serve to explain the unusual mix of both stone and form in the section to the N, perhaps restored at the same time (**Secton 5a**). Because of the aqueduct, unfortunately, this gate is probably not as it stands representative of the initial fourth century phase; the single small section in *tufo giallo della Via Tiberina* may represent an earlier phase but is too corroded to be of much aid in reconstruction.

Section 5c Piazza dei Cinquecento (Stazione Termini)
Max. length 94 m; ht. 10.00 m (17 courses = avg. ht. .59). Lifting holes, masons' marks, and masonry seams all present (see below). Primarily tufo giallo della via Tiberina but with trace blocks of tufo lionato (Monteverde) as well as a few blocks of tufo del Palatino, which Säflund recorded but which I am unable to locate. Block ht. and w. is fairly close to .59 on avg. +/- .08, but with slightly taller blocks (~.63) in the lowest three courses. Block length is considerably more variable, perhaps intended to approach 1.77 m (6 RF of .295, giving a ratio of 1:1:3), but normally found shorter and even as short as 1.09 m.

The impressive section of wall standing in the piazza in front of Stazione Termini extending at a slight curve to the northwest. The preserved section begins at a distance of 44 m to the south of **Section 5a**, and 28 m to the south of the southeast wall of the *Porta Viminalis*. The wall is 4.00 m thick at the eighth course but tapers from top to bottom on the interior (west) side forming an offset. This fact along with the neat alternation of courses of headers and stretchers above may suggest that the first eight courses formed the buried foundations.[885] The blocks are finished in a slightly trapezoidal manner such that the upper corners make better contact than the lower; this has been noted in most sections of the *tufo giallo della via Tiberina* wall but is plainly visible here. This section was the exterior casing of an earthen *agger*, much of which has been reported in 19th century excavation in the area, and this section corresponds to the internal casing wall **Section 5d** located 40 m to the west as well as to a *fossa* excavated to the east.[886]

     Restoration work on the wall in the 1950s with the construction of Termini and then again in the past decade has sacrificed much of the marks and holes in the blocks in order to consolidate and to preserve the whole monument. However, Säflund's drawings from the 1932 show the prolific presence on the west (interior) side of masons' marks of several varieties. Lifting holes for *ferrei forfices* are found on the top as well as the bottom margins of block faces with little discretion: a block with a hole on the bottom end is found as high as the fourteenth course. Cranes with lifting tongs were then not employed to place even the upper courses of ashlars.

     As has long been recognized, and with fundamental import to our understanding of the construction method, this section of the wall contains two masonry seams, what has been called in brickwork a "pig" or a juncture where the

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[885] Suggested by Säflund 1932: 58 as well as Picozzi and Somella 1976: 22-23.
[886] Dimensions for the entire system are discussed in the main text, and see Aurigemma 1961-62.

courses of the wall do not knit together but show a clean division vertically from top to bottom.[887] The wall is in this way divided into three units, the central one with both ends preserved is 36 m long, the southern section is only 20 m long though its corresponding seam is obliterated by Stazione Termini; the northern section reaches 38 m before the section of wall ends. It is likely that these sections correspond to the apportioning of the labor force for the wall's construction, as discussed in the main text.

Section 5d: McDonald's (Stazione Termini / Agger)
Max. ht. 3.85 m; max. length 5.5 m; thickness 1.35 m; tufo del Palatino ht. .30 - .25 m.

These blocks now incorporated into the downstairs McDonald's of Termini Station are part of the interior (western) retaining wall of the *agger* at this point. The interior (western) face is well worked; the exterior (eastern) is much rougher and must have originally attached into the earthen *agger*. Cifani includes this section in his documentation for the Archaic wall, basing this conclusion on stone-type.[888] The *tufo del Palatino* here, however, corresponded in its last phase, at least, with the exterior wall of the *agger* in *tufo giallo* (**Section 5c**). Piccozzi and Somella argue that this interior wall makes up part of an integral defensive system of the fourth century.[889]

6. **Piazza Manfredo Fanti**
   Max. length 23.00 m; max ht. 1.80 m; tufo giallo della via Tiberina ht. .53-.63 m.

A 23 m long stretch of wall running S-N but preserving an oblique angle, entirely of *tufo giallo della via Tiberina*. The module and construction technique in courses of headers or stretchers is equal to that nearby in **Section 1**. Lifting holes were found on both the upper and lower margins of blocks, and originally the west face had a large number of masons' marks dominated by 13 examples of an upper-case "E," though Säflund had already found many difficult to make out. The wall here was 3-3.50 m thick (Säflund records a maximum of 5 m), and in cleaning work in the early 1990's was recorded at a height of 1.80 m preserving three courses of blocks.[890] Course heights vary considerably between .53 and .63 m.
	There are two interesting architectural features to this section. The first is the presence of the *agger* and *fossa*, both recorded by Lanciani in the 19th century. The *fossa* was in this case particularly deep: he notes it as beginning 7 m beyond the wall (east) and extending 18 m below ground level; just south of the same

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[887] Pigs discussed in Lancaster 1998: 291. See this fact mentioned by Aurigemma 1961-62: 24 as the wall was in fact splitting at these junctures in the 1950s when repairs were made to consolidate it.
[888] Cifani 1998: 371-72.
[889] *RMR* 23-25.
[890] Caruso and Volpe 1995: 187-88.

area, on via Principe Amadeo, the same *fossa* extended 19.60 m below the ancient ground level.

Second is the unusual presence on the interior (west) side of this wall, exactly at the oblique angle, of a hemicycle comprised of the same *tufo giallo* blocks in construction contemporaneous to the main section of the wall. The interior of the hemicycle between the curved wall and the main course of the wall was open. The function of this feature has been variously described as a buttress, a tower, or most recently as a guard post.[891] As Caruso and Volpe rightly point out, a buttress at this point (and within the *agger*) would have been unnecessary. Their interpretation of the structure as a guard-post is acceptable, although we are left to question why this was constructed within or even on top of the *agger*, rather than extending out from it.

7. **Via Carlo Alberto 45**
Max length 4.40 m, height 1.00 m. Tufo giallo della via Tiberina height .60-.63 m, width .55 - .59 m, length .83-1.15 m.

Fragmentary remains of three courses are encased in the wall of a modern building. No masons' marks or lifting holes.

San Vito
Excavations of a secton of wall in 1972 in the vicinity of the *Porta Esquilina* under S. Vito are still not fully published.[892] In his presentation to the reissue of Säflund, Coarelli pointed to these remains without elaboration as definitive proof of the existence of a prior circuit wall. Cifani includes them in his catalog of sites for the archaic wall.[893] This short section appears to follow a different course entirely than the nearby *Porta Esquilina*, represented by the later Arch of Gallienus.[894] If this excavated section does indeed represent a prior wall on the Esquiline, then we may suppose that the fourth century wall completely restructured the *Porta Esquilina*, and represented a construction *ex novo* in this area south of the *agger*.

8. **"Auditorium of Maecenas"**
Two sections, max length 3.00 m, ht. 1.10 m; tufo giallo della via Tiberina avg. ht. .60 m, avg. w. .60 m; l. 1.42 m.

Within the southeast wall of the so-called Auditorium of Maecenas are found two small sections of the circuit wall, both consisting of three or four badly worn

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[891] Guard post: Caruso and Volpe 1995: 186; previous opinions can be found in Thein in Haselberger *et al.* 2002: "Muri: Cispius" pp. 173-74.
[892] Summary notice by Santa Maria Scrinari 1979.
[893] Cifani 1998: 373.
[894] Several remains were reported in the 19th century around the Arch of Gallienus, which is now commonly held to be a rebuilding of the earlier *Porta Esquilina*. See Säflund 1932: 43-44, Thein in Haselberger *et al.* 2002 "Porta Esquilina" p. 195. Also, **Section 7** on Via Carlo Alberto must be assumed to continue the wall in that area.

blocks of *tufo giallo della via Tiberina*. Säflund noted quarry marks on several blocks consisting of three horizontal or vertical lines similar to examples found in Piazza dei Cinquecento (**Section 4**). Block hts. range from .57-66 m; lengths are highly variable as the stone is corroded. A much larger stretch continuing these two sections was recorded in 1874 extending almost due north from the Auditorium.[895]

9. **Via Mecenate 35a**
   Six courses of *tufo giallo della via Tiberina* blocks are visible in the entrance-courtyard of a private apartment building. The construction method, with courses of headers and stretchers, is identical to that at **Section 4** and other portions of the wall.

Caelian

Several blocks of the wall in *tufo giallo della via Tiberina* are still visible on the S side of SS. Quattro Coronati, *contra* Picozzi and Sommella.[896] They do not, however, appear *in situ*, as Säflund had tentatively suggested.[897] The number of blocks, though, would suggest that the wall ran very close by to the church, where its blocks could have been conveniently reused in bulk. This in turn would suggest that the wall's circuit on the E Caelian, between the *Porta Caelemontana* and the *Porta Querquetulana* ran much closer to the natural topography of the hill, not in the broad curve down in the flat plain beneath the hill as has recently been represented in the map of Haselberger *et al.*, although see the remarks in the accompanying text by Thein on SS. Quattro Coronati (172).[898]

  A number of *tufo giallo* blocks are also found reused in the wall adjacent to the Oratory of Santa Silvia, just uphill from S. Gregorio Magno. These blocks prove enigmatic: though Ferrea recently supports the hypothesis that they derive from the circuit wall, they are found here well interior to the actual circuit, and must have been brought some distance.[899]

10. **Via di S Paolo della Croce (Arch of Dolabella and Silanus / Porta Caelemontana?)**
    Margin of courses visible, max width of .10-.15 cm. Tufo giallo della via Tiberina.
    Adjacent to the northern pier of a travertine archway of an Augustan date (AD 10, *CIL* VI 1384 for the archway inscription) are the edge of five courses of ashlars in *tufo giallo della via Tiberina* now almost completely englobed in the later brickwork remains of the Neronian *Aqua Claudia*. The material is consistent to that found in other traces of the fourth century wall; the courses are approximately 59 cm high though difficult to measure.

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[895] Vespignani *Bull.Com.* 1874, see Säflund 1932: 43 "Esq. *f.*" with a reproduction of the plan.
[896] *RMR*: 9, "ora non più riconoscibili."
[897] 1932: 40, "Caelian A."
[898] Krautheimer in *CBCR* IV pp. 12, 14 notes only reused material, which he attributes to a Carolingian phase of SS. Quattro Coronati based on his general interpretation that reused ashlars from the wall were prominent in church construction of that period.
[899] Ferrea 2002: 64-65; Säflund 1932: 39.

It was on the presence of these blocks that Colini argued that the travertine arch was a later remaking of the original *Porta Caelemontana* into which an important access road to the Caelian, the ancient name of which is not known, entered the walls and became the *Clivus Scaurus*.[900]

Porta Capena

Several excavations in the 19th century revealed sections of wall in the valley between the Caelian and Aventine where the Via Appia exited the walls through the *Porta Capena*. None of these sections remains visible, but it is worth noting that in the evidence recorded by Säflund, the material is listed as *tufo lionato* (Anio), and the module (min. .57 x .55 x 1.20 – max. .63 x .63 x 1.41 m) is in accordance with the wall at Piazza dei Cinquecento or Piazza Albania.[901]

Aventine

Climbing up from the Porta Capena, the wall skirted the "Lesser" Aventine. This area was explored in some depth by the Sovraintendenza Communale in 1982-83 in preparation for enlargement of the UN Food and Agricultural Organization (FAO) building, which now occupies much of the area immediately south of the Porta Capena. We can now reconstruct how the wall ran along the slope of the hill to the base of S. Balbina, where it made a sharp turn from southward to westward along the base of S. Balbina. All material associated with its course here was *tufo giallo*.[902] From there, following along the natural topography, the wall arrived at S. Saba, where a photo from 1864-66 by Carlo Baldassarre Simelli shows substantial ashlar walls below the porch of the church.[903] In these areas, Lanciani had noted an *agger* and even a *fossa*, although so far only one stone wall has been located, as opposed to the double-wall system of the Viminal *agger*.[904]

Tufo del Palatino is scarce on the Aventine, despite its importance dating back to the archaic period—this is where Remus watched the augury of Rome. Lugli raised the possibility of its exclusion from the earlier (i.e. archaic) circuit wall.[905] Cifani relies on early excavation reports to suggest three early sites.[906] The overwhelming evidence now visible on the hill suggests, however, that the bulk of building activity belongs to the fourth century and later: if the hill did have an archaic wall, it was probably entirely restructured after the Gallic sack and again in the period of Sulla's invasions. The best evidence for an Aventine wall in *tufo del Palatino* is that of the impression of ashlar blocks on the lower exterior of a cement core of the Sullan wall to the southeast of Piazza Albania. These impressions show traces of ashlar blocks of c. .60 m height, thus

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[900] Colini 1944: 29-35.
[901] Säflund 1932: 34-39.
[902] Di Manzano and Quinto 1984, esp. 79.
[903] The photograph was taken as part of Parker's work and is republished and identified as the Servian wall in Cavazzi, Margiotta, Ramieri, and Tozzi p. 68, fig. 91/143, cf. also Leone 2010, 235. Säflund 1932, 31 cites *Quattrocento* descriptions.
[904] *BCom* 1892, 284, and indicated on *FUR* 41.
[905] Lugli 1957: 265.
[906] 1998; sites 18-20.

presumably of *tufo giallo*. Underneath the cement, excavations discussed and photographed by Parker showed seven courses of *tufo del Palatino* blocks beneath the cement structure. Troubled by this apparently problematic appearance of *tufo del Palatino*, Säflund dismisses these as an error produced by the angle of Parker's camera; Gjerstad also suggests that the blocks beneath and the core were to be dated simultaneously to the whole structure. Instead, Quoniam and Coarelli see this situation as analogous to the wall on the northern Aventine, where they argue that the *tufo giallo* wall was directly superimposed onto an earlier phase in *tufo del Palatino* (**Section 13**).[907] According to them, this small section would represent the only evidence for *tufo del Palatino* on the entire enceinte of the "Lesser" Aventine.

11. **Piazza Albania**
Max. length 42.00 m, height 8.00 m, blocks of tufo lionato (monteverde, anio) and tufo giallo della via Tiberina, 14 courses in total (= avg. h. .57 m) encasing a cement core. A well-preserved arch in tufo lionato rises from the 8th course with 11 cunei.

This well-preserved stretch of wall must date to later (probably Sullan-period) restorations, to judge from the concrete nucleus. Still, much of the stone may derive from an earlier phase, and Säflund was able to make the barest hint of a masons' mark on the header of one of the *tufo giallo* blocks.[908] Just a few meters downhill from the stretch of wall on Via di S. Anselmo (**Section 12**), which lacks the cement core and is probably still part of the original fourth century phase, this long section instead shows the frequent repairs to this crucial portion of the wall where the low valley split the two Aventine peaks. It also shows how drastically different specific repairs could be from one meter of the wall to the next: perhaps to allow for the artillery arch, this entire section was remade on a concrete core, whereas the old original wall still sufficed just uphill.

Other traces of this same wall phase in *opus caementicium* and a cladding of ashlars remain identifiable at various other points on the Aventine, here and also near Santa Balbina.[909]

12. **Via di S. Anselmo**
Max. length 43.00 m., height 6.90 m, width at base 4.50 m, width at 5th course 4.40, width at 9th course 3.15. Almost entirely tufo giallo della via Tiberina with a few blocks of tufo rosso a scorie nere and tufo lionato (Monteverde). Avg. course ht. (=block ht.) .57 m, however the upper courses are generally broader and the lower slightly narrower. Avg. block length .54 m but some examples are as small as .35. Avg. block length 1.28 m but highly variable. Courses laid entirely in headers or stretchers.

[907] Saflund 1932, 28-31; Gjerstad 1954, 62; Quoniam 1947, 59-62; Coarelli 1995, 16; see Cifani 1998, 373.
[908] Säflund 1932: 23.
[909] Picozzi and Somella 1976: 26-31; Säflund 1932: 33-34.

Well preserved section of wall reaching a height of 12 courses and showing the tapered profile with the lowest five courses offset. Anathyrosis is visible on several blocks. Säflund considered the bottom section of the wall to have been underground as a block in the second course displayed a masons' mark (a simple cross). The offset taper also suggests that the lower five most courses of this wall represent the foundation. He also reported that the interior part of the wall was cut into the natural soil up to the fourth course and then the remainder was supported by an artificial mound of clean soil reaching the wall at a c. 50° angle. This is good evidence to suggest that the construction involved significant preparation of the existing landscape including the carving back of the hillside in order to create space for the wall's course on the sloping terrain. Lifting holes are sparse, but some are in fact disposed on the lower margin of stretchers.

As they are deployed in blocks within lower courses, the other building materials are mixed in with the *tufo giallo* in a way to suggest that the entirety belong to the same phase rather than to successive restorations. The module, the construction method, and the quality of the *tufo giallo* all suggest that this relates strongly to the same phase as that at Piazza dei Cinquecento. Lugli considered this a later phase, perhaps related to the repairs during the Hannibalic war, but as the wall is cut into the virgin soil of the hillside, this seems unlikely unless we accept that this area of the city was left unfortified in the fourth century circuit.[910]

13. **Santa Sabina**
Walls underneath the cloister of Santa Sabina were first fully published by Quoniam, who remarked on the interesting fact that the walls are composed of three to four courses of *tufo del Palatino*, directly on top of which were placed coursed blocks of *tufo giallo*. Interpretation of these mixed-composition walls has been divided between Quoniam, who considered there to have been two phases with the lower Archaic and the upper Mid-Republican, and Gjerstad and Lugli, who considered both materials of the same phase.[911] Lugli, who doubted a 6th century wall on the Aventine to begin with, brought up the comparison of the Castrum of Ostia, which also showed two stones used one-beneath-the-other in a single phase, probably to be dated to the 4th century.[912]

Forum Boarium area
From the foot of the Aventine by the river to the Capitoline, across the Velabrum, the defense circuit of the fourth century shielded completely the Palatine hill, removing its existing walls, some of which had dated back to the 8th century, from the city's external defenses.[913] The crucial path of the wall west of the Palatine and running from the *Porta Trigemina* to the *Porta Carmentalis*, however, has been one of the

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[910] Lugli 1957: 264 ff.

[911] Quoniam 1947; *contra* Gjerstad, 61 mostly on the grounds that *tufo del Palatino* need not be restricted to an Archaic date; cf. Lugli 1957, 266.

[912] 1957, 266. The building of the castrum walls is not uncontroversial, but a late 4th century date for the entire structure in both stones now has some basis in stratigraphic excavation, as see Martin 1996, 35-37.

[913] S.v. N. Terrenato "Murus Romuli" *LTUR* III: 315-17, the Palatine's archaic defenses in fact seem to have been destroyed by the end of the 6th century.

more disputed sections of the Republican wall.[914] Further confounding the situation is the fact that by the early second century, a significant embankment on the Tiber meant that the wall running parallel to it now became defunct and parts of it went out of use.

On via del Teatro Marcello, a section of *tufo del Palatino* blocks all aligned as stretchers and supported by brickwork has convincingly been identified as a late antique creation and not part of the original circuit, though perhaps made of spoliated material taken from its course.[915] The only definite stretch of the wall in the N Forum Boarium is that excavated in 1959 under the Vicus Jugarius, just behind the twin temples of Mater Matuta and Fortuna. Here, a wall of *tufo giallo della via Tiberina* 3.95 m thick and running in a southwest-northeast direction—perpendicular to the Tiber—for 19 m with a possible double-gate opening (*Porta Carmentalis*?) was found with good ceramic evidence for a date in the early 4th century.[916] This probably gives us the north part of the Forum Boarium; unfortunately, the south side once reconstructed from remains under piazza Bocca della Verità[917] is now confirmed not as a single defensive wall but as two parallel walls of a structure of a different nature. Ruggiero's critical reexamination of this and other remains in the piazza and around S. Maria in Cosmedin suggests that other tuff-structures remains are part of scattered and separate walls, most of them too thin to be part of the course of the defensive wall.[918]

In between the southwest-northeast running wall to the north and whatever lay at the south, in the area of the *Porta Trigemina* at the foot of the Aventine, the wall continues to be difficult to reconstruct, and an older theory suggested that the wall at this point consisted only of two separate branches running from the respective corners of the Capitoline and Aventine directly to the river bank.[919] The orientation of the section under the vicus Jugarius does suggest that such branches perpendicular to the hills existed, but two factors also speak towards a wall at least in its initial phase running parallel to the river between these two arms: 1) the existence of an intermediary *Porta Flumentana* not precisely located but presumably in the mid-Forum Boarium, between the *Porta Carmentalis* and the *Porta Trigemina*, and leading to the *Pons Aemilia* but already mentioned in the events of 384 B.C.,[920] and 2) the probable identification of remains of this stretch just to the east of the Temple of Portunus and also in *magazzini* along the Tiber, which as Ruggiero demonstrates, are on a similar orientation parallel to the river bank.[921] For this reason, I would tentatively restore a maximalist construction of the wall at least in its first (fourth-century) in a stretched H-shape, with arms running perpendicular to the Tiber from

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[914] See the crtical study of I. Ruggiero 1990 and the cautionary remarks of Thein in Haselberger *et al.* 2002, "Muri: Forum Bovarium-Tiberis."
[915] Ruggiero 1990: 26.
[916] Summarily published by Vergili 1979; Ruggiero 1990 returns to the excavation reports.
[917] Coarelli 1988: 36.
[918] Ruggiero 1990.
[919] That of Kiepert and Hülsen 1896: see Coarelli 1988: 14 fig. 2.
[920] Palmer 1976-77; Borbonus and Haselberger in Haselberger *et al.* 2002: "*Porta Flumentana.*"
[921] Ruggiero 1990: 29.

the Capitoline and Aventine, and then with a long wall parallel to the river connecting the two.[922]

Capitoline

Like the Palatine, overconstruction for centuries on the slopes of the Capitoline has made a reconstruction of the hill's Republican defensive works difficult, though we can suppose that the hill was included in the fourth century wall, especially as a project to shore up it's stone defenses may have been the initial phase of the project to construct the entire circuit (cf. Liv. 6.4.12).

14. **Via or Salite delle Tre Pile**

Two sections, max length 2.15 m, height 3.25 m. Tufo giallo della via Tiberina with reportedly a single slab of tufo del Palatino, but the latter is now difficult to confirm.

A short section of ashlar blocks in *tufo giallo della via Tiberina* and *tufo del Palatino* is still visible, though heavily corroded, in a well on the slopes of the hill. Very fragmentary, the original contained two sections, the first 1.00 m long and comprising five courses to height of 2.36 m, the second 2.15 m long of seven courses and 3.25 m high. Säflund reported lifting holes on both the upper and lower margins of the blocks.[923] The left section has a slab of *tufo del Palatino* (more precisely, in this case, likely *tufo del Capitolino*) on top of blocks of *tufo giallo*. The mix of stones, also noted by Picozzi and Somella, is noteworthy as it suggests that this section at least was not built from a singular supply of material; it also demonstrates the fact that the local and imported stones were employed at the same time.

This section would lie just below the platform of the Capitolium, and thus Cifani dismissed it as part of a terrace-project associated with the temple. Coarelli has also argued for a double wall on the S slopes of the Capitoline with the upper, the Via delle Tria Pile section, being part of a terrace wall for the Capitolium (1995: 36). If this is the case, this section is no longer evidence of the circuit wall, but it remains noteworthy as it probably belongs to the terracing of the Capitolium recorded by Livy in 388 (6.4.12) and is still connected to the larger renovation of the hill's defense in those decades. Säflund instead suggests that this section represents the first phase of the wall running across the saddle between the two peaks of the Capitolium, and that **Section 15** represents a later attempt to shore up defenses in the Sullan period.

15. **Via di Teatro Marcello / Via Tor de' Specchi**

Max length 10 m, height 8 m.[924], Tufo del Palatino .85 x .58 x .27 m avg.

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[922] This essentially follows the schematic of Wiseman 1990, see Thein in Haselberger *et al.* 2002, "Muri: Forum Bovarium-Tiberis" p. 176 fig. 13.
[923] 1933: 100-1 "Cap. D."
[924] The section was not fully excavated, but Colini (in Muñoz 1930: 36) estimated that it would have descended 8 m down to the ancient level.

Running downslope but parallel to **Section 14** is another stretch of wall in *tufo del Palatino*. At the moment of its discovery in 1930, the wall still stood 8 m high and over 10 m long. Colini noted that the direction of the wall continues a face of the natural tuff of the Capitoline slope where it cuts back essentially where Salita delle Tre Pile ends today: in this case, it may not have continued further east where the rock face was otherwise remained steep. That is, after Colini's thinking, there is no reason necessarily to extend this section E or, for that matter, continuing around the hill: it was a supplement for "uno dei punti più deboli della difesa del colle."[925]

The dating is controversial: Säflund saw this as very late and relating to the long section of similar stone on the Quirinal (**Section 1**), both of which he related to the Sullan period refortification. Cifani would see this as archaic based on the material and module, and it is hard to argue against his claim for the wall's antiquity. There remains, in that case, the problem of the need for two parallel walls along this area of the Capitoline. In other circumstances (e.g. the Temple of Athena Nike at Athens), the steepness of a hilltop temple's podium such as that beneath the Temple of Jupiter Optimus Maximus (**Section 13**) would be sufficient. The answer may lie in the fact that this section of wall was intended at a very early date as a supplement to the hill's natural topography but was not part of a full circuit either around the city or around the Capitoline itself. The upper wall may instead be part of a more systematic circuit built at a later date and further upwards along the slope of the hill, in connection with the restructuring of the Capitolium platform in 388 B.C. (Liv. 6.4.12).

16. **Garden in front of the Museo del Risorgimento (Porta Fontinalis?)**
The single course of blocks is completely englobed in the road surface and impossible to be measured with much precision. 5.10 m max. length; 4.10 max. width; entirely tufo giallo della via Tiberina .50-.60 m wide; no lifting holes as in no place are the sides of the blocks possible to be observed.

A small portion of the wall is possibly still visible in front of the Museo del Risorgimento of *tufo giallo*, and may relate to the Porta Fontinalis, leading out to the Campus Martius.[926]

Capitoline to Quirinal (Area of the *Forum Caesaris* to *Forum Traianis*)
The crossing of the wall from the NE slope of the Capitoline along a high-lying saddle to the slope of the Quirinal was completely destroyed in antiquity by the removal of the saddle itself in the preparatory excavation for the area of Trajan's Forum, as the inscription on the base of the same emperor's column makes famously

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[925] Colini in Muñoz 1930: 36.
[926] Von Gerkan 1941, 12. The configuration of these blocks is unusual, and von Gerkan suggests they were the connection point between three sections of walls, perhaps related to the gate-structure of the *Porta Fontinalis*, which is the accepted view as followed by Coarelli 1995, 31 and Meneghini 2009, 19-21.

clear (*CIL* VI 960). Recent excavation of the *Fora* of Caesar and Trajan, however, have helped to clarify the ancient situation: the ashlar remains in Salita del Grillo once thought by many to have been part of the ancient wall now appear to belong to rectangular structures (*domus*?) on the slopes of the Quirinal.[927] The course of the wall now is pushed somewhat to the north and directly through the hemicycle of Trajan's markets; the wall ran slightly down-slope on the external (north) side of the saddle between Quirinal and Capitoline. Most relevant here is the fact that the exclusion of Salita del Grillo from the circuit wall now reopens entirely the question of this section's existence in the archaic period: we now lack physical evidence of the wall from the *Porta Fontinalis* (the *Via Flaminia*) and the *Porta Sanqualis* (Piazza Magnanapoli, **Section 17**). With the *Porta Sanqualis* constructed of *tufo giallo della via Tiberina* on virgin soil, and the *Porta Fontinalis* in *tufo giallo* as well (**Section 16**), we may suspect that the Quirinal and Capitoline were not fully integrated until the fourth century, giving more credence to the literary tradition that Romans took refuge upon the Capitoline (not behind the walls of the *Via Flaminia* which would represent the natural N entrance to the city center) during the Gallic invasion.

        In very recent excavations in front of the Torre delle Milizie, at the back of the exedra of Trajan's Markets, Meneghini reports "two or perhaps three" blocks of "*tufo del Palatino*" set directly onto the original bedrock at an angle parallel to the turn of the hill and set directly onto the bedrock. These are interpreted by him for reasons of material, block-size, and orientation as the original line of defense.[928] My own observation of these blocks, however, suggests that they are not from the typical *tufo del Palatino* elsewhere used in the wall, but rather a more reddish stone, more similar to the living rock of the Quirinal at this point. There is no reason to associate these few blocks with the course of the circuit wall.

Quirinal
The Quirinal's northwest line of defenses show several sections of wall, still traceable, in *tufo del Palatino*, such as those in the traffic circle of Largo Santa Susanna or at Via XX Settembre no. 12.[929]

   17. **Piazza Magnanapoli (*Porta Sanqualis*)**
     Max. length 9.50 m, ht. 2.20 m; tufo giallo della via Tiberina with blocks avg. .59 cm, ht. .53, length 1.28 m (but highly variable, from 1.00-1.54 m). Lifting holes for ferrei forfices are visible here disposed at both the bottom and the top of blocks.[930]

     The traffic roundabout in the middle of Piazza Magnanapoli contains three courses of ashlars in *tufo giallo della via Tiberina*. Five courses were seen by

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[927] Meneghini and Santangeli Valenzani 2007; Meneghini and Santangeli Valenzani 2007: 22-24 *contra* Picozzi and Somella 1976: 16-17 and Cifani 1998: 365 with extensive prior bibliography.
[928] Meneghini 2009, 20 fig. 17. The bend in the wall from the slope of the Quirinal to the saddle is reconstructed by him to include a Republican well within the defenses, see *op. cit.* 23, fig. 23.
[929] Cifani 1998: 365-68.
[930] I was only able to see holes on the bottom of blocks, but see Säflund 1932: 91 "Quir. Z."

Säflund, who also reported the entire section to have been 9.50 m long. At the time of its discovery, it was drawn by Lanciani with three buttresses or door posts slightly extending to the E.[931]

The east-west orientation of this section in respect to the south-north course of the wall that can elsewhere be recorded from earlier (now destroyed) sections in the same area has suggested that it was part of an entrance vestibule for the *Porta Sanqualis*.[932] Based on Lanciani's 19th century drawings, Säflund also reconstructs here a second wall ("*contromuro*") to the north of this stretch. Presumably between the two was an earthen fill about 9 m thick, a sort of bastion or *propylon* protecting the entranceway. The fact that blocks were placed using earthen ramps—hence the upside-down *ferrei forfices* holes—may indicate that the bastion was originally inserted into a casement-wall construction with an earthen fill, making the use of earthen ramps at this point more practical. The identification of the gate as the *Porta Sanqualis* rests on the location of the *Porta Fontinalis* instead as the gate through which the *via Flaminia* passed at the foot of the Capitoline, although no ancient source confirms this fact. A *porticus* built in 193 *ab porta Fontinali ad Martis aram* (Liv. 35.10.12) would have had to have been incredibly long to reach from the slopes of the Quirinal all the way to the central Campus Martius where the altar of Mars may have been, and it would have navigated fairly steep topography: rather this portico is better interpreted as running along an east-west offshoot of the Flaminia that ran into the Campus Martius (as Säflund 1932: 207). Carafa has radical revised the course of the wall on the north Quirinal and calls for this gate to be the *Fontinalis*. But he would have the Temple of Semo Sancus, which we know gave its name to the *porta Sanqualis* stand much closer to the *Porta Quirinalis*, whereas we know from Varro that the Temple of Semo Sancus was on the part of the Quirinal known as the *Collis Mucianis* and was adjacent to the gate (Varro *DLL* 5.52; cf. Paul. Fest. 465 L). Much better is to identify the *Mucianis* with the higher ridge under Piazza Magnanapoli and then put the temple of Semo Sancus and both nearby.

It is very significant for the dating of the entire wall that, in the area of this section of wall, Pinza examined some supposedly intramural burials on the Capitoline-facing slope of the Quirinal, where Via Nazionale meets Largo Magnanapoli, and he concluded that finds in them that could not have antedated the 4th century.[933] These tombs were perhaps part of the vast necropolis that extended on the low-lying land all the way from the Argiletum up to the southwest slope of the Quirinal.[934] R. Ross Holloway extended Pinza's argument

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[931] *Bull.Com.* 1876 tav. XV, reproduced by Säflund 1932: fig. 41.

[932] Säflund 1932: 92-98; Brands 1988: 196-97. For the identification of this as the *Porta Sanqualis* in particular, see Coarelli in *LTUR* III "'Murus Servii Tulii'; Mura repubblicane: Porta Sanqualis" p. 332.

[933] Pinza 1912, 68-87, in particular 85 where the important ceramics of his "Period III" date (4th century B.C.) are described as *vasi etrusco-campani e quelli a fondo giallo e figure nere di fabbriche dell'Italia meridionale*. Cf. Lugli 1933, 5-6.

[934] On this burial ground see most recently Delfino in Meneghini and Santangeli Valenzani 2010. The continuity of this necropolis with those Iron Age tombs near the Temple of Antoninus Pius and Diva Faustina was obscured in part by the construction of the imperial fora, but its shape is now better known thanks to recent excavations in that area.

and pointed to one intramural chamber tomb in particular (Pinza's Tomb LXI), which he argued contained Genucilian class pots, the open-formed ceramics common in Mid-Republican contexts.[935] Dating these to the 3rd century, Holloway accordingly down-dated the wall in this area to the time of the Pyrrhic war. The specific description of the pot emphasized by Pinza and then Holloway is worth citing: "tazza ordinaria etrusca con ornate in nero nella parte concave, priva del pieduccio."[936] Unfortunately, the pot itself is lost. If this report intends to describe ornamental decoration (and not black gloss) on the inside of an open-form, footless pot, then we may indeed have a cup from the Genucilian class, as both Pinza and Holloway assume. In this case, the date is not exclusively 3rd century, but more broadly from the beginning of the early 4th through the 3rd centuries B.C., although many more unusual forms found in Rome have suggested a Roman production of this form beginning in the late 4th to 3rd centuries.[937] We would very much like to have the specimen itself to continue with this argument; without it, such an important conclusion remains speculative. However, if a tomb with Mid-Republican ceramics existed *within* the route of the walls on the southwestern Quirinal, we would have strong stratigraphic evidence for a *terminus post quem* of a 4th century date for the wall in this area.[938]

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[935] Del Chiaro 1957 remains the most in-depth study. The name comes from a *dipinto* on an example in the Museum of the Rhode Island School of Design.

[936] Cited from excavation reports by Pinza 1912, 80.

[937] The earlier date was established by Del Chiaro 1957, 306, based on the identification of Falerii Veteres as a production center as well as stylistic affinities with Attic ceramics of the late 5th century. The Faliscan production center is still accepted, though Del Chiaro's idea of producers from Falerii bringing their trade to a new production center in Caere has, as see most recently Poulsen 2002, 91-93.

[938] Holloway's arguments are not mentioned in those recent discussions of the Archaic circuit of which I know. It is hard to imagine such a tomb placed intentionally within the walls. Even though admittedly the wall did not follow the *pomerium*, the XII Tables were explicit against burial in the *urbs* (rather than within the walls): *hominem mortuum in urbe ne sepelito neve virito*, as gleaned from Cic. *de Leg.* 22.58.

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Appendix 2:
Quantifying the Wall.

For the sake of the model, it will be necessary to simplify the bulk of a massive structure that, as the previous appendix makes clear, was often tailored to suit the topography of individual areas of the city. In order to attain some figure of magnitude, however, we will have to balance the need to extrapolate the extant evidence to the entire circuit with the need to maintain some degree of the wall's specific construction process. I focus here on the wall itself: the additional material costs for gates and towers, as they are so poorly known, can be folded into the margin of error, a calculation which should in fact give a slightly lower estimate than actual, favoring a conservative figure.

In all cases, the height of the wall is a matter of conjecture as it nowhere preserves to its uppermost courses. Säflund argues for a minimum height of 20 cubits based on Philo of Byzantium, or something like 8.872 m, but this is only the above-ground height.[939] Total height probably averaged closer to 10.0 m, but since we should keep to numbers divisible by block height (=.60 cm), 10.2 m (= 17 courses) is a better approximation. 10 m is the preserved height of the section at Piazza dei Cinquecento, which originally extended even taller.[940]

The thickness of the ashlar wall of *tufo giallo della via Tiberina* both in connection to the external wall of the *agger* and in areas where it was only a self-standing stone wall is similar. The wall was narrower at its top, but as the taper seems to be fairly even, an average thickness of 3.6 m can be used, being equivalent to 6 headers or 3 stretchers in width and the arrangement seen in section in the wall on Via di San Anselmo at the mid-point. Using this average, the entire wall can then be treated as long, rectangular (as opposed to trapezoidal) polygon, 36 m^2 in section.

In some places as many as eight courses were subterranean (**Section 5c**), but five courses seems a more regular arrangement (cf. **Section 12**) and required the excavation of a foundation trench of 3 m depth.

The wall was supported in some places with the *agger* and *fossa* system in its complete form including an interior ashlar wall. Here, the exterior wall was also buttressed in its original form, every 36 m, with a buttress 6 headers wide (3.6 m), extending 2.0 m from the wall, and rising to the eighth course of the wall (4.8 m).[941]

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[939] 1932: 262-63; Philon [Diels and Schramm, edd.] p. 4.

[940] We can also assume that the wall ended in crenulations both for a military function and also because crenulations are seen in the Esquiline tomb painting, dating from a later but still Middle Republican date: the fortress depicted there may well have been inspired by the still standing fourth century walls of Rome. The Augustan gates almost certainly had crenulations, as see their frequent appearance in depictions of walls from that period such as the Basilica Aemilia reliefs. An enticing relief from the Capitoline, which is now lost, also depicts a tower with crenulations, cf. a photograph in Muñoz 1930: fig. 55, reproduced by Säflund 1932: fig. 72b.

[941] The wall was not, as Thein assumes in Haselberger *et al.* 2002 "*agger*" doubled in thickness at this point, but the confusing depiction of these buttresses in profile by Aurigemma 1961-62: fig. 4 has misled both Thein *loc. cit.* and Coarelli 1995: 23 into reconstructing such a doubled-wall. Clarification is found in Säflund 1932: 57-58, but the situation is also easily apparent in the physical remains.

Thus, for every 36 m of *agger*, we need to account for the construction of 34.6 m³ of stone wall in *tufo giallo della via Tiberina*.

   The interior wall of the *agger* was of *tufo del Palatino* cut on a .28 cm foot. It also had a trapezoidal section, and can be treated in complex as averaging 1.40 m wide; the height is speculative, but if the *agger* sloped down at a steep 15% grade over its 42 m width from the 10.2 m height of the exterior wall to the interior wall, the interior wall would need to rise to a ht. of 3.9 m, and rounding that to the nearest number divisible by course height, we arrive at a ht. of (3.64) = 3.6 m.[942] Thus, it was 5.0 m² in section.

   The *agger* itself formed in this way a regular polygon of earth, with a section 226.8 m² in area. The *fossa*, excavated in its entire form in several areas around Stazione Termini, was 36 m wide, 17 m deep, and 8 m wide at its base, forming a polygon 612.0 m² in area in section.

With these constants established, we can break the wall into the following four types by length (total = 11 km) and thus quantity both in bulk and by block:

1. A simple ashlar wall (7.9 km).
2. A simple ashlar wall with a corresponding *fossa* (Lesser Aventine, .8 km).
3. The *agger* with corresponding interior casement wall (From the area of *Santa Susanna* around the *Porta Collina* down to area of the *Horti Maecenati* = 2.3 km)
4. The *fossa* (*Porta Collina* to *Porta Esquilina*, 1.3 km[943])

Expanding this, we reach the following volumetric calculations:

1. Simple ashlar wall of 284,400 m³ of *tufo giallo della via Tiberina*
2. Simple ashlar wall of
    a. 28,800 m³ *tufo giallo della via Tiberina*
    b. excavation of a *fossa* of 489,600 m³
3. *Agger* complex consisting of:
    a. (exterior wall 82,800 m³ + 2,211 m³ buttresses =) 85,011 m³ *tufo giallo della via Tiberina*
    b. interior wall 11,500 m³ *tufo del Palatino*
    c. *agger* of 521,640 m³ of mounded earth
    d. *fossa* of 795,600 m³

Additionally, the entire wall needed a foundation trench 3 m deep and slightly beyond the thickness of the lower portions of the wall, thus about 5 m. In turn, this required excavation of a polygon with an area of 15 m² in section for the entire circuit, or the removal of 165,000 m³ in total.

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[942] Aurigemma 1961-62: 22 fig. 4, assumed that the original height was equivalent to that of a section found well-preserved in construction on the new Stazione Termini, thus 1.78 m, which in his reconstruction in fig. 4. However, the section of this wall nearby is already at 2.75 m (**Section 5a**), and we must assume that the wall was originally taller.

[943] While evidence for the *agger* is found beyond Dionysius' parameters, the *fossa* here is taken to conform to the reported length of Dionysius of Halicarnassus, 9.68.3.

We can now tabulate the total material for the wall:

Table A2.1 *Quantifications of material requirements for the circuit wall*

Volume (m³)	Material/Activity	
398,211	*Tufo giallo della via Tiberina*	171,230 = blocks (.43 m³ each)
11,500	*Tufo del Palatino*	1,955 = blocks (.17 m³ each)
521,640	Mounded earth	
1,450,200	Excavated earth	

Appendix 3:
Labor constants for the ashlar construction.

Labor constants are derived primarily from the 19th century (i.e. modern) handbook of the Milanese engineer Giovanni Pegoretti.[944] It was Janet DeLaine who first applied these figures to Roman building, as she saw them as appropriate parallels in consideration of the similarity of environmental conditions faced by Italian builders, ancient and modern, and the tipically conservative methods of the building trade. Properly speaking, although it is never said explicitly, DeLaine operates here under the uniformitarian assumption that geological and physical processes are the same today as in the past. However, she does not do so without reservation, and this is important to mention here as well: for her own working this quantitative method, she notes that we must make the following two assumptions:

1) that average human output is basically the same as it was in Roman antiquity, bearing with it assumptions on basic nutrition, body-size, slave v. free labor, etc.
2) that the working day was 12 hours including 2 hours of break (thus 10 working hours), akin to that assumed by Pegoretti.[945]

I can continue to use this method at least as far as a qualitative tool, a way of speaking with numbers. In its particulars, the work day especially will need to be challenged by those attempting to make such calculations in the future.[946] The resulting calculation will be less important as an absolute record of historical truth, and more important as a means of comparison with other building projects at other times. Therefore, the correspondence between the estimation figures given here and those of DeLaine affords us better opportunity to give comparisons between our results and prior estimate work on Roman architecture.[947]

The blocks only show the need for minimal shaping and finishing to assure for even coursing. Several hidden costs are ignored with the effect that the real cost of the project was likely larger: these include fashioning tools such as wheelbarrows, scaffolding, shovels, and cranes as well as feeding oxen and other livestock involved. Also disregarding effort for quarrying and transport prior to the arrival of material into Rome,[948] cost can be broken down into the following components:

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[944] My gratitude here to Jordan Pickett, who has brought to my attention a large corpus of work in this direction, mostly by New World archaeologists, which utilizes other estimating techniques. I reached this material too late to incorporate it properly into the following discussion, but I hope to draw more properly from it as this project goes forward.

[945] DeLaine 1997: 103-7; 2001: *eadem* 232-34.

[946] First of all, the earliest we can tell that Romans measured work by the day is the time of Saserna (c. 100 B.C., as suggested by Varro *RR* 1.18), although I'm not yet sure how important it is that they did or did not conceive of labor in such terms to the fact that labor was still expended in such terms: undoubtedly, many ancient buildings built on ancient ratios and units remain intelligible to our modern understanding when measured in meters, etc. More important may be Pickett, pers. comm. who informs me that 6-7 hours may be a more reasonable estimate for the maximum daily capacity of a pre-modern worker.

[947] For the value of such calculations as comparative frameworks rather than 'historical truths,' see Trigger 1990.

[948] As discussed above, this is may be attributable to slave labor from those captured Veientines. For the sake of achieving the minimal model, we exclude those figures here. I will say that Romans of course

I.   Movement from port to site

Tufo giallo della via Tiberina needed to be moved from the Tiber port to the construction site. In some cases, this required circumnavigating steep topography that would have made such movement difficult. Still, it is probably best to aim for an average, in this case blocks moved .75 m, which is just under half the distance from the Tiber Port to the *Porta Collina*, the furthest point away. Dock to site transport was achieved by ox-cart figured at 2.32 mdays/ton per km.[949]

II.   Moving and lifting blocks within the construction site[950]

Mdays/ton = Moving cost (0.02 + 0.033d) + Lifting cost (0.02h + 0.01), where d = distance and h = horizontal height to which the block must be moved.[951]
If we assume the average height of 5 m (½ the height of the wall) and the average distance of 18 m (½ the length of a 36 m section), then 0.165 + .37 = .535 mdays/per ton.

III.   Minimal finishing and squaring of blocks with a simple chisel[952]

Coarse finishing of stones already blocked out in the quarry: 1.67 hours per m^2 of surface =.17 mdays per m^2 at a rate of .53 d per block of *tufo giallo della via Tiberina* (.60 x .60 x 1.20 = 3.14 m^2) and .28 mdays per block of *tufo del Palatino* (.27 x .55 x .82 = 1.64 m^2).

IV.   Manual excavation[953]

Table A3.1 Manual excavation labor constants.

Task	Unskilled (assume + 0.1 skilled for oversight)
Digging foundations < 1.6 m deep	0.14 mdays per m^3
Digging foundations 1.6 - 4 m deep	0.15 mdays per m^3
Raise spoil from foundations > 1.6 m deep	0.018 mdays per m^3

would have had to feed those slaves working in the quarries, and thus some suggestion of surplus production is implicit even if their labor cost is excluded from this model.
[949] DeLaine 2001: 248ff., same constant of 1.44 man-labor-equivalent/ton per mile used for all materials.
[950] These are figures given by DeLaine apparently without comparandum, cf. 2001: 258 with n. 30.
[951] 2001: 258.
[952] Pegoretti 1869: I 438-45 using his figures for *tufo calcarei*, which he specifies as those red sedimentary stones from the Monti Euganei region (what he calls *quelli di Verona*). These are softer than the *tufi volcanici* in which he mistakenly includes travertine, *loc. cit.* Chisel marks are also very commonly found in all sections of the wall. DeLaine 2001: 259 estimated that this stage alone took 22 mdays/m^2, so my estimate is extremely conservative here and represents only the bare minimum of on-site working to finish the blocks.
[953] The process of excavation is treated in Pegoretti 1869: I 241-45; see DeLaine 1997: 268.

For the foundation trench, this entails %53 of the project at the lower rate of 0.14 mdays and %47 of the project at the higher total rate of 0.168 mdays per m.^{3} Combining this rate, then, we get an avg. labor cost of 0.153/m^3. Additionally:

Load into baskets or wheelbarrows	0.06 mdays per m^3
Moving soil by wheelbarrow away from trench and returning per linear meter	(0.000571 hours x 21.875 trips per m^3 of rocky mixed soil) = 0.00124 mdays per m^3 per linear m. For a distance of 46 m[954] = 0.057 mdays per m^3
Shoring foundations	0.015 mdays per m^3

Putting these all together, we get total costs in man-days for various units applicable to the wall:

Table A3.2 Aggregate labor constants.

cost per ton of stone:	2.702 mdays/ m^3
cost per block of *tufo giallo della via Tiberina*	0.530 mdays/ block
cost per block of *tufo del Palatino*	0.280 mdays/ block
cost of excavation per m^3 of earth	0.213 mdays/ m^3
cost for creation of *agger* calculated as movement and shoring of excavated soil:	0.072 mdays/ m^3

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[954] Assuming much of the excavated *fossa* was applied to the construction of the *agger*, 46 m represents the average distance from the mid-point of the *fossa* to that of the *agger*, and is representative of a typical distance traveled by a wheelbarrow of earth from excavation.

Appendix 4:
The organization of the *agger* workforce and the date of the *agger*.

For the Viminal *agger*, and in particular in the 36 m panel of wall at Piazza dei Cinquecento (**Section 5c**), we have direct evidence that the exterior wall was built in sections the identification of which has already been discussed. Two more technical points regarding this section of wall seem salient:

1) The seams that delineate the 36 m panel taper inwards slightly as they move upwards making the entire panel into a slight trapezoid sitting on its longer side;
2) The panel shows the presence of upside-down (as it were) lifting-tong holes on the upper courses.[955]

The first point is suggestive of the fact that this panel was built prior to the stretches of wall extending on either side. This would explain the taper of the seams, which suggest that those sections of the wall on either side of the panel post-date the panel itself. That is, work on this section of wall started with the construction of this panel, and then moved outward in either direction. The second point confirms the fact that, although the blocks of *tufo giallo della via Tiberina* were lifted with cranes at some stage in the construction process, the final placement of the blocks into the wall is better explained as completed with the use of earthen ramps. All of this forms an insight into the planning and construction of this section of the wall, in the core area of the *agger-fossa* complex between the *Porta Viminalis* and the *Porta Esquilinis*: the work on this particular section of the *agger* started not from a gate or a natural break-point, but between two gates and moved outwards from a central point where work began by building a free-standing panel of ashlar masonry. This means that, in order to place the blocks, a ramp was necessary first at this point and then logically extending outwards in both directions.

The mechanical advantage of a ramp is in proportion to its angle of incline; a lower grade affords an easier time in raising the block to the requisite height. For the lower courses of the wall, this is not problematic, but as the wall rose in height, the ramp by necessity stretched for a long distance in either direction. How long? In the case of our *tufo giallo della via Tiberina* blocks weighing an average of 657 kg, a 10% grade required a run of 100 m for the highest courses of the wall. A 5 degree grade, on the other hand, allows for a more compact ramp but required an enormous ramp 200 m long. In fact, there was a limit to the ramp used for the panel of wall in **Section 5c** set by the *Porta Viminalis*, which was 48 m E,[956] and therefore 66 m away from the panel's central point. A 66 m allowable run suggests a 15% grade (= 10/66) for the ramp at this point.[957]

Conceivably, the ramp could extend 100 m or more to the inside of the wall, but this would force the builders then to excavate out 58 m of ramp in order to place the interior ashlar wall and limit the *agger* to its present 42 m length. More plausibly, the ramps ran directly within the *agger*, extending for their whole length parallel to the wall. The construction ramp itself was, in any case, a significant structure to manage.

The greatest implications of all of this rather technical discussion is that the *agger* was an integral part of the construction process of the walls that encased it. With such a

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[955] The second fact is well illustrated by Säflund 1932: tb. 25.
[956] Measurement in Säflund 1932: 65 fig. 29.
[957] The slope was then 66.7 m long, and the mechanical advantage is thus 6.67.

large ramp necessary, it is hard to imagine Roman builders trying to navigate pre-extant walls, structures, or anything else: the most convenient procedure would be to start with a cleared-off construction site.

This has connotations for the dating of the *agger* itself as well as the *agger*'s interior wall, both of which have been assigned by other scholars to periods earlier than the large exterior wall of *tufo giallo della via Tiberina*. But the whole complex makes the most sense from a construction perspective as a single project, designed together, and built in a single effort. This is not to exclude the possibility of a simple earthen *agger* protecting this area of the city prior, but what we see now—exterior wall, earthen mound, and interior wall—are arguably part of a unitary project of construction. The structure recently excavated underneath platform 24 of Termini station, entirely in *tufo del Palatino*, but seemingly leveled and obliterated by the Republican *agger* makes sense in this context:[958] any older attempt to fortify this part of the city needed to be demolished and cleared before the new Republican wall in all of its constituent parts could be placed in the same area. In conclusion, we should reiterate two important points:

1) This provides further evidence linking the use of *tufo giallo della via Tiberina* and *tufo del Palatino* to a single phase, contrary to some who assume that the two stones automatically represent separate phases of the wall.[959]

2) The strongest argument in favor of an earlier *agger* stems from the discovery by Lanciani of a small fragment of Attic pottery from a stretch of the *agger* off of Via Salandra (**Section 2b**). Gjerstad argued strongly that this small fragment of red-figure vase dating to 490-470 placed the entire *agger* construction at around the same period.[960] Despite doubts almost immediately expressed by Momigliano, the problem of the small sherd continued to find its way into more general discussions of the wall and its phasing, often with little notion to the difficulty of the evidence.[961] But this one piece of pottery cannot alone account for the entire dating of the *agger* complex. It can establish a *terminus post quem* for the *agger* of the mid-fifth century, and considering that the earth of the *agger* was itself secondary context (excavated earth), there is no reason that the date of the *agger* itself needs to be closely confined after this *terminus*. Considering the construction techniques detailed here, a date of 376 for the whole thing is entirely plausible.

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[958] Now platform 24, previously platform 22, excavations described by Menghi 2008.
[959] *Pace* Coarelli 1995; Cifani 1998; Fabbri 2008.
[960] This later date is on the authority of John Davidson Beazley himself, who, in communication with Gjerstad, dated the fragment to 490-470, whereas Gjerstad preferred the more expanded date range, cf. Gjerstad 1953: 412-22.
[961] Momigliano 1969: 102 n. 58; see more credulous descriptions in Heurgon 1973: 153; Cifani 1998: 363.

Introduction to the Catalog

        The following list of public construction projects at Rome is both old and new. Old because similar attempts to create a dictionary of urban sites in ancient Rome have been done many times before, most recently in the remarkable work of *riferimento*, the *Lexicon Topographicum Urbis Romae* (*LTUR*). New because the choice here was for an arrangement of entries in chronological order, something that neither the *LTUR* nor other such works has attempted to do, although there have been studies that have tried to trace such a temporal progression limited to specific building types in this period, in particular temples (Pietilä-Castren 1987; Ziolkowski 1992; Orlin 1997). This choice was taken out of a desire to show the city's development over time, an evolution in terms of the urban shape and in terms of the building types or construction techniques.

        This was not always easy to do: our sources both archaeological and literary for the period are rarely straightforward. Debate exists around many of these catalog entries. I have tried to take a conservative approach, laying out the arguments presented but at times resisting judgment. This means that some entries are vaguely dated, and some archaeological sites are discussed separately whereas others might accept their identification with one or another monument attested in literature—good examples of this are Temples A and C in Largo Argentina. Some degree of duplication is implicit, then, in the catalog. Considering the patchiness of our sources, however, in the end the duplication is probably mooted when it comes to the total count of building projects.

        Several sites are excluded from the catalog for various reasons. First, the *lacuna* in Livy's text from 293 to 218 has prevented us from recognizing a number of triumphal foundations and censorial public work programs in those years. Coarelli rightly pointed out that the full extent of public construction following the break in Livy's text in 167 was probably far greater than our sources permit us to know.[962] The same is the case for the earlier period, but generally I am cautious against placing difficult or unknown temple foundations into that gap as a sort of catch-all, as some other scholars have done.[963] A similarly minimalist stance is taken toward chance notes of the adornment of sculpture or plaster in a temple that has been taken by some to include more wholesale repairs.[964] We know of several devastating fires and floods during the period that may have necessitated rebuilding projects: many of these are taken into account, but I do not include all notices of thunderbolts striking roofs or other such *prodigia* that may hide evidence of consequent repair when no mention is made of corresponding damage to public structures—what we do not explicitly know is simply *argumentum ex silentio*. Finally, there were several construction projects that were not domestic *per se*, nor were they

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[962] Coarelli 1977.

[963] On the Aventine, the Temple to Minerva, on the Campus Martius Temples to Feronia (if it was even a temple) and Iuno Curritis all fall into this camp. Also excluded are a Temple to Hercules Custos and a sanctuary of some form to Neptune, rebuilt by D. Iunius Brutus Callaicus, both in the Circus Flaminius.

[964] Typical of this phenomenon are the frequent notices of sculptural additions to the Temple of Jupiter Optimus Maximus (Liv. 10.23.12: 296 B.C.; *isdem* 35.10.11, .41.10: 192 B.C.; *isdem* 40.52.7: 179 B.C.).

private, but they were not undertaken by office-holders and so are excluded from the catalog.[965]

Rome's magistrates did undertake a great deal of work beyond the *urbs* in this period, and these projects are not included. This means the exclusion of work near to Rome such as the Pons Mulvius, as well as a number of censorial projects in the colonies. Roadwork undertaken outside of Rome is not included; roads that entered into the city are.

Finally, recent excavation has revealed at lower levels a number of sites that cannot yet be related to specific public monuments. Work especially at the east foot of the Palatine and also in the Imperial Fora continues to reveal ashlar walls at low levels that appear to be part of significant architecture, which is currently interpreted as private.[966]

Using the catalog

The guiding arrangement is date. As close as possible, a building is listed under its date of dedication. Monuments that can be assigned more broadly to a quarter- or half-century are pegged to a standard possible date within that range: a structure of the "mid-4th C" will be listed as being in the year 350, a structure of the "late 4th C" at 300, a structure of the "1st quarter of the 4th C" at 375. This also serves to illustrate that, for the sake of space, "century" is abbreviated with a capital "C," and cardinal directions are abbreviated with the corresponding capital letters (N,S,E,W, etc.).

Not all public monuments were the same; this goes without saying. As it is argued in the text of the dissertation that triumphal construction and censorial construction were separate but intricately linked categories, no attempt to separate them is taken. Distinction is made, instead, between construction *ex-novo* and repair work, as well as for those monuments extending out beyond the *urbs*, whose construction was less site-based (namely, roads and aqueducts). The titles of sites are color-keyed as follows:

> **Bold:** Monument within the *urbs* built *ex novo*.
> **CAPITALS:** Repair or restoration of a pre-existing monument within the *urbs*.
> **Bold and underline:** Projects extending beyond the *urbs*.

The entries begin with the title of the site followed by a source catalog only of those ancient sources relevant to the location and construction phases (e.g. *votatio*, *locatio*, *dedicatio*) of the structure. Other pertinent ancient sources will be cited in full in the description that follows. Following that, all sites contain a summary of their procedural and archaeological evidence before listing relevant bibliography. Modern sources can be found in the bibliography accompanying the dissertation as a whole.
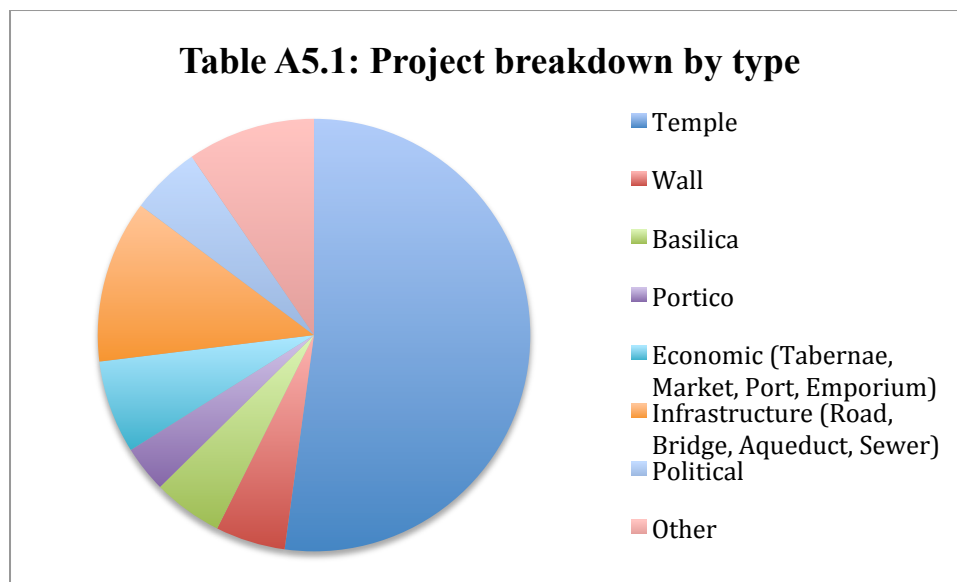
Some quantitative results

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[965] Included in this class are the *Ara Pudicitia Plebeia* and the *Sacellum Pudicitia Patriciana*; similarly, the *Fornix Scipionis*.
[966] E.g. Palatine East in Papi and Carandini 1998: 200-3; buildings in the Imperial Fora in Meneghini 2009: 19-23.

The preceding chapters have presented a synthetic study of the evidence that follows, but some more technical results from the collating of this catalog can be given in brief as a means of introduction. First of all, the catalog contains 116 entries over a period of 222 years, meaning that we know of public construction projects to the rate of just over 1 per every 2 years (although by no means were the projects distributed regularly). Considering the difficulty of our source material, especially the loss of Livy for much of this period, this is impressive. Furthermore, 22 projects (19 %) can be specified as repair to pre-existing structures damaged by time, fire, flood, etc. showing how much new building dominates the historical record of the period.

Of these entries, 36 (31%) have identifiable archaeological remains. This forms a representative sample both to give us some impression of the physical manifestation of these building projects but also to trace a sort of development in construction processes over time. As a collective group, these sites have not been studied before. By comparison, the only other real attempt to gather the archaeological data at Rome from this period catalogs only five sites.[967]

Three further breakdowns are instructive. The first involves the character of the monuments under consideration (tb. A5.1).

Table A5.1: Project breakdown by type

- Temple
- Wall
- Basilica
- Portico
- Economic (Tabernae, Market, Port, Emporium)
- Infrastructure (Road, Bridge, Aqueduct, Sewer)
- Political
- Other

As a class, temples dominate. This is by and large a product of our sources: it can be argued that there was very good documentary evidence concerning temple foundations, especially as compared to other structures. But Livy at times seems to have documentary evidence for secular building projects as well, especially for censorial efforts; his occasional mention of structures that could no longer exist in his own time suggests that he had documentation of censorial building programs from the 3rd and 2nd C (see e.g. **No. 101**).

The second chart involves the relationship between triumphal and censorial construction (tb. A5.2): as the dissertation often notes, these two forms of arranging for

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[967] In the catalog *Roma Medio Repubblicana*.

public construction are frequently treated separately by modern scholarship, but they were by all regards part of a single larger phenomenon. There were distinct censorial constructions (ee.g **Nos. 99-101**) as there were indisputably triumphal monuments (e.g. **No. 42**), but the procedural line between the two was often blurred as Roman magistrates often continued as censor what they started when consul, etc.

Table A5.2: Project breakdown by responsible magistrate
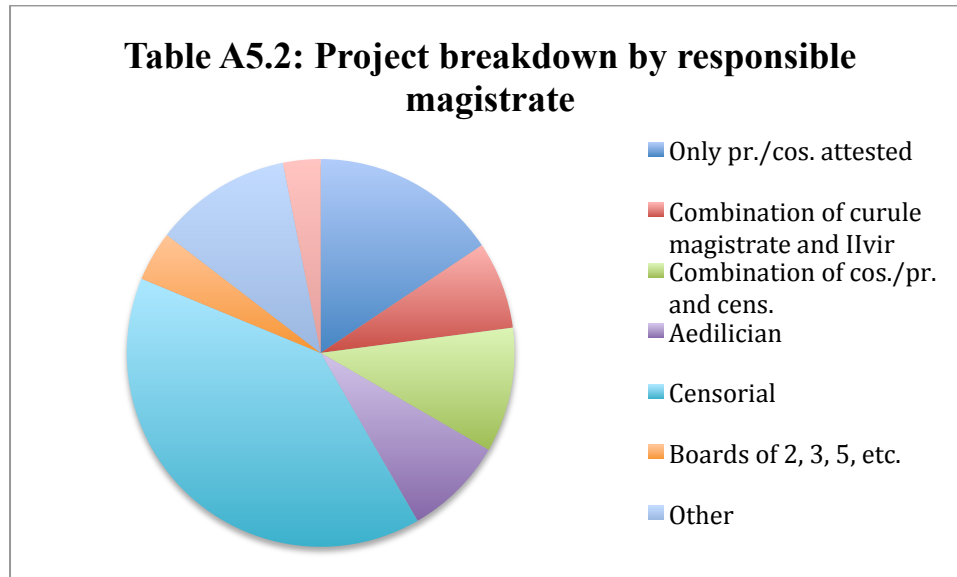
The third is an easy way to show change over time by breaking down the projects by type and by decade (tb. A5.3). What emerges immediately is the aforementioned loss of Livy's text for the period from 293-218: with it, there can be no doubt that more projects would emerge. The boom-and-bust scenario, for example, of 11 buildings from 299-90, compared to no buildings from 289-80 is probably created artificially by a serious gap in our sources. What also becomes apparent is the phenomenal shift in the early 2nd C towards the adornment of the city with what can be called secular architecture (i.e. *basilicae*, *porticus*, and various public works programs); the causes behind this are discussed in Ch. 4, and this chart serves to make the trend visibly manifest.

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Table A5.3: Project breakdown by decade and type
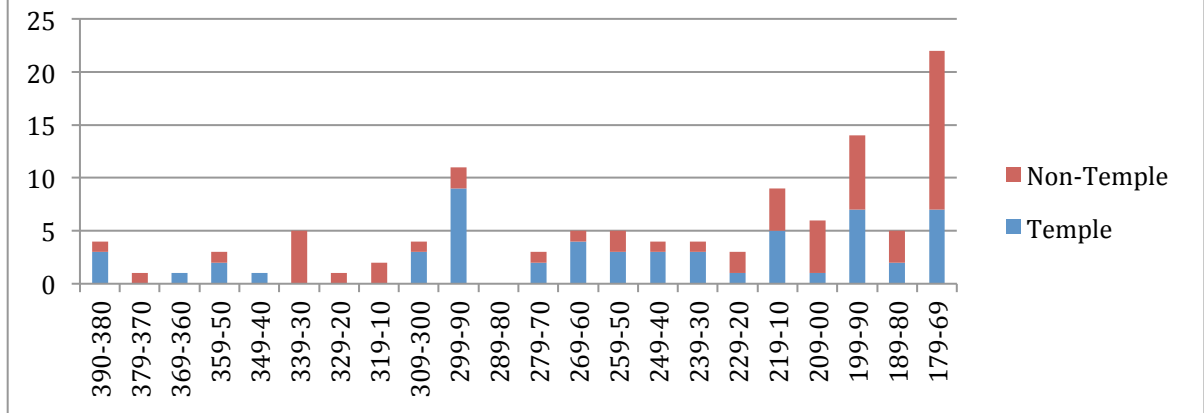
The Catalog

1. c. 390 – *Aedes, Mater Matuta* **and monumentalization of the** *Area Sacra di San Omobono*

Sources: Liv. 5.19.6, .23.7; Plut. *Cam.* 5.

The phasing of the two twin temples excavated in the area of the Church of S. Omobono in the ancient Forum Boarium remains anything but clear. At some point after its destruction in the late 6th C, the sanctuary was rebuilt with a massive ashlar podium supporting twin temples to Fortuna and Mater Matuta. Livy records a vow by M. Furius Camillus on the eve of the conquest of Veii: *aedemque Matutae Matris refectam dedicaturum, iam ante ab rege Ser. Tullio dedicatam* (5.19.6); the dedication of the same temple is recorded in the course of the year 396 (5.23.7), although it is more frequently dated to the period shortly following the Gallic sack (Pisani Sartorio in *LTUR*).
　　The issue at stake is which phase of the twin temples at S. Omobono represents the restoration and dedication of Camillus, but always underlying such a debate is the mythohistorical nature of the figure of Camillus. Coarelli suggests that the importance of Camillus argues for the accuracy of the literary sources on this temple phase (1988: 216), but it is precisely the reverse: Camillus' fame acted as a magnet, accreting a number of events that may not necessarily have been his doing, if he existed at all (Bruun 2000). Some restoration action in the *area sacra* at this date seems plausible, but more work is needed to determine the physical extent.

Procedural: Consular vow; dedicated by the same figure as dictator.

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Archaeological: The site of two twin temples superimposed over an Archaic temple (with a possible, but unconfirmed corresponding second Archaic temple to match the later double temples) was discovered by accident in work on a modern office building adjacent to the church of S. Omobono in 1937. Since then, the *area sacra* has been the focus of several excavation campaigns. The final publication of these campaigns has yet to appear, although currently an ongoing project directed by N. Terrenato and P. Brocato aims at such a synthesis.

Meanwhile, the state of research must be cobbled together from a dozen publications, and my conclusions in following can only be preliminary. Concerning the Republican phases, argument exists over the initial creation of the sanctuary following the end of the Regal period. Less debate exists over the fact that, in the late 6th C, the Archaic temple was destroyed by fire and abandoned (Pisani Sartorio 1989: 13; *eadem* in *LTUR*; Ioppolo 1971-72: 15-17). It was then buried with fill taken from the Capitoline; Ioppolo 1971-72: 17 gives a figure of 30,000 m³ of earth brought in to cover the site that is often repeated (e.g. Holloway 1994: 80; Cifani 2008: 172). This is followed by three phases:

a. A platform in *lapis Albanus* from Marino; this is thought to be the earliest appearance of this stone in Roman architecture (Cifani 2008: 172, 224; Holloway 1994: 80). Jackson and Marra 2006: 433, however, call the platform *tufo del Palatino* raising doubts about the geological character of the stone. It is usually said to have been paved in *tufo del Palatino*. At this point, the temples were also built on foundations of *tufo del Palatino*.

b. A thick-slab pavement of the platform in *tufo lionato* from both Monteverde with some Anio tuff as well. A rectangular and a circular votive monument inscribed by M. Fulvius Flaccus (**No. 40**) sit on the paving; it is not clear archaeologically if monument and pavement belong to the same phase, although arguments have been presented on both sides.

c. A thin-slab paving of the area in *tufo lionato* from Monteverde on top of a compact layer of earth, covering the Flaccus monument completely (**No. 66**). With this paving is associated a long wall in *tufo giallo della via Tiberina* as part of the exterior foundations of the twin temples, as well as the interior cella walls of the temples in *tufo rosso a scorie nere*.

These are the three Republican phases as first presented by Pisani Sartorio and Virgili (1979: 44; Pisani Sartorio 1989: 13-14; *ead.* in *LTUR*). The argument centers on whether the first paving in *tufo lionato* (b) belongs to those repairs attested by Livy for Camillus, or to a phase connected to the placement of the monuments of M. Fulvius Flaccus. The excavators and especially Virgili and Pisani Sartorio date the platform in *lapis Albanus* (a) to the early 5th C, and then the paving in *tufo lionato* (b) to the early 4th C. Coarelli instead argues that the thick-slab *tufo lionato* (b) paving is related to the altar and represents a phase of the 3rd C; the earlier phase of Camillus is the initial platform in *lapis Albanus* (a) with temples in *tufo del Palatino*.

Coarelli bases his argument on his own observation in a light layer of compressed earth between the thicker *tufo lionato* (b) and the platform of *lapis Albanus* (a), which, however, he calls *cappellaccio* (in general, there is a very

high level of confusion about the stone types used). In this layer of earth, he reports the find of a small fragment of a black-gloss cup of form Morel 96, dating to c. 300 B.C. (1988: 214).

If this is true, then the entire thick-slab paving in *tufo lionato* (b) belongs to the 3rd C, but more importantly, the site of the archaic temple lay in its abandoned state for over 100 years between its destruction in the late 6th C and the rebuilding of Camillus. Coarelli notes this to some effect, suggesting that a period of abandonment was suggested by the original excavators (1988: 218). But an archaeological stratum of significant abandonment could have accumulated in a far shorter time than 100 years, especially in the area of the city that was frequently inundated by Tiber flooding. This idea of the rubble of the Archaic temple lying intentionally in its destroyed state for over three generations has not received much of a following except where restated by Coarelli himself (compare the presentation in *RMR* with that of Pisani Sartorio in *LTUR*; Cifani 2008: 172-73 follows the latter).

Conservatively, I follow the interpretation of Pisani Sartorio, seeing the work of the early 5th C as a platform in *lapis Albanus* (a). The platform was paved in *tufo del Palatino*, and this same material made up the foundations of the two temples, which were had an elevation in mud-brick or some other perishable material (Pisani Sartorio in *LTUR*; Cifani 2008: 172).

The work of Camillus, then, is the paving of the area in *tufo lionato* from Monteverde in thick-slabs (b). Two U-shape altars were placed onto this paving, and the temples were restored (stone unclear; it is unclear in autopsy what structures of the temples themselves date to this phase).

Between the temples and within the underlying podium, a long cistern was constructed 27.71 m long, 2.41 m wide, and 2.08-2.33 m high. It was built of *tufo lionato* from Anio laid in courses of stretchers and built into a vaulted roof. The walls, vault, and pavement were covered in cocciopesto, but this waterproofing could easily be part of a later phase. Its capacity was 800,000 liters, and it was accessed through a square well built of tuff slabs joined with metal ties that lay in the area in front of the W temple (Virgili 1988).

Bibliography: Cifani 2008: 168-73; Coarelli 1988: 205-18; Holloway 1994: Ch. 5; Ioppolo 1971-72; Ioppolo 1989; Pisani Sartorio 1989; Pisani Sartorio in *LTUR* II "Fortuna et Mater Matuta aedes" 281-85; Pisani Sartorio and Virgili 1979; *RMR* 100-3; Somella 1968; Virgili 1977; Virgili 1988.

2. 388 – Enlargement and planning of Capitoline Hill

Sources: Liv. 6.4.12.

Record of the Capitoline area built up (*substructum*) in *opus quadratum*. This project may signal the beginning of the effort to build a full city wall noted by Livy in 376 (cf. 6.32.1 and the discussion above in Ch. 1). Structures in *tufo*

giallo della via Tiberina and *tufo del Palatino* on the *Salita delle Tre Pile* may relate, and are discussed in the Appendix to Ch. 1 §Site 14.

Procedural: Unspecified.

3. 388 – *Aedes, Mars*

Sources: Liv. 6.5.8.

Livy tells us that T. Quinctius dedicated as *IIvir sacris faciendis* an *a.M.*, which had been vowed in the Gallic war. T. Quinctius T.f.L.n. Cincinnatus Capitolinus was in that same year a *tr. militum* with consular power (*MRR* I 98). The person responsible for the vow of the temple and the occasion of the vow, besides his participation in the *bello Gallico,* are unknown, and this is Quinctius' first attested curule position. The *a.M.* is probably to be identified as that located on the course of the later Via Appia between the first and second mile on the left (NE) side of the street (cf. *CIL* VI 10234 for the address). Why this particular location was selected at this point prior to the construction of the Appia is not entirely clear, but the temple later became a prominent marker along the Appia's path (cf. Liv. 7.23.3, 10.23.12, 10.47.4, 38.28.3). There were later phases: an inscription found in the locale mentions a dedication by Marcellus to Mars (*CIL* VI 474 = *ILS* 13), and Canina reported finding a large mass of architectural marble outside of the Aurelian *porta Appia* (Borbonus).

Procedural: *Dedicatio* by a *IIvir* notably *sacris faciendis* as opposed to *aedis dedicandae*.

Bibliography: Borbonus in *MAR* "Mars, Aedes (Via Appia)" 165; Coarelli in *LTUR Suburbium* IV "Mars, Aedes, Templum, Lucus," 44-45; Ziolkowski *1992* "Mars in Clivo" 101-4.

4. After 390 – *Ara, Aius Locutius*

Sources: Liv. 5.32.6, 5.50.5; Varro in Gell. 16.17.2; Cic. *div.* 1.45.101, 2.32.69 (Aius Loquens); Plut. *Cam.* 14.3-4, 30.4.

The legend is as follows: when in 390 the plebeian M. Caedicius heard during the night a divine voice warning the Romans to remake the walls and gates of the city because of an impending invasion; the portent was ignored because of the low status of the messenger. After the Gallic sack, an altar was consecrated to this portentous voice on the *via nova*: the address is given by Varro as *infima via nova* and by Cicero as *a luco Vestae, qui a Palatio radice in novam viam devexus est*. Wiseman puts the sanctuary (and the pre-Neronian *via nova*) on the sloping area between the foot of the Palatine and behind the house of the Vestals. Though he admits that it is hard to imagine an area sloping still further down from the bottom

of a hill, the area behind the house of the Vestals, not so far from where the Clivus Palatinus let out onto the Via Nova, makes sense. Aronen, following Cic. *div.* 1.45.101, which mentions an *ara* and a *saepta*, interprets the site as a an open air altar in a demarcated sacred precinct: Livy's reference to a *templum* is not contradictory but rather instructive as to the fact that this word simply indicates a consecrated area rather than any architectural feature. The construction effort was not particularly monumental, but we may imagine something akin to the Republican altars known from Largo Argentina, Sant' Omobono, the Comitium, or many other sites in Latium such as Lavinium or Ardea.

Procedural: The area is only known as being *consecrata* (Cic.)

Bibliography: Aronen *LTUR* I "Aius Locutius" 29; Wiseman 2004: 169-70.

5. 378 – Circuit Wall

Sources: Liv. 6.32.1-2.

The wall is fully treated in Ch. 2, and archaeological data is collected separately in Appendix 1.

Procedural: Livy states censorial *locatio*; however, see the argument in Ch. 2.

6. 367 – *Aedes, Concordia*

Sources: Ov. *Fast.* 1.637-44; Pl. *Cam.* 42.4-6.

Only Ovid and Plutarch make explicit the idea that M. Furius Camillus celebrated the reconciliation of the orders in 367 with the dedication of an *a.C.* in the Forum. We are more certain of L. Opimius' temple dedicated in 121 after the Gracchi, but the existence of this earlier temple is strongly doubted. Momigliano first pointed out that all earlier mentions of a temple of Concord refer explicitly either to the *aedicula* built in 304 (**No. 20**) or to the temple *in arce* dedicated during the Second Punic War (**No. 61**). The inclusion within the remains still visible of the Augustan-period temple of fragments of *tufo giallo della via Tiberina* in the cement core is proof of nothing more than the reuse of some *tufo giallo* rubble, of which there was apt to be a great deal in the area of the Forum where intensive building had taken place for five centuries before Augustus. Following Momigliano's reasoning, the historicity of a 4th C temple had been universally rejected (Gasparri, Maetzke, Ziolkowski, Norena). However, excavations in the late 1980s and early 1990s by the Soprintendenza within and underneath the Augustan podium of the Temple of Concord have reopened such a possibility on archaeological grounds: "Gli scavi stratigrafici in corso stanno portando alla luce strutture di IV a.C. in livelli sottostanti il tempio" (Ferroni). Any further

information has yet to be published, and until fuller details of those structures are known, the question of this 4th C monument remains open.

Procedural: The irregular procedure described by Plutarch—the senate votes to build a temple vowed by Camillus, who did not celebrate any triumph—casts doubt on the historical account if not on the authenticity of the temple itself.

Bibliography: Gasparri 1979: 16; Maetzke 1991: 69; Ferroni in *LTUR* I "Concordia, Aedes;" Norena in *MAR* "Concordia Augusta, Aedes" 97; Ziolkowski 1992: 22-24.

7. 353 – REPAIR OF THE WALL

Sources: Liv. 7.19-20.9.

Livy reports the following in the year 353: *legionibus Romam reductis relicum anni muris turribusque reficiendis consumptum.* Cornell argues that this represents the conclusion of the construction of the wall begun in 378 (**No. 5**), but Livy refers here to rebuilding. Employing the troops in the upkeep of the city's defenses may have been a more common exercise in this period, though this is the only time we hear of it. In a year mostly noted for the deference of the previously friendly Caere to Roman rule (cf. Liv. 7.20.1-8), the repair of the walls may have been the signal achievement of the otherwise unoccupied legions, and in this way it may have made its way into some documentary source.

Procedural: Repair work done by the soldiers.

Archaeological: No distinction can be made between the wall of 378 and any repair work slightly over twenty years later.

Bibliography: Cornell 1995: 62 n. 11.

8. 353 – REPAIR OF AEDES, APOLLO MEDICUS

Sources: Asc. *in Cic. Orat.* 90; Liv. 7.20.9.

In 353, Livy succinctly reports *aedis Apollonis dedicata est*. The impetus for the dedication of a temple (vow? censorial repair?) is unknown, as is the agent behind the dedication. The location of the temple, however, can be determined. Asconius records that only a single temple to Apollo existed in the city prior to the construction of Augustus' Palatine temple:

> *Ne tamen erretis, quod his temporibus aedes Apollinis in Palatio fuit nobilissima, admonendi estis non hanc a Cicerone significari, utpote quam post mortem etiam Ciceronis multis annis Imp.Caesar, quem nunc Divum Augustum dicimus, post Actiacam victoriam fecerit: sed illam demonstrari quae est extra portam Carmentalem inter forum*

> *holitorium et circum Flaminium. Ea enim sola tum quidem Romae*
> *Apollinis aedes.*

This being the case, the *aedes Apollo extra portam Carmentalem* between the Forum Holitorium and the Circus Flaminius is the Republican precursor of the Temple of Apollo *in Circo* rebuilt in grand style by C. Sosius in the early Augustan period. This, however, leads to some dilemma as to the extent of the construction in 353: Livy has already recorded in greater detail the vowing of a temple to Apollo Medicus in 433 (4.25.3) following a plague and the dedication of that temple two years later (4.29.7). This is the temple at the E end of the later Circus Flaminius, perhaps related to an even earlier cult to Apollo in that area (see Ciancio Rossetto: 178, 181 on the *Apollinar* in the *Prata Flaminia* and Liv. 3.63.7). That being the case, and seeing as there was only one temple in Rome to the deity prior to the Palatine structure, what is meant by this *dedicata* (not *rededicata*) in 353? This conceivably could be a mistake on Livy's part, especially considering the complete lack of any procedural detail. Normally, this phase is counted as authentic but considered as a minimal repair (Viscogliosi; Ciancio Rossetto). The archaeological data discussed below is not entirely clear on this point.

Procedural: Unknown.

Archaeological: Structures related to the older phase of the Apollo temple were studied by Delbrück in 1903 and further excavated by the Soprintendenza in 1937-39 and 1997-98. Delbrück recorded a wall of tuff ashlar masonry 12 m long in the cellar of the convent attached to S. Maria in Campitelli. The wall forms the N limit of the earlier temple, the side closest to the later Porticus Octaviae. The wall was visible for a height of eight courses but extended further downward where he observed a slightly offset lowest course forming a sort of lightly projecting socle. Blocks were of two stones: interior was a greener more brittle tuff, and this was reveted with an exterior facing of a harder brown tuff (rooms were later carved into the wall to store wine barrels, revealing the structure in section). Ciancio Rossetto later described these two stones as *tufo del Palatino* faced with probably *tufo lionato* from Monteverde (1998: 184). Delbrück gives block dimensions: courses range from .275 - .300 m H.; blocks are 0.75 - 0.90 m L. and 0.57 - 0.62 m W. These blocks are clearly cut on the typical *tufo del Palatino* module of a ratio of H:W:L::1:2:3, but it is noteworthy to see that the variance in the module encompasses both the so-called Italic and Attic feet (i.e. the variance in height is from .275 to .300 m), and this is a good example of the difficulty of applying precise metrology to tuff, which was too brittle to conform to such high tolerances.

   In 1937-39 when the podium of the Augustan period temple was uncovered, more remains of the earlier phases of the temple were brought to light. The opposite side of the wall seen by Delbrück in *tufo del Palatino* was revealed abutting a later mosaic relating to a 2nd C repair (**No. 107**), and parts of walls perpendicular to Delbrück's wall and forming part of the interior cella walls were also connected to the same mosaic. Beneath the pronaos floor of the later temple

were found two rectangular foundations, again in *tufo del Palatino*. Using these components, Viscogliosi restored the original temple as a squat 25 x 21 m podium with a tripartite cella at the rear; the two rectangular foundations suggest either a tetrastyle temple or distyle columns *in antis*, and Viscogliosi prefers the former (1996: 24).

This is a Tuscan-style temple in plan, but it was not without interesting refinement: Delbrück noted that the wall at the rear of the cella had upward curvature forming a convex curve 0.045 above the horizontal at its center.

In 1997-98, Ciancio Rossetto published soundings at the front of the temple's podium, where it was discovered that the temple sat on a very tall ashlar platform. The platform was the same W of the temple (21.45 m, given more precisely than Viscogliosi), but 38.20 m long. The function appears to have been for protection of the temple in the Tiber floodplain, and is akin to similar structures at this point. The platform found at both E and W of the tempel was made of blocks cut on the same ratio of H:W:L::1:2:3 as Delbrück's wall. At the E, the platform exterior was better preserved and ran to a complete depth of 18 courses (5.25 m). The lowest 3 courses were buried, and the next three protruded slightly forming a socle.

The material of this platform wall was twofold, suggesting a strategic revetment: an interior core of "*cappellaccio del Campidoglio*" (*tufo del Palatino*), and an exterior cladding of a harder tuff suggested by Ciancio Rossetto to be *tufo lionato* from Monteverde. The lowest course of the wall was in this *tufo del Palatino* (Ciancio rossetto 1997-8: 181-83).

The date for the whole temple, provided by ceramic material and terra cotta architectural elements found near this platform, is 5th C. But there were also ceramics in the same fill running into the 4th C (Ciancio rossetto 1997-8: 193). More important is the use of what has been suggested as *tufo lionato* from Monteverde: if indeed this is the source of this material, then we must reconcile this with the historical fact that quarrying this stone from across the river in large quantities prior to the capture of Fidene and Veii on the west bank of the Tiber may have been difficult. There is also the question of the curvature: this can either be interpreted as evidence of nascent Hellenism in the 4th C, or as connections between Rome and the Greek (mainland and Sicily) world where such refinements were in vogue in the 5th C.

The bottom line is that archaeology shows only one significant phase to the temple prior to the 2nd C (**No. 107**), whereas Livy attests to two. Both dates have respective problems: perhaps closer geological study of the stone identified as *tufo lionato* would be instructive.[968]

Bibliography: Ciancio rossetto 1997-8; Delbrück 1903; Viscogliosi 1996.

9. 4th Century – *Aedes, Vesta*

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[968] At the time of this writing, the cantina was deemed too dangerous to allow for study by the Soprintendenza, and I was unable to access the remains in person.

Sources: None.

Procedural: Unknown.

Archaeological: Recent stratigraphic excavation around the imperial-era *a.V.* on the Forum has suggested a possible temple structure there belonging to the 4th C. Evidence is thin and interpretation is hotly debated. In recent full publication of the American excavations in the area during the 1980s and 1990s, Scott dates the first phase of the temple to the late 3rd C following the fires of 241 and 210 documented by Livy. In a rejoinder to Scott, Arvanitis displays stratigraphic results suggestive of a 4th C date. Debate revolves around very limited architectural evidence, only two blocks of *tufo giallo della via Tiberina* of unknown character (Arvanitis 57: "podio"). Scott's identification of different *tufi* is geologically rudimentary, sometimes limited to color or to pointing out the fact that "different types" of tuff were used without further comment. Better evidence comes from the pottery found in the scant stratigraphy that remained after the early excavations of Boni. Argento's analysis of the ceramics excavated by Arvanitis suggested a 4th date dominated by ceramics of the 5th and 4th C (77-80); Scott reports the find of black-gloss ware belonging to the late 3rd C, but this may very well come from later 3rd C reworking of the sanctuary (21). On ceramic evidence, then, it does seem likely that some building activity of a completely unknown extent took place in the 4th C.

That much is fine; Arvanitis develops the phasing further. Within what he identifies as the cut of a foundation trench associated with those two blocks of *tufo giallo*, he distinguishes two different phases. He posits the later phase in the late 4th C and the earlier phase in the first two quarters of the 4th C. He then very tentatively draws the lower part of the cut in relation to the a purported post-Gallic sack phase. This seems unlikely: first and foremost, there is no evidence of burning, and nothing here that would give physical credence to the sack. This may be a mid-4th C phase, but there is no reason to align it with the difficult notion of the *incendium Gallicum*. Beyond this, there are three problems in following the logic of two distinct phases:

1) The earlier phase appears from his published section (fig. 26, section aa') to fill the same cut as the foundation trench of the next phase.
2) Argento's detailed publication of the ceramics from these contexts does not identify any evidence that would distinguish the early 4th from the late 4th C.
3) No architecture can be associated with the purported earlier phase, even less than the the later 4th C phase, which consists of only two blocks of stone. We would have to assume a complete destruction of the structure, a robbing of its foundation course, and a replacement of new foundations in precisely the same alignment, all within about fifty years time.

Arvanitis writes that the second trench is "dallo stesso andamento e delle medesime dimensioni, con la differenza che, in questo caso, si sono conservati

due dei blocchi del podio in tufo di Grotta Oscura." Perhaps the lower foundation trench is the last 20 cm or so of the upper trench, excavated and hence conceived as separate human actions. However, Occam's razor would suggest that the present and limited evidence can only support a single 4th C phase.

Bibliography: Argento in Arvanitis, ed. 2010: 74-88; Arvanitis in Arvanitis, ed. 2010: 54-59; Scott 2009: 21-23.

10. 343 – *Aedes, Iuno Moneta*

Sources: Liv. 6.20.13, 7.28.4-6; Ov. *Fast.* 6.183-85.

Campaigning against the Aurunci, L. Furius Camillus vowed an *a.I.M.*, and a site was designated on the Capitoline for the temple by the senate on the location of the house of M. Manlius Capitolinus. The site had been left in its ruined state since its official destruction in 384 when Manlius attempted to establish a tyranny. It was dedicated the following year. This is the story given to us by both Livy and Ovid; a later parallel suggests that the house instead was that of Titus Tatius (Plut. *Rom.* 20; Solinus 1.21). A version transmitted by Valerius Maximus (1.8.3) suggesting that the temple was vowed by M. Furius Camillus after the sack of Veii seems to be a conflation of various legends: the *praenomen* of the more famous Camillus, the Veientine Juno Regina taken to Rome after the sack, and the warning (*monere* being a possible root of *Moneta*) squawks of sacred geese, which alerted Manlius Capitolinus (also aggregated into the story) of the Gallic attempt to invade the *arx* (any linearity to this story disputed by Wiseman 1979; Meadows and Williams 2001). Untangling these strands becomes so difficult, that Livy's notice concerning L. Furius Camillus and the Aurunci, which has the form of more official senatorial language, is to be preferred. The temple later was known to have held both the Republican mint as well as the linen list of Roman magistrates, the *libri lintei magistratum* (cf. Liv. 4.20.8).

The site is given as *in arce* whereas elsewhere Manlius' house is described as being *inter duos lucos* (Cic. *De domo* 38.101). Together, this points to an area towards the SE side of the Capitoline, where we know that the Temple of Veiovis was also *inter duos lucos*, but at a location higher up the E peak of the hill than that temple, as the *arx* was in the area now occupied by S. Maria in Aracoeli.

Recently, Tucci (2005) restores Giannelli's association of the temple with those remains in the Aracoeli gardens consisting of a lower wall in *tufo del Palatino* with superimposed courses *tufo rosso a scorie nere*. Tucci publishes excavation plans that demonstrate that these tuff foundations resemble the podium of a temple. As he points out, the combined use of stone corresponds to the ancient notion that the temple was built upon the destroyed foundations of an earlier structure, though Tucci posits instead that the underlying *tufo del Palatino* represents part of the earlier fortification circuit (2005, 19-20). Other attempts to place the temple elsewhere or to put another structure in the Aracoeli gardens are awkward: a location higher on the *arx* under S. Maria in Aracoeli is disproven by

the lack of any remains underneath the church (Tucci *contra* Thein). Von Hesberg wants to identify these remains instead as the Temple of Honos and Virtus built by C. Mucius and commissioned by Marius; while Vitruvius 3.2.5 notes the fact that the Temple of Honos and Virtus was built of tuff rather than marble, *tufo rosso a scorie nere* goes mostly out of use after around 200 B.C., and it would be surprising to find it here in a temple from a period when the *tufo lionato* quarries on the Anio were producing large volumes of better quality tuff.[969]

The identification is problematized, however, by two large *opus caementicium* walls sitting directly over the structure and constituting an Imperial-period construction (the aggregrate contains red porphyry and granodiorite) whose purpose is not clear. Tucci suggests that the *a.I.M.* was moved from the Aracoeli gardens to the top of the so-called Tabularium in the early 1st C B.C., and he locates it around two voids in the Tabularium structure, one under the cella and another under the pronaos. The temple would have then overlooked the Forum in a platform-temple arrangement similar to late-Republican sanctuaries in Hellenistic style such as Jupiter Anxur at Terracina and Hercules Victor at Tibur. It is a solution that even he admits is "striking" (2005, 24). With the Renaissance construction of the Palazzo Senatorio on top of the Tabularium, there is no way of checking his argument, which must remain speculative. The superimposed cement structures remain to be explained, but the composite nature of the structure in the Aracoeli garden, the date suggested by the materials used, and its location all support his initial identification.

Procedural: Dictatorial vow; senate appoints *IIviri ad aedem pro amplitudine populi Romani faciendam*. Dedicated by an unknown party the following year. In this case, the temple was built remarkably fast (Ziolkowski: 238).

Archaeological: A mix of two stones with *tufo del Palatino* normally being lower and reinforced with *tufo rosso delle scorie nere*; however, in some places the *tufo del Palatino* sits on top of the *tufo rosso*, but it is not clear whether this is due to the original phasing or to modern repair work, as some blocks have brick fragments and mortar underneath them. *Tufo del Palatino* is cut on the standard dimension seen in the circuit wall (i.e. ideally .27 x .55 x .82 m); the *tufo rosso* is highly variable in dimensions, as is usually the case owing to the difficulty of cutting cleanly through so many inclusions of hard black scoria. Avg. of 4 blocks gives a H. and W. of .52 m (ranging from .42-.60 m). Some blocks reach up to L.: 1.80 m. No signs whatsoever of lifting holes on either stone.

Bibliography: Meadows and Williams 2001; Thein in *MAR* 153-54; Tucci 2005; Von Hesberg 1995: 77-80; Wiseman 1979; Ziolkowski 1992: 71-73.

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[969] This Anio tuff is found in the Tabularium, Largo Argentina Temple B, and the pertinent phase from Largo Argentina Temple A. I also thank S. Zink for showing me constructions on the S side of the Palatine probably from the early 1st C B.C. and making heavy use of this same material. Contrastingly, *Tufo rosso a scorie nere* is not to my knowledge known from architecture of this period.

11. 329 – *Circus Maximus*, wooden *carceres*

Sources: Liv. 8.20.2; Varro *DLL* 5.153

Livy gives the date, and Varro explains the physical nature of the *carceres*: *carceres dicti, quod coercentur equi, ne inde exeant antequam magistratus signum misit.* They were the wooden starting gates, stalls large enough to hold a chariot team. Our two earliest Latin epic poets both described their form: Ennius called them *faucibus pictis* (cf. Cic. *Div.* 1.108) suggesting that they were painted. There is some debate about whether *pictis* should be emended to refer to the colors of the chariot teams rather than to the gates themselves, though Humphrey argues that colored teams were unlikely in Ennius' day. In the passage cited above, Varro reveals his source as Naevius, who named the starting gates *oppidum* because their appearance was like a wall with turrets and towers: *muri ad speciem pinnis turribusque…olim. Olim* suggesting that the turreted form was an older phase extant in the third century—the time of Naevius—but no longer during Varro's time.

Procedural: Unknown.

Bibliography: Humphrey 1986 Ch. 4.

12-16. 338/318 – Maenian public works in the Forum

Sources: cited below, but otherwise see catalogues in Coarelli *FR* II 39-42 (*Columna Maenia*), II 143-45 (*Maeniana*).

Coarelli was the first to deduce a unified public works project in the NW area of the Forum by studying the various threads connected with the career of C. Maenius and associating them with the fourth paving level of the Comitium. The different attested works are as follows:

12. *Rostra*

In a naval battle at the mouth of the Astura, Maenius triumphed over the Antium, Lavinium and Veletri during his consulship in 338 (sources in *MRR* I 138). The ships of Antium were brought back to Rome, and the detached beaks were attached to the speaker's platform in the forum from which it derived the name "Rostra" (Liv. 8.14.12 *rostrisque earum suggestum in foro exstructum adornari*; Plin. *NH* 34.20; *eodemque in consulatu in suggestu rostra devictis Antiatibus fixerat*; Varr. *DLL* 5.155 *ex hostibus capta fixa sunt rostra*). Coarelli (*FR* II 21 n. 37) notes that a tribune or platform of some sort (the *suggestus*) is attested earlier—the XII tables were posted there, and the statues of the legates killed at Fidene in 437 were placed on it—but considers this to have been a significant reworking of the monument.

13. *Columna Maenia*

A free-standing column was erected in this area by Maenius. If it was stone, it was one of the earliest stone columns in Roman architecture, although Pliny states that the earliest honorary column at Rome was that of Minucius, dating to the mid-5th C (*NH* 34.21). Coarelli (*FR* II 43-44) argues against identifying the column with an equestrian statue given to each consul of 338 (cf. Liv. 8.13.9), and his analysis of the sources bears this out. The column was located also in the area of the *carcer*, that is at the foot of the Capitoline in the NW area of the forum.

14. *Maeniana*

Still in the same area of the Forum are the *maeniana*, as Festus tells us *Maeniana appellata sunt a Maenio censore, qui primus in foro ultra columnas tigna proiecit, quo ampliarentur superiora spectacula* (120 L). Other sources catalogued by Coarelli (*FR* II 143-45). The Maeniana were wooden balconies projecting over those structures in the Forum (presumably the *tabernae*, see Vitr. 5.1.2) and allowing spectators a less obstructed view down below. Isid. *Orig.* XV.3.11 attributes them to "Maenius collega Crassi," thus to Maenius' censorship, shared with L. Papirius Crassus (*MRR* I 155).

15. *Tabernae Argentariae*

Coarelli (II 146) argues that the *tabernae argentariae* were first constructed at this time in order to sustain the *maeniana*. The *tabernae* are first mentioned in the course of 308 when Samnite shields were affixed to the outside (Liv. 9.40.6, and cf. Coarelli 1996b), and we know that they replaced the Archaic *tabernae lanienis* (Varro frg. Non. 853 L: *hoc intervallo primum forensis dignitas crevit atque ex tabernis lanienis argentarias factae*). A connection with the *maeniana* seems preferable to other opinions that have sought to connect the creation of the *tabernae* with the beginning of silver coinage in the third century (cf. the summary of prior literature at Papi "Tabernae Argentariae" in *LTUR* V 10-12). The first mention of the stalls in Livy's account of 308 explicitly links the *argentariae* stalls with non-monetary metallic activities (breaking down captured gold and silver Samnite armor), and it is not necessary to assume the presence of coinage to understand the *argentariae* in the Forum, although cf. discussion in Ch. 3. For the location of these, see **No. 68**.

16. RESTRUCTURING OF THE *COMITIUM*

On the argument that the fifth paving of the comitium is connected by Coarelli to M. Valerius Maximus Messalla (**No. 46**), the fourth paving belongs in the 4th C. Considering the other projects in that area undertaken by C. Maenius, Coarelli connects this paving with this work, though probably we would prefer to see it

done during his censorship in 318. Carafa: 144-47 dismisses the ability for such an accurate reconstruction, suggesting that the equivalent of Coarelli's fifth paving belongs appropriately to the 3rd C, but that the fourth paving belongs sometime after the mid-5th C: according to him, there is no archaeological trace of Maenius' work in the Comitium.

According to Coarelli, these changes entailed a full and significant revamping of this area of the forum comprising significant ideological (*columna*), political (*comitium*), and economic (*tabernae*) structures.

Procedural: Work started by the consul (*Rostra*, statue); and by the same man as censor (*Maeniana*; column; paving and rebuilding of *comitium*?).

Archaeological: The only physical evidence of these projects belongs to the Comitium structure in *tufo lionato* from Monteverde (Amici: 358) and an associated u-shaped altar of *tufo giallo della via Tiberina* consisting of a small rectangular socle (3.75 x 2.88 m) with a *cyma reversa* moulding (Coarelli *FR* I 124-26), which replaced a smaller earlier altar (Amici: 354). Coarelli argued for the Comitium to have been a fully circular structure at this point, but recent three-dimensional mapping of the remains has proven this to be impossible (Amici: 359-62; anticipated by Carafa: 135-41). Instead, the mid-Republican phase of the Comitium consisted of a raised curvilinear platform some 30 m long with a stepped interior curve extending to the E of the altar. The whole thing made a sort of truncated arc. The area in front (to the N) seems to have been paved with slabs of *tufo giallo della via Tiberina* (Coarelli *FR* I 124-26).

Bibliography: Coarelli *FR*; Carafa 1998; Amici 2004-2005.

17. 312 *Via Appia* to Capua

Sources: Str. 5.3.6; Stat. *Silv.* 2.1.12; Liv. 9.29.5-7; Diod. Sic. 20.36.2; *Insc.It.* XIII.3, 79; Front. *Aq.* 5; Eutr. 2.9; Auct. *De vir. ill.* 34;

The "Queen of roads" (Stat. *regina viarum*) was the first planned route exiting the city of Rome, and its almost arrow-straight trajectory from Rome to Terracina is testament to the artificiality of the road as compared to those pre-existing routes such as the Latina or the Salaria that had formalized over time. Sources without exception attribute the beginning of construction on the road to Ap. Claudius Caecus' censorship in 312. There has been some argument against the historical accuracy of this, but it is not widely accepted (summary in Wiseman 1970). The road's early importance is marked by the presence of tombs there from the first half of the 3rd C, notably that of the Cornelii Scipiones, which lies on a small side road just outside of the city. Ap. Claudius Caecus' role in a construction project extending SE may have leaned on private connections in this area (his daughter was married to a Capuan).

The route provided a means of accessing Campania that was more direct than the existing *via Latina*, and that was kept further away from the Liris Valley where Fregellae and other settlements were intrusion enough to the Samnites there (Patterson). The road was extended later across the peninsula to Brundisium probably sometime in the third century, and then became the main route to the E as Brundisium was the embarking point for the Greek peninsula and beyond.

The road left the walls through the *Porta Capena*. In 296, it was paved in *saxo quadrato* by the Ogulnii for the first few miles (**No. 25**), and in 293 a further extra-urban section was paved in *silex* (cf. Liv. 10.47.4). This suggests that, prior to 296, the road of Ap. Claudius Caecus was only graveled.

The road is straight except for a small deviation around Aricia. This meant that the road bed had to be cut through the uneven terrain of the Alban mount. A long and impressive viaduct, an ashlar ramp through the plain S of the descent from Aricia, is dated to the late 2nd C, and continual improvements have obscured the road's earliest form. A great body of literature exists on the Appia: I count at least four guidebooks or general volumes in Italian in the last two decades (Della Portella 2003; Quilici 1997; Quilici 2004; Spera and Mineo 2004). However, most of this is work is topographic and concerned with itineraries of monuments along the course of the road; there has been little if any concentrated study on the physical development of the roadway itself or on the economic impact of the road's construction.

Procedural: Censorial *locatio*.

Bibliography: Della Portella 2003; Quilici 1997; Patterson in *LTUR* V "Via Appia" 130-33; Quilici 2004; Spera and Mineo 2004; Wiseman 1970.

18. c. 312 – *Aqua Appia*

Sources: Diod. 20.36; Eutr. 2.9.2; Fest. 23 L; Front. *de Aq.* 5, 18, 65; Liv. 9.29; Pompon. *Dig.* 2.2.36.

The first aqueduct providing Rome with fresh water was built in the last decades of the 4th C. Frontinus has this to say about the history surrounding the project's construction:

> M. Valerio Maximo P. Decio Mure consulibus, anno post initium Samnitici belli tricesimo aqua Appia in urbem inducta est ab Appio Claudio Crasso censore, cui postea Caeco fuit cognomen, qui et Viam Appiam a Porta Capena usque ad urbem Capuam muniendam curavit. Collegam habuit C. Plautium, cui ob inquisitas eius aquae venas Venocis cognomen datum est. Sed quia is intra annum et sex menses deceptus a collega tamquam idem facturo abdicavit censura, nomen aquae ad Appii tantum honorem pertinuit, qui multis tergiversationibus extraxisse censuram traditur, donec et viam et huius aquae ductum consummaret.

The story of Appius delaying his censorship through connivings (*tergiversationes*) until he could finish his construction projects may have something to do with anti-Claudian historiographic sources: Diodorus emphasizes

Appius' combativeness towards the Senate and states that he spent a large sum of money on the aqueduct without their decree. But there is no doubt that a project so involved and, at that time, so novel took a long period to plan and execute. The involvement of C. Plautius Venox (Diodorus: L. Plautius) is intriguing: both Frontinus and Livy record that Plautius abdicated his position after quarreling with Ap. Claudius. The *cognomen* Venox is attributed by Frontinus to his locating of the source for the aqueduct and could suggest that Plautius lent a hand in the early stages of the project when the sources of water were mapped, and then the actual financing and construction belonged to Ap. Claudius after the two quarreled. However, Plautius' father was also named C. Plautius Venox, cos. 347 and 341, so it is unclear how much we should make of the cognomen.

The course of the aqueduct is mapped by Frontinus: it began in the *ager Lucullanus* between the 7th and 8th mile of the Via Praenestina and continued for 11,190 *passus* to the *Salinae* outside the *Porta Trigemina* (that is, along the river at the N foot of the Aventine at the *imo Publicii Clivo*). The entire flow was carried in an underground *specus* except for 60 *passus* on *substructio et opus arcuatam* near the Porta Capena where it crossed from Caelian to Aventine. A *passus* is 1.475 m, making the full extent 16.5 km. It was the lowest of the aqueducts (Front. 18) and its intake was 50 *pedes* below ground (Front. 65).

Procedural: Censorial work without a *Senatus Consultum*.

Archaeological: Probably owing to the fact that it was so low underground, the source of the acqueduct is still unlocated, and there has long been debate, still unresolved, over where exactly it lay (Ashby: 51). The *specus* was recorded in 1677 in the Vigna di Benedetto Santori lying "at the angle made by the road from the curved end of the Circus to the Porta Ostiensis with another road leading to the left of the church of S. Balbina the martyr" (quoted by Ashby: 52; Van Deman: 27). This is somewhere on the Lesser Aventine, and presumably the same track was followed by Lanciani in 1876 for over 100 m. where he observed a width and height of 5.5 feet with a vaulted roof and lined with three courses of "peperino" blocks on the sides (the stone type is very insecure: Van Deman reports *cappellaccio* [*tufo del Palatino*] blocks .50-.55 m high); at this point, the channel narrowed between two shelves on either side (Van Deman reproduces the 17th century drawing: 23, fig. 2). Lanciani also saw manholes at regular intervals, *putei*, with foot-holes cut into the sides. This area of the *specus* has, however, been inaccessible since 1880 (Ashby: 52-53). In a "subterranean stone-quarry nearly under S. Saba," Parker saw no less than five *specus* in 1870 sloping down to carry water into the lowest *specus*, that of the Appia (were the five other *specus* instead service shafts or *putei*?) (Ashby 53; Van Deman 27).

Beyond the city, Pace publishes a map made by Di Fenizio on possible sources, but as Mucci suggests, in the absence of any trace of the *specus*, nothing relevant can be said. Ashby calculates from the elevation of the source and outflow in Frontinus that the aqueduct had a total grade of 0.5%.

Bibliography: Ashby 1935: 49-54; Pace 1983: 118-19, tb. 4; Mucci in *LTUR* I "Aqua Appia" 61-62; Van Deman 1934: 23-28.

19. 307 – *Via Tiburtina / Valeria*

Sources: Liv. 9.43.25.

The road leading E towards Tibur was known in later times as the Via Tiburtina, but as the Via Valeria continued or overlapped with it, and as the Valeria seems to have been first, both routes probably had their origins at the same time (Wiseman). The evidence for the Valeria's construction is found under the year 307, when Livy notes that M. Valerius Maximus and his colleague C. Iunius Bubulus *viae per agros publica impensa factae*. This also accords with the subsequent colonization of Alba Fucens (303) and Carsulae (298), made possible by a route into the Apennines (Patterson; Wiseman).

> The route near the city is not clear: the *v.T./V.* may have formed from the convergence of those roads that went out of the *Porta Viminalis* and the *Porta Esquilina*. Patterson suggests that this was the land-route by which travertine would have been transported to Rome, although there is better evidence that the material was brought by water (cf. Str. 5.3.11).

Procedural: Censorial *publica impensa* (*locatio* not specifically mentioned).

Bibliography: Patterson in *LTUR* V "Via Tiburtina" 146-47; Wiseman 1970: 139-40.

20. 304 – *Aedicula, Concordia*

Sources: Liv. 9.46.6; Plin. *NH* 33.17-19.

The rabble-rousing Cn. Flavius caused a legal battle when he dedicated an *aedem Concordiae in area Vulcani* (Liv.) in 304. He was the son of a freedman, the first to reach the office of aedile of the plebs, as Pliny tells us, and moreover he had the audacity to hold both the tribuneship and the aedileship at once; Livy has him as a *scriba* who was then elected aedile by the *factio forensis*; Cicero has him still a *scriba* (cf. *MRR* I 168). Aedile seems best, and certainly plebeian, as he seems to have been bent on irritating the patricians. Livy also attributes to him the publication for the first time of the *ius civile* as well as the *Fasti*; he also repaid his *factio forensis* by creating four urban tribes for them. Not surprisingly, his attempt to dedicate a temple to Concord met with, to quote Livy, *summa invidia nobilium*. The attempt to block his efforts is recorded by Livy as follows:

> *Coactusque consensu populi Cornelius Barbatus pontifex maximus verba praeire cum more maiorum negaret nisi consulem aut imperatorem posse templum dedicare. Itaque ex auctorite senatus latum ad populum est, ne quis templum aramve iniussu senatus aut tribunorum plebei partis maioris dedicaret.*

Pliny describes it concisely: *Flavius vovit aedem Concordiae, si populo reconciliasset ordines, et, cum ad id pecunia publice non decerneretur, ex multaticia faeneratoribus condemnatis aediculam aerea fecit.* Thus, Flavius' actions provoked legislation that henceforth demanded that the *dedicatio* process required the support either of the majority of the Senate or of the tribunes of the plebs. Flavius' funding was cut off, and he instead went about building the temple in the typical aedilician manner (*ex multaticia aerea*). The resulting structure of bronze was much reduced—could the bronze of this *aedicula* have been the very bronze levied in the fines? The area of the structure then became the *area Vulcani et Concordiae* associated with prodigies of the 2nd century (cf. Momigliano 1942: 116); the Volcanal was in proximity to the Comitium at the foot of the Capitoline (s.v. Coarelli in *LTUR* V 210-11). This is in the same area where Opimius built his later Temple to Concord. Whether or not there was a Camillan temple there from the 4th C is a matter of debate (**No. 6**).

Procedural: Vowed by an aedile. His action was blocked either by refusing to allot him monies for the temple or by the actions of the *praetor maximus* who was involved in the rites for sanctifying the grounds of the future building; probably, in fact, by a combination of both. The temple was then changed into a foundation *ex multaticia aerea* (*ex multaticio*).

Bibliography: Ferroni in LTUR I "Concordia, Aedicula" 320-21; Momigliano 1942; Ziolkowski 1992: 219-34 (on the resulting legislation).

21. 302 – *Aedes, Salus*

Sources: Liv. 9.43.25, 10.1.9.

In 306, Livy records that C. Iunius Bubulcus Brutus as censor *aedes Salutis…locata est, quam consul bello Samnitium voverat* (9.43.25). Ziolkowski plausibly assigns the vow to Iunius' third consulship in 311, when he triumphed over the Samnites (cf. *MRR* I 161). The *a.S.* was then dedicated by the Iunius serving as dictator in 302, and the personal attention to the temple is noted by Livy: *aedem Salutis quam consul voverat, censor locaverat, dictator dedicavit* (10.1.9). This was the temple that Fabius Pictor painted (cf. Plin. *NH* 35.4.19; Val. Max. 8.14.6).

The *Collis Salutaris* (from the *Liber Argeorum*, Varr. *DLL* 5.52) and the *Porta Salutaris* (Paul. Fest. 465L), both explicitly related to the temple by ancient sources, locate the *aedes* on the Quirinal. A lightening bolt struck both the temple and the circuit wall in 275 (Oros. 4.4.1, **No. 35**), placing the temple near the wall on that hill. The N gate on the Quirinal was the *Porta Collina*; the *Porta Salutaris* was the exit down from the steep W side somewhere in the vicinity of the later Palazzo Quirinale, but a more precise location cannot be given. Ziolkowski argues for a site further N under the Palazzo Barberini, but if the wall ran from Quattro Fontane to Largo Santa Susanna—it has been recorded in both

places—in basic accordance with via XX Settembre, then the Palazzo Barberini was slightly extramural, and there is no good reason to suspect that the temple of Salus was as well.

Procedural: C. Iunius Bubulcus Brutus *votatio* as cos. 311, *locatio* as cen. 306, *dedicatio* as dict. 302.

Bibliography: Coarelli in *LTUR* IV "Salus, Aedes" 229-230; Ziolkowski 1992: 144-48.

22. Late 4th/Early 3rd C – *Aedes, Portunus*

Sources: Not attested.

Soundings in 1947 around the sides of the still-standing Late Republican *a.P.* in the Forum Boarium showed that the temple rested on an earlier platform of *tufo giallo della via Tiberina*. The cult of Portunus in the area of the Tiber port has been shown by Coarelli to be Archaic in date, so that an earlier phase of the Late Republican temple is perfectly logical (1988: 115-27).

Procedural: Unknown.

Archaeological: The predecessor to the Late Republican temple is most visible under the NE angle of the later podium, where a platform of 11 courses of *tufo giallo della via Tiberina* extended downwards. The blocks were of typical dimensions for *tufo giallo* if slightly shorter: 2 RF x 2 RF x 5 RF on a foot of .295 m. The platform in its entirety was 6 m high, but the final two courses were foundation courses, slightly offset, and so the platform stood 5.25 m above ground (Ruggiero 1991-92: 253). The blocks were laid in alternating courses of headers and stretchers.

This platform measured c. 11 x 32 m and was entirely of *tufo giallo*. Colini and Buzzetti note that the exterior facing was in the same stone, dissimilar from Temple C in Largo Argentina, which had the softer *tufo giallo* interior reveted with a harder stone (**No. 24**) (1986: 12). Ruggiero speculates that it was stuccoed (1991-92: 265).

Found lying at the base of the excavation trench were two pieces of a cornice in *tufo lionato* from Anio; these should probably be restored on top of the platform projecting outwards with a simple *cyma reversa*. The base would have lacked a moulding as with Temple C at Largo Argentina or the Temple of Juno Sospita at Lanuvium (Ruggiero 1991-92: 254).

Also noteworthy is the discovery, along with the cornice fragments, of a fragmentary uppermost drum of a column in tuff (of an unspecified type). It was .46-.56 m high, .73 m in diameter at the top and .80 m at the bottom with 20 flutes. The flutes have flat arrises, suggesting that the order was not Doric; perhaps this represents an older Ionic phase of the Late Republican temple that is

also Ionic. This column has only been published in a figure taken from a hand-drawing by Colini (in Ruggiero 1991-92: 258 fig. 5), and it is unclear what phase it pertains to: it is doubtful that it belonged to the earliest phase when we know of no other such stone trabeation in temple architecture.

In front of this platform, and springing from the sixth course into which it bonded, was a vuossoir arch that spanned a roadway running E-W across the N side of the temple platform; also in *tufo giallo della via Tiberina*, its span was 5.20 m (Colini and Buzzetti 1986: 13). Colini and Buzzetti suggest it served as an accessway towards the Pons Aemilius; Ruggiero's raises the possibility that it was linked to the Aqua Appia, but this would implausibly have made the *specus* run along at the level of the temple itself.

Because the arched road passed immediately to the front of the temple—assuming it had the same orientation as its later iteration—Ruggiero makes much out of the fact that frontal steps leading down from this tuff platform would have been impossible to put at the front of the temple. On these grounds, she sees the structure with the arched passageway as a later phase, replacing a hypothetical series of stairs on front of the temple (1991-92: 254, 265; followed by Buzzetti). It may be better to think that the *tufo giallo* construction found under the temple did not constitute the temple podium itself, but rather made up part of a platform beneath the temple's podium accessed by stairs along some as-of-yet undiscovered side area. This is in accordance with platforms elsewhere in the frequently-flooded Forum Boarium: e.g. that under Apollo Medicus or under the twin temples at S. Omobono. In the latter case, the platform of the twin temples appears to have been accessed by a small staircase at the rear (rather than anywhere near the front area with the altars); in this way, an as-yet unlocatable side or rear access may solve the problem of the difficulty of placing stairs in front of the temple.

Ceramics found in the area point to a date in the late 4th/early 3rd C. Colini wanted to see the temple as earlier than Temple C in Largo Argentina because of the lack of an external revetment (1986: 12; followed by Ruggiero 1991-92: 265 in general accordance with the ceramic finds). Temple A also lacked an external revetment in its earlier phase, so this is not automatic. Instead, the date remains vague, although from a construction perspective, the platform is in keeping with similar construction efforts over the 5th-3rd C in the Forum Boarium before the restructuring of the port in the late 3rd/early 2nd C removed the constant fear of flood damage (**No. 97**).

Bibliography: Adam 1994; Buzzetti in *LTUR* IV "Aedes Portunus" 151-52; Coarelli 1988: 115-27; Colini and Buzzetti 1986; Ruggiero 1991-92.

23. c. 300 – Lower chamber of the *Carcer* / *Tullianum*

Sources: Liv. 26.27, 39.22.10; Varr. *DLL* 5.151.

The structure under S. Giuseppe dei Falignani at the NW corner of the Forum is identified as the prison of Republican Rome. The multiple literary mentions of the structure make this identification secure (Coarelli). Perhaps most famous of all is Sallust's description of the prison in which the consul Cicero had Lentulus and the other Catilinarian conspirators executed: *est in carcerem locus, quod Tullianum appellatur, ubi paululum ascenderis ad laevam insuper camera lapideis fornicibus iuncta.* True to this portrayal, the structure under S. Giuseppe contains a rectangular room superimposed above a lower room (the *Tullianum*). The two rooms have different plans and are thought to represent different phases. The lower room is circular in plan with the successive courses tapering towards the top, giving it a round profile (hence, *lapideis fornicibus*) and a bee-hive like shape, which led some early excavators to suggest that it was a *tholos* or Archaic tomb of some sort. The monument is closely associated with an area known as the *Lautumiae*, and the ancient suggestion that the foot of the Capitoline at this point once formed a tuff quarry, a gallery of which later became the lower chamber of the prison, appears valid (Varro: *quod Syracusis ubi delicti causa custodiuntur, vocantur latomiae, inde lautumia translatum, quod hic quoque in eo loco lapidicinae fuerunt*). The whole area may have backed into part of the Archaic wall that ringed the Capitoline (Catalano, Fortini, and Nanni).

Romans believed that the lower part of the prison dated back to the time of the kings (Varro: *in hoc* [sc. *carcere*] *pars ubi terra, ideo quod additum a Tullio rege*; cf. Festus 490 L, *contra* Liv. 1.33.8 who attributes it to Ancus). In truth, the use of *lapis Albanus* in the lower chamber's masonry suggest that the date is not much earlier than around 300 (Frank; Blake 1947: 35; Coarelli; however, see the debate over the date of the use of this stone at Sant' Omobono, **No. 1**). Could it have been installed as late as c. 200, after a fire burned the *lautumiae* in 210 (Liv. 26.27.3)?

Procedural: Unknown.

Archaeology: the earliest phase consists of blocks of *lapis Albanus*; three courses are visible. The upper chamber has *tufo lionato* from Anio and occasional travertine, and thus is dated by Frank and Coarelli to c. 100. Our knowledge of this monument still relies on plans of the early twentieth century, and the publication of ongoing work there by Patrizia Fortini and the Soprintendenza is eagerly awaited.

Bibliography: Blake 1947: 35; Coarelli *FR* II 62-80; Coarelli in *LTUR* I "Carcer" 236-37; Catalano, Fortini, and Nanni 2001; Frank 1924: 45-6; Le Gall 1939.

24. Early 3rd C – Temple C in the *Area Sacra di Largo Argentina*

Sources: None.

The third temple from the N in the Area Sacra di Largo Argentina in the Campus Martius was excavated and fully published by Marchetti Longhi in 1933. There is still, unfortunately, no strong evidence to support the various subsequent identifications of this temple. On the one hand, there is Coarelli's identification, following that of Castagnoli, with the Temple to Feronia, but we cannot even state with confidence that Feronia was worshipped at an architectural structure. Aside from the *Fasti*, the only mention of her cult is a *donum* given by Roman matrons simply to "*Feroniae*" (Liv. 22.1.18; see the salient comments of Kondratieff). Ziolkowski' argument in favor of the Temple of Iuturna goes against what we know about the terminus of the Aqua Virgo, where the Temple of Iuturna was located by Ovid (cf. **No. 51**); it also promotes a date slightly later than that suggested by the architecture and finds (see below).

The confusion has, unfortunately, left us without a positive identification for the temple. The main issue is likely the loss of Livy's text after 293, the *terminus post quem* for temple, which, to judge from its architecture, belongs very shortly thereafter.

Archaeology: The temple is one of our finest examples of architecture from the period, and we can divide discussion into the various architectural components:

The podium The first phase of the temple is represented by a large tuff podium sitting directly on the virgin soil of the Campus Martius and measuring 30.50 x 17.10 m, and 4.25 m high (8 courses). The *peripteros sine postico* plan was arranged on the podium around two empty voids: one longitudinal reflecting the disposition of the *cella* (L 10.50 m x W 5.30 m), the other latitudinal underneath the *pronaos*, so that the temple's architects economically used stone construction only where it was necessary to support the temple's superstructure. The voids were filled with earth mixed with tuff rubble comprised of *tufo del Palatino*, including some squared blocks and *tufo giallo* from Grotta Oscura (Marchetti Longhi 1932: 284-85). In the rear half, around the longitudinal *cella* void, there is a gap of .54 m between the wall defining the *cella* and the wall that makes the outer edge of the podium: this would presumably have been filled with earth for stability. At the front of the temple, where the latitudinal void for the *pronaos* extends further towards outer edge of the podium, a single wall defines both the void on its interior and the edge of the podium on its exterior.

The gap at the rear of the temple between the wall making up the edge of the podium and that making up the edge of the *cella* void is not evidence of two phases. Because of the narrow width of the *cella*, it was surrounded by what was essentially a casement wall (two ashlar walls with dirt infill). The wider *pronaos* is defined by the exterior wall of the podium, and this exterior wall bonds with both the interior and exterior walls of the rear of the temple, so that both of the double walls at the temple's rear belong to the same phase as the rest of the podium, even though they do not themselves bond. This construction manner is explained by the fact that only those parts of the temple that supported a superstructure were given stone foundations: in the rear of the temple, the gap

between the two walls represents the space between the outer colonnade and the walls of the cella.

The exterior wall of the entire podium was composed of two different types of stone: the interior is a very friable *tufo giallo della via Tiberina* from Grotta Oscura; the exterior is what is now identified as another variety of *tufo giallo della via Tiberina* but of a harder quality, perhaps from quarries at Prima Porta (Jackson and Marra 2006: 427).

The interior blocks are nearly identical to those seen in the 4th C circuit walls (**No. 5**) not only for their material, but also for their avg. size of .60 x .60 x 1.50 m, according to Marchetti Longhi. He also recorded seeing masons' marks on the interior of the cella, none still visible, but originally including forms resembling a lunate *sigma*, an *eta*, a cross, and a *rho*, all with single characters incised only on the header of the block. This is another characteristic that links these blocks with the material of the wall.

The exterior blocks are of a well-lithified more durable stone. The stone is cut on a similar foot but in a different measurement, somewhat thinner with a width of c. .42 m (1 1/3 RF?). The exterior was presumably also plastered both for aesthetic purposes and to protect it from the elements.[970] The face is made of a single course of these blocks laid in header and stretchers and bonding with the softer *tufo giallo* of the interior of the wall. Jackson and Marra suggested that this represented a later revetment to protect the degrading inner *tufo giallo* (*loc. cit.*). However, from an architectural perspective, this is cannot have been the case: the exterior blocks bond integrally with the interior ones. In order to encase the interior *tufo giallo* in the harder stone at a later date, one would have had to dismantle the entire podium. Instead, this combined use of two different stones shows the attentiveness of the architects to the physical properties of the different types of *tufo giallo* at this early date. The interior stone was readily available, as it had been supplied in large quantity for construction projects of the early 4th C (e.g. **Nos. 1, 5, 22**). However, as Vitruvius would later point out (2.7.5), it was highly water permeable and degraded quickly unless it was confined to less susceptible areas of the building—in the case of Temple C, it is kept to the interior of the podium, where it was very unlikely to suffer water damage.

In the harder exterior stone, one finds here the earliest preserved *cyma reversa* in monumental stone architecture at Rome; the bottom of the podium has no moulding (Shoe Merritt *ERRM*[2] 146 no. XLV,1).

The elevation The superstructure of the earliest phase is unknown: unlike the podium, the elevation seems to have been reconstructed at later points. A base and fragment of a column in *tufo lionato* from Anio has been identified with the second Republican phase (Coarelli 14). In its first phase, the superstructure likely consisted of a wood, mud-brick, and terracotta structure on top of a stone podium. Of the terracottas, thirteen fragments of the architectural decoration pertain to this

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[970] The recent discovery at Marina di Ardea of two tuff ashlar temples currently dated to the 5th and 4th C B.C. prove that this was the earliest technique, as one temple still preserved a good deal of red-painted plaster over the moulded exterior of the podium blocks. See Di Mario 2007.

phase of the temple and all have a stylistic date suitable to the late 4th or early 3rd C (Strazzulla).

The stairs The temple was accessed by a front set of stairs whose width extended on either side slightly beyond the full width of the podium. Marchetti Longhi notes that the temple thus lacked the "guance laterali," the extension of the *antes* confining the staircase (290), and in this way the temple's frontal plan is different than many later *peripteroi sine postico* that had their stairs confined between lateral extensions of the podium (e.g. Venus Genetrix in the Forum of Caesar, or Castor and Pollux in the Forum Romanum). The stairs are constructed on a frame of two ashlar walls projecting perpendicular to the front wall of the podium; the risers of the stairs are cut into the blocks of these. The foundation walls of the stairs do not actually bond to the temple podium, but the front blocks of the podium are left very rough, and were finished only where they contacted the abutting perpendicular foundations of the stairs. In this way, the stairs and the podium are separate constructions but are planned and built in a single phase.

Stones used As discussed, in its earliest phase the temple had a podium of two types of *tufo giallo* with softer stone on the inside and harder stone on the outside. The stairs are of *tufo lionato* from Monteverde; a few risers of *tufo lionato* from Anio may be later repair. The harder Monteverde tuff was more appropriate for the stairs that were both exposed to the elements but also frequently tread upon.

Lifting evidence Temple C presents some of the most interesting evidence for the use of a crane in mid-Republican architecture. Two different techniques are seen on the two different types of tuff used in the podium wall: the softer, interior *tufo giallo* shows holes for *ferrei forfices* disposed both upside-down and rightside-up on the later faces of the blocks, exactly as they are found in the fourth century wall. The harder *tufo giallo*, however, shows cuttings on the upper faces of the blocks for the insertion of lewis pins: the cuttings are trapezoidal, 10 cm long, 3 cm wide and 10 cm deep, tapering upwards so that the hole is narrower than the base. This is the earliest attested example of this technique in Roman architecture. The reasoning for the absence of lewises on the softer *tufo giallo* is plainly obvious: the lewis works by creating friction by pressing outwards against the wall of the trapezoidal socket. With the softer stone, the socket would crack and the lewis would fail. We do not see this technique used again until harder stones such as travertine and marble become more regularly used in the 2nd C. The hybrid use of different tuffs is paralleled by a hybrid system of lifting on the same construction site. There is no reason to doubt this: both systems involved attaching an iron implement to a rope suspended from a crane. Both the lifting tongs and the lewis pins could be attached to an iron ring tied to the rope, and shifting from one implement to the other would not have been prohibitively time-consuming. It is telling to find evidence for these two techniques on blocks that are often adjacent to each other; Roman technology in this case should not be seen as following a linear advancement from simple to more advanced or sophisticated

techniques. Once architects and engineers developed a certain technique, they did not automatically replicate it, but rather they considered the appropriate technologies for the geological or physical properties of specific materials within the larger building project.

Date In consideration of how close the *tufo giallo della via Tiberina* is to that used in the wall both in terms of size and in the similarity of the masons' marks, the temple ought to be dated somewhere in the 4th or 3rd C. The terracottas also would appear to bear out such a date. Such a date is also supported by five very fragmentary inscriptions found by Marchetti Longhi while excavating Largo Argentina, all studied by Kajanto. The longest runs five lines and preserves certain word forms indicative of third century Latin, in particular *dederont* for *dederunt* and the final *d* on the ablative case (Kajanto, no. 1). Not all of the inscriptions are directly related to Temple C (the five-line example comes from a drain), but one inscription in particular found on the corner of the podium of Temple C contains the spelling *cosol,* an archaic form no longer seen after the Second Punic War (Kajanto, no. 3). The inscription is on a small base that held a dedication of some sort; it probably related to an offering that postdates the actual construction of the temple. All told, the evidence suggests a date in the early 3rd C.

Bibliography: Coarelli 1981; Jackson and Marra 2006; Kajanto 1981; Kondratieff in *MAR* "'Area Sacra': Largo Argentina" 54-55; Marchetti-Longhi 1932; Strazzulla 1981; Ziolkowski 1986; Ziolkowski 1992: 25-28, 94-97.

25. 296 – PAVING OF THE *VIA APPIA* FROM THE *PORTA CAPENA* TO THE *AEDES MARTIS.*

Sources: Liv. 10.23.11-12.

The two curule aediles of 296, Cn. and Q. Ogulnius brought several *feneratores* to trial, and the resultant fines were applied to several projects in the city. These included a new bronze lintel for the Capitolium and a statue of the god in a quadriga for the temple's roof; most famous was the positioning of a statue of Romulus and Remus, suckled by the she-wolf, by the Ficus Ruminalis in the Forum. Along with these additions, they undertook to pave a road just outside the city: *semitamque saxo quadrato a Capena porta ad Martis straverunt*. This would be the newly built *via Appia*, which exited the city through the Porta Capena, and the project suggests that in its earliest phase (that of Ap. Claudius), the street was only graveled. Why it is referred to here as *semita* rather than *via* is unclear. The endpoint of the project was the Temple of Mars vowed in 388 by T. Quinctius: Appian suggests that this was 15 stades (about 2.8 km) outside the city, but see discussion (**No. 3**). Livy's source seems to be accurate: the specification of *saxo quadrato* is unusual compared to the normal later reference to *silice* and may represent the fact that streets were not yet paved in silex at this time.

Procedural: Aedilician construction *ex bonis multatis*. Interestingly, the plebeian aediles put on games and gave gold *paterae* to Ceres *ex multaticia pecunia*, whereas Livy specifies that the Ogulnii paid for their work *quorum bonis multatis ex eo*. I'm not sure how far we should rely, however, on a minor distinction in a much later source.

26. 294 – *Aedes, Victoria*

Sources: Liv. 10.33.9.

Livy tells us in 294 that L. Postumius Megellus during his second consulship *aedem Victoriae, quam aedilis curulis ex multaticia pecunia faciendam curaverat, dedicavit*. Postumius first held the consulship in 305, so that if his aedileship was earlier than his first turn in high office, than work on the temple would have begun in 306 at the latest. Others have wanted to see the aedileship between consulships, but this makes for a strange *cursus honorum* (discussion in *MRR* I 165). Ziolkowski builds an argument that Livy followed a source negative to Megellus, which pejoratively referred to the foundation *ex manubiis* of a temple vowed in 305 as a lesser aedilician foundation. However, Cecamore rightly points out that Livy is almost entirely positive to Megellus—he is the sole source for a triumph in 305 that is otherwise unparalleled even in the *fasti*. When Livy does give a less favorable detail on Megellus, he normally cites his sources, but he does not here. Livy's evidence seems secure, then, although this does make this a unique temple from a procedural perspective.

The temple has been identified with a platform on the SW corner of the Palatine nearest the temple of Magna Mater: this accords with the notice that the cult statue of Magna Mater, brought from Pessinus, was stored in the Temple of Victory prior to the completion of its own temple (Liv. 29.14). Various epigraphy found in and around the area would confirm this identification (discussed by Ziolkowski).

Procedural: Vowed by aedile *ex multaticia pecunia*; dedicated by the same individual as consul.

Archaeology: Excavation in the area of the podium revealed portions of the earliest temple phases, now recovered. A podium comprised of ashlar blocks of *tufo giallo della via Tiberina* from Grotta Oscura was revealed along the E and S (front) sides of the temple. Pensabene restores the podium size at 33.40 x 19.35 m, though the width of the podium is not at very secure owing to the almost complete absence of the W side of the temple. The wall of the E side was four block-widths and two block-lengths thick, and it was built of alternating courses of all-header or all-stretchers; thus, the blocks were cut on an ideal ratio of W:L::2:1. Two-thirds of the distance along the S-N wall toward the front, the central area between the two foundation walls, was reinforced with ashlar blocks.

The evidence for the actual early phase of the temple, now enclosed in later reconstruction in *opus caementicium*, is hardly more than these two walls. Pensabene reconstructs from this a *peripteros sine postico* with eight lateral columns and a hexastyle porch two rows deep sitting on the reinforced area of the podium. This leaves in his reconstruction a deep flat porch area in front of the outermost row of columns that would have been accessed by a tiny staircase at its center. This makes for a problematic projection of the roofbeams in front of the temple in cantilevered eaves for a distance of almost two meters. It might be better to reconstruct a broader staircase occupying the majority of the area of the podium in front of the last S row of columns.

Bibliography: Cecamore 2002: 120-28; Pensabene 1998: 26-34; Ziolkowski 1992: 172-79.

27. After 294 – *Aedes, Iuppiter Stator*

Sources: Liv. 10.36.11, 10.37.15-16.

According to Livy, M. Atilius Regulus cos. was suffering badly in a campaign against the Samnites in Luceria but turned the tide of battle with a vow of *a.I.S.* The temple, the author further explains, was first vowed by Romulus: *ut Romulus ante voverat; sed fanum tantum, id est locus templo effatus, fuerat. Ceterum hoc demum anno, ut aedem etiam fieri senatus iuberet, bis eiusdem voti damnata re publica, in religionem venit.* The story of the doubly vowed temple rests heavily on the mythohistorical layers of the life of Romulus, but we can at least imagine that Atilius' temple was sited on a pre-existing cult site to Jupiter Stator associated with the Archaic period. The association between this temple and a *fanum* of Romulus, which is mentioned frequently in the conglomeration of toponyms at the foot of the Palatine, has helped define the general location if not the precise spot of Atilius' foundation. Wiseman has recently collected all mentions of the temple, whose position he calls "desperately controversial." We can glean a general address at the foot of the hill by the *Porta Mugonia*, near the Via Nova, where the Tarquins were thought to have lived: probably somewhere on the Velia and in the general area of the Arch of Titus. Beyond this we are unable to say, although several attempts have been made to associate the temple with physical remains:
- Among the earliest attempts was that of Pietro Rosa who associated a structure in *tufo giallo* on the NW side of the Palatine near the concrete podium aside the Arch of Domitian. Tomei published Rosa's notes and revived this possibility, but as Cecamore points out, photographs of the *tufo* remains show what is clearly a drain or well-shaft rather than a temple podium.
- Ziolkowski identified the temple with what he called a "concrete podium" SE of the Arch of Titus; the "podium" is identified as Flavian in date because of its matching alignment with the Flavian structures underneath

the Vigna Barberini, although Ziolkowski speculates it had some earlier phase. However, Spanish excavation of this "podium" showed it not to be a podium at all and to be of Severan date (Arce). Rather, the structure is a small platform with two extending branches of concrete on top of a larger rectangular platform with piers in *opus quadratum* of *lapis Albanus* and travertine. Cecamore would like to see here two different structures with the travertine and the upper branched structure superimposed on what remains of an earlier temple platform, which was completely transformed in a later period. To strengthen her hypothesis, one would want to see some evidence beneath the platform for the earlier phases of the temple, but no findings datable prior to the Flavian period have been reported.

- Coarelli relies on the regionary catalogs to suggest that the temple was on the N side of the Sacra Via, and he sees the Sacra Via as forming the boundary of *Regio IV*, which included the temple. With the temple of Iuppiter Stator thus dislocated from the slopes of the Palatine against every tradition that would put it there, it is placed instead inside the Maxentian structure known as the "Temple of Romulus" on the north side of the Sacra Via. As Ziolkowski notes, Ovid's *Tristia* 3.1.27-34 would suggest that the temple lay to the south, not north, of the Sacra Via, on the slopes of the Palatine and in connection with the Temple of Vesta and the Regia (and the Porta Mugonia). A close and detailed study of his proposed site of the "Temple of Romulus" further confirms that the site was not that of a previous Republican temple (Dumser 2005: 151-91).

In summary, nothing remains of the Mid-Republican temple, and we still cannot say with certainty where it was located beyond its general address.

Procedural: Vowed by a consul; dedication is unknown (perhaps after the break in Livy's narrative).

Bibliography: Arce in *LTUR* V "Iuppiter Stator, Aedes" 271; Cecamore 2002: 129-44; Coarelli 1983: 21-33; Dumser 2005; Tomei 1993; Wiseman 2004; Ziolkowski *1992:* 87-91.

28. c. 293 – *Aedes, Bellona*

Sources: Liv. 10.19.17; Ov. *Fast.* 6.201-8; Plut. *Sull.* 32; Serv. *ad Aen* 9.52; *CIL* I^2 192 = *ILS* 54.

Livy cites the vow of Ap. Claudius Caecus to build an *a.B.* during his final consulship in a battle againt the Etruscans: *Bellona si hodie nobis victoriam duis, ast ego tibi templum voveo*. The dedication of the temple is unknown, but we can presume it occurred shortly after 293 when Livy's narrative stops (Ziolkowski).

The temple was very frequently the site of senate meetings especially, those where foreign dignitaries were received and those in which triumphs were rewarded during the middle Republic (examples listed by Viscogliosi). Both of

these functions were facilitated by a position that was exta-pomerial but still very close to the city center (Serv.). The location is specified variously by different authors: Plutarch puts it near an *agora* (the Forum Holitorium or Boarium) and in contact with the Temple of Apollo; *in circo* by Ovid (*prospicit a templo summum brevis area circum*) and the *Fasti Venusini*. In one of his earliest major contributions to Roman topography, Coarelli used the circumstances of a lost speech of Cicero (the *de Othone*, cf. Plut. *Cic.* 13) as well as a piece of the Severan marble plan (*FUR* 31d) to identify the temple with the podium adjacent and just E of the Temple of Apollo, thus at the extreme E end of the Circus Flaminius beside the *Forum Holitorium*.

Procedural: Consular vow. Ap. Claudius Caecus served as dictator shortly after the break in Livy's narrative (*MRR* I 187), and perhaps it was then that he dedicated the temple?

Archaeology: The concrete podium and what little remains of the architectural decoration is entirely of the Augustan period; nothing of the earlier phase has been identified (De Nuccio).

Bibliography: Coarelli 1967-68; De Nuccio 1995; Viscogliosi in *LTUR* I "Bellona, Aedes in Circo" 190-92; Ziolkowski 1992: 18-19.

29. 293 – *Aedes, Quirinus*

Sources: Liv. 8.20.8, 10.46.7; Varr. *DLL* 5.52; Paul. Fest. 303 L.

In 293, L. Papirius Cursor dedicated a temple to Quirinus during his own consulship and adorned it with Samnite arms (*consul dedicavit exornavitque hostium spoliis* 10.46.7). Livy notes that none of his sources recount the temple's vow, but that *neque hercule tam exiguo tempore perficere potuisset*, and so he suggests that *ab dictatore patre votam filius consul dedicavit*. We find a vow, perhaps in this case invented by Livy, during the elder Papirius Cursor's dicatorship in 325. There is no reason to doubt Livy's logic except for the inordinately long time between L. Papirius Cursor's dictatorship in 325 and the consulship of his homonymous son in 293. We might prefer Papirius Cursor's dictatorship in 309 when he triumphed at Lake Vadimo (*MRR* I 162), but there are strong doubts as to the historicity of that office (cf. Kroll in *RE* XVIII 3 "Papirius" 53, coll. 1050-51).
    The building replaced a *sacellum* of an Archaic date. The temple may have burned in 206, and certainly burned in 49. Only its Caesarian rededication was known to later authors (cf. Vitr. 3.2.7; Cass. Dio 41.14.2-3).
    The location of the temple is crucial to the topography of the Quirinal hill, but the evidence remains ambiguous. In his list of the *sacraria Argeorum*, Varro identifies four *sacraria* on each of the four ridges that comprised the Quirinal (ordered moving S from the *Porta Collina* at the NE): the *Collis Quirinalis*, the

Collis Salutaris, the *Collis Mucialis*, and the *Collis Latiaris*. The first *sacraria* was *cis aedem Quirinalis*, which would put the temple on the north-most and homonymous ridge of the Quirinal. Festus' lexicon identifies the temple with the *Porta Quirinalis*, putting it further into a concentrated area of Quirinus-named locations (gate/temple/hill) but also near the circuit wall: *Quirinalis porta dicta sive quod ea in collem Quirinalem itur, seu quod proxime eam est Quirini sacellum*. Festus' mention of a *sacellum* and not an *aedes* is not problematic, but he probably retains the name of the earlier Archaic cult sanctuary that predated the foundation of Papirius Cursor. Furthermore, the temple was near the house of Martial (Mart. 11.1.9-12) and not far (*non longe*) from that of Atticus (Cic. *Att.* 4.1.4). If the *Porta Quirinalis* is correctly identified as being on Via delle Quattro Fontane to the W of the four fountains, then the temple belongs either N or S of that road, in those areas now occupied by the Palazzo Barberini and the Palazzo Quirinale, respectively. A location further to the N near Largo Santa Susanna has been suggested on the basis of the finds of a number of architectural terracottas there (Manca di Mores followed by Ziolkowski), but as Dumser has pointed out, these terracottas are difficult to associate with a major temple structure, *contra* Manca di Mores. Dumser locates the temple "W of the Porta Quirinalis within the Servian Wall," but this is physically impossible for a presumably intramural temple, as the Quirinal gate sat on the W side of the city wall to begin with.

This leaves the two Palazzi N and S of Via delle Quattro Fontane. The older tradition of Lanciani and Hülsen, followed more recently by Carafa, puts the temple in the E part of the gardens of Palazzo Quirinale where a Doric column was seen and drawn in the Renaissance, and where Urban VIII reported finding dedications to Quirinus and to Mars in excavations in 1625 (*CIL* VI 475 = 30767a, which accompanied another dedication to Iuppiter Victor). But the capital, while plausibly pertaining to one of the more famous Doric temples in Rome (Vitr. *loc. cit.*), need not have been found at that spot (Ziolkowski). Moreover, as many have pointed out, the landholdings of Urban VIII at the time of the inscription's discovery also included property to the E, on the other side of Via delle Quattro Fontane, and cannot have excluded the grounds of the Palazzo Barberini (Manca di Mores 337; Ziolkowski 141; Coarelli 186). Thus, it is very intriguing that Coarelli reports "scoperte recentissime nell'area di Palazzo Barberini" of a podium in *opus caementicium* supported on its N side by an arcuated substructure faced with reticulate work. Could this have been the Augustan version of the temple? We cannot yet say: the structure has yet to be fully published; an interim report is found in Pales.

Procedural: vowed by a consul; dedicated by that man's son while consul; there is a particularly long time span in between. Livy mentions this temple as adorned with enemy spoils.

Bibliography: Carafa 1993; Coarelli in *LTUR* IV "Quirinus, Aedes" 185-86; Dumser in *MAR* "Quirinus, Aedes" 214; Manca di Mores 1982-83; Pales 2001; Ziolkowski 1992: 139-44.

30. 291 – *Aedes, Venus Obsequens*

Sources: Liv. 10.31.9; Serv. *ad Aen.* 1.720.

Two different foundation legends are given for this temple: Livy suggests that Q. Fabius Maximus Gurges as curule aedile in 295 saw to the temple's construction from fines imposed on adulterous matrons (*aliquot matronas ad populum stupri damnatas pecunia multavit; ex quo multatico aere Veneris aedem quae prope circum est faciendam curavit*); conversely, Servius claims that the temple was consecrated by Gurges after a vow in 292 during the third Samnite war (*post peractum bellum Samniticum ideo hoc nomine consecravit quod fuerit obsecuta, hanc Itali postvotam dicunt*). Platner and Ashby, as well as Ziolkowski, have attempted to combine both notices, suggesting that Gurges vowed the temple as curule aedile in 295, but then dedicated it after his triumph in 291. The consulship in 292 had started horrendously when, due to military defeats, he was reduced to serving with his father as a legate, and together the two Fabii recovered to earn a triumph as promagistrates the next year (Broughton *MRR* I 181, 183). Livy may have clarified the situation if his text were to have survived.

     The temple served as a landmark for later topographic notes: the censors of 204 let out work on a road *e foro bovario ad Veneris circa foros publicos* (Liv. 29.37.2; **No. 73**). A corrupt passage of Livy associates it with roadwork outside the Porta Trigemina *in Aventino* in 174, but the exact location is difficult to ascertain (Liv. 41.27.8; **No. 113**). In the *Fasti* it is *ad Circum Maximum* (cf. Festus 322 L). It is thus probably on the Aventine above the Circus Maximus, that is, on its N slope perched above the Circus valley.

Procedural: Vowed *ex multatico aere* by a curule aedile; dedicated by that same man as consul.

Bibliography: Platner Ashby; Papi in *LTUR* VI "Venus Obsequens, aedes ad Circum Maximum" 118; Ziolkowski 1992: 167-71.

31. After 291 – *Aedes, Aesculapius*

Sources: Liv. 2.5.4, 10.47.6-7, *Per.* 11.2; *de vir. ill.* 22.1-3; Val. Max. 1.8.2.

A cult statue of Asclepius was transferred to Rome from the Greek healing sanctuary of Epidauros in response to a devastating plague. A temple to house the statue was decreed by the senate and would become the first major structure on Tiber Island. The plague is first mentioned in 293, when the Sybilline books were consulted, but Livy states that nothing was done as the consuls were campaigning (10.47.7). In 292, the plague had not abated (Liv. *Per.* 11.2), and *decemviri* led by Q. Ogulnius were sent to carry a statue of the god from Epidauros to Rome (*de vir. ill.*; Val. Max.; cf. *MRR* I 182). A snake, which had stowed away in the tent

of Ogulnius, swam from the *Xvir*'s boat to Tiber Island, indicating the spot on which the temple was later founded. When the temple was actually founded is unclear: if Ogulnius himself was related to its later history, we know of his consulship in 269 (*MRR* I 199), but such continuity is not necessary, as the temple was initiated by prescription of the Sybilline books rather, than by triumphal vow.

The Mid-Republican phase of the temple is poorly known both because of a major renovation in the 1st c. B.C. but more importantly because no ancient remains have been positively identified on the island and very little has ever been published of what can still be seen (although see below). Brucia analyzes the sanctuary of Epidauros as a model for that at Rome and suggests that Livy's mention of porticoes on the island might refer to an *abaton*-like structure near the temple. She reconstructs a larger complex with a *tholos* and *abaton* accompanying the temple. Although the passage in question does not specify that those porticoes were situated around the *a.A.* (2.5.4), some of the scant archaeology of the island discussed below makes this hypothesis possible. The structure is assumed to have been on the SE part of the Tiber Island under the modern Church of S. Bartolemeo and towards where a late Republican relief in travertine and tuff bearing the image of Aesculapius still stands (Degrassi, Harmansah, Richardson; *contra* Brucia). There is no real ancient basis for this often repeated assumption, however, and terra cotta votive offerings found in the Tiber near the Pons Fabricius don't necessarily point to the S part of the island. Remains under the Fatebenefratelli Hospital at the N end may instead suggest that some part of the sanctuary extended that far.

Procedural: Temple vowed by prescription of the Sybilline books after a plague; otherwise foundation history unknown.

Archaeological: Remains of Republican structures on Tiber Island pertinent to the discussion of the Aesculapius sanctuary have never been properly published, which has hampered modern topographic discussion. However, two sites may relate to the sanctuary; both are clearly visible in autopsy but difficult to comprehend for lack of a plan. The first site is underneath S. Bartolomeo, which is very often connected with the site of the ancient temple. Here, a well-head on the altar opens to a 9 m deep well built of ashlar tuff blocks, attributable by their material to the Mid-Republic. As excavations in 2005 under the crypt of S. Bartolemeo have shown, every structure since antiquity built in that location has preserved the centrality of this well up to the present-day church. Furthermore, those excavations found two rows of reused ashlars of *tufo giallo della via Tiberina*, which are readily identified as salvage from the ancient Republican monument that stood in the same location (Di Manzano, Cecchelli, and Milella 2006-7: 127-30, 159). Furthermore, the find of an inscription from the 3rd C has been noted from S. Bartolomeo, and a paper on the stone has been presented at the XIIIth International Congress for Greco-Roman Epigraphy, but the text is still forthcoming (Di Manzano, Cecchelli, and Milella 2006-7: 126). All told, S. Bartolomeo presents evidence of the continuous presence of cult. This being the

case, the absence of any *in situ* structural remains underneath the church in recent excavations was surprising: Di Manzano either suggested that such levels simply had not been excavated as work was limited, or alternatively that the ancient sanctuary was subject of violent destruction after the suppression of the cult in the 4th C CE (*ibidem*: 134).

S. Bartolomeo stands to the S of the island, above an Imperial period relief of a ship's prow in travertine. To the N of the island, under the Hospital of the Fatebenefratelli, excavations from 1989-1994 also turned up significant remains of ashlar construction in *tufo giallo della via Tiberina*. These are presently thought to pertain to the Temple of Jove in insula, built in 194 (cf. **No. 80**). Although, as discussed in that entry, there are some problems with the attribution, it does seem likely that the N part of the island was from the 2nd C onward associated with a cult of Jupiter. However, it is also possible that some of the *tufo giallo della via Tiberina* walls there represent earlier phasing, as Di Manzano alludes to in passing (Di Manzano, Cecchelli, and Milella: 134 n. 17). From my own examination of some sections of those remains under the hospital, it is impossible to preclude a 3rd C date.

All of this speaks to the decided presence of the cult, but the absence so far of any definitive physical structure. Part of this may be a problem in the fact that much of the topographical and archaeological work has sought a single temple to the god on the island. However, as Brucia especially has pointed out, it is clear that Epidauros and its sanctuary served as a model for the early cult at Rome. After all, the deity himself was invoked from the Peloponessian Greek sanctuary. At Epidauros, cult revolved around not one but three structures, the *tholos*, *abaton*, and temple. Brucia's analysis of a bronze medallion of Antoninus Pius with a view of the deity on his island surrounded by multiple buildings and with "AESCULAPIUS" in the exergue supports her reconstruction. The widespread dispersal of Mid-Republican remains both N and S on the island may speak to the fact that initially, the Romans built several connected structures not a single one, and her notion that S. Bartolomeo stood over the *tholos*, surrounding the well-head, rather than over a more traditional looking temple may explain why the podium of a temple was not uncovered there in recent excavations. More work is needed, but as of now there is no reason yet to limit our search either architecturally or topographically.

Bibliography: Brucia 1990, 63-113; Degrassi in *LTUR* I "Aesculpaius, aedes, templum (Insula Tiberina)" 21-22; Di Manzano, Cecchelli, and Milella 2006-7; Harmansah in *MAR* "Aesculapius, Aedes" 42; Richardson 4.

32. c. 290 – *Aedes, Iuppiter Victor*

Sources: Ov. *Fast.* 4.621; Liv. 10.29.14.

By the 1st C, there were two temples with similar epithets in Rome, one to Iuppiter Invictus and one to Iuppiter Victor. Both are mentioned separately and

on distinct *dies natales* in Ovid's *Fasti* (6.650, 4.621 respectively). Sources locate the Temple of Iuppiter Invictus on the Palatine (Grenier and Coarelli) and its foundation date is by no means secure, although it is probably included over the course of the Middle Republic. Arguments for the 3rd C (Coarelli *LTUR* "Iuppiter Invictus, Aedes [in Palatio]") and 2nd C (Ziolkowski) have been proposed.

The history of the *a.I.V.*, on the other hand, can be better established: Livy tells us that the consul Q. Fabius Maximus Rullianus *aedem iovi victori spoliaque hostium cum vovisset* at the Battle of Sentinum in 295. Coarelli notes that the dedication would have taken place after 293, within the lacuna in Livy's text. He suggests a date of 289, when Broughton places the censorship of Rullianus' son, Q. Fabius Maximus Gurges (*MRR* I 184-85; not consulship, *pace* Dumser), although Gurges' censorship is very uncertain. An inscription found in the seventeenth century on the Quirinal in the Palazzo Pontificale records *Q. IOVEI VICTORE / …T.MEFU…M.F. / IIIVIR [resti]TUIT* (*CIL* VI 438=30767a). *CIL* VI identifies the inscribed object as an altar of *tufo*, and notes that on the side of the same block was a dedication *P. CORNE[lios] / L.F. COSO[l]/PROBA[vit] / MAR[te sacrom]* (*CIL* VI 475=30767a). Coarelli and Ziolkowski assume that this means that the stone, now lost, was reused, and if P. Cornelius L.f. is the Cornelius Lentulus Caudinus of 236 (*MRR* I 222), then the second inscription dates to the late 3rd/early 2nd C and records the cult of Iuppiter Victor on the Quirinal already in that period. For this reason, they place Rullianus' temple on the Quirinal. Coarelli further notes the connection between the *gens Fabia* and the Quirinal in the fourth century, connecting Rullianus' topographical choice with the story of Fabius Dorsuo sacrificing on the Quirinal during the Gallic siege of the Capitoline (cf. Liv. 5.46.2-3).

Cecamore, however, argues strongly in a recent work that the *a.I.V.* does not belong on the Quirinal. Focusing on the inscription, she notes that the dedicatee was a *IIIvir*, and that *IIIvir* were not necessarily related to temple building—she must argue away the evidence of Liv. 25.7.5-6 mentioning *IIIviri aedibus reficiendis* in 213 to repair temples damaged by fire in the Forum Holitorium and Forum Boarium. She then suggests that his office here may simply have been mentioned on the inscription as part of his *cursus*, rather than having indicated his function when making the dedication. Epigraphically this is problematic, as I know of no parallels at this date for a Roman mentioning his former office in a private dedication in a public place, whereas the appearance of one's rank in dedicatory inscriptions was commonplace. She further suggests that the inscriptions, instead of replacing one another, are coeval, and that, if the *T. Mefu*[…] inscription was on a reused block, care would have been taken to erase fully the previous inscription. Again, this does not follow in epigraphic comparanda from the Middle Republic.[971] It appears simpler at present to follow Coarelli and Ziolkowski, strengthened by Coarelli's connection between the *gens Fabia* and the Quirinal.

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[971] See, *infra alia*, *ILLRRP* 342.

Procedural: Vowed by a consul; possibly dedicated by the consul's son while censor.

Bibliography: Cecamore 2002: 99-114; Coarelli in *LTUR* III "Iuppiter Victor, Templum" 161; Coarelli and Grenier 1986; Dumser in *MAR* "Iuppiter Victor, Templum" 157; Ziolkowski 1992: 91-94.

33. 289 – *Aedes, Fors Fortuna*

Sources: Liv. 10.46.14.

In 293, the cos. Sp. Carvilius campaigned successfully in Etruria. He began an assault on a city called "Troilus," and after obtaining payment from 470 of the city's *ditimissimi*, he let them leave before taking the town itself. Livy then tells us that he took five *castella* and then made a treaty with the Faliscans for *centum milia gravis aeris et stipendium eius anni militibus*. For these exploits, he triumphed and deposited *aeris gravis…trecenta octoginta milia* in the *aerarium* and paid 102 *asses* to the soldiers, centurions, and cavalry; with the *reliquo aere aedem Fortis Fortunae de manubiis faciendam locavit prope aedem eius deae ab rege Ser. Tullio dedicatam*. No vow is known, but we must assume that it came during his campaign in the same year; the actual dedication of the *aedes* was probably mentioned after the end of Livy's text, thus post 293. We know from Velleius Paterculus (cf. 2.128.2) that Sp. Carvilius was censor, probably in 289 (cf. *MRR* I 184-85; Suohlati 241-42), and it would be sensible to locate the dedication then.

There is a great deal of specificity in our sources over the allotment of various parts of Carvilius' *manubia*. Not only does Livy relate specific deposits in the aerarium and among the troops, but Pliny describes a colossal statue of Jupiter made by Carvilius on the Capitoline *e pectoralibus eorum ocreisque et galeis*. (*Eorum* here are the Samnites, says Pliny, so that these arms date to the early part of his consulship, when he campaigned in Samnium with Papirius Cursor, rather than the later part when he earned a triumph in Etruria). Then "*e reliquis limae*" he made a statue of himself at the foot of the colossus of the god. This makes it seem that the captured arms in this case were melted down and remade (hence the scraps: *reliquis limae*; cf. Plin. *NH* 34.43). And in that case, the reference to *gravis aeris* taken from the Faliscans, to bribes given by the Troili, to *asses* distributed to the soldiers, and to *reliquo aere* used for the contract to built the *a.F.F.* all point to actual metallic coinage, rather than to the bronze weaponry taken as spoils of war. One should combine this with the fact that the other consul of 293, L. Papirius Cursor, deposited 2,533,000 pounds of *aes grave* into the treasury, which *redactum ex captivis dicebatur* (cf. Liv. 10.46.5), from the sale of enslaved prisoners of war. The actions of the consuls of the year 293 consequently present fine evidence for the monetization of contracts related to manubial construction on the *a.F.F.* and of Quirinus (built by Papirius Cursor, **No. 30**).

The location of the temple is very much debated. We can assume that Carvilius' sanctuary had an architectural structure in it, because in 209, a prodigy is recorded *in cella aedis* involving a crown falling off of the cult state (cf. Liv. 27.11.3). According to Livy, this temple should be located close by (*prope*) a pre-existing cult site to Fors Fortuna attributed to King Servius. Varro refers to a *fanum Fortis Fortunae secundum Tiberim extra urbem Romam* dedicated by Servius (*DLL* 6.17). Dionysius speaks of two Servian temples to Fortuna, one in the Forum Boarium, and the other across the Tiber to Fortuna Virilis (4.27.7), but Savage argues that Dionysius made a mistake in the epithet (1940: 32 n. 61). Mention in the regionary catalogues for *Regio XIV* would put the temple a mile or so outside the city, where Tiberius restored a temple to Fors Fortuna within the *horti Caesaris* (cf. Tac. *Ann.* 2.41: *aedem Fortis Fortunae iuxta in hortiis quos Caesar dictator populo Romano legaverat*); however, a late-Republican inscription found about six miles out of Trastevere (at the fifth mile beyond the Porta Portese) along the Via Campana bears the names of several dedicators from a guild of *aerarii* to Fors Fortuna (*CIL* VI 36771). Among the names are two men with the gentilician *Carvilius*, and Savage connects the inscription with continued veneration by the Carvilii of the site of Sp. Carvilius' temple. Hence, according to Savage, there were two temples, the Servian/Tiberian one at the first mile of the Via Campana, and the Carvilian one at the sixth: Livy's *prope* is taken very loosely in consideration that in Livy's time both extra-urban temples seemed remote. This reading is intriguing if not entirely convincing: Livy certainly knew of the Horti Caesaris, public property since 45 B.C. (Suet. *Iul.* 83.2), and the location of at least one of the temples. It is difficult to imagine him calling another temple "*prope*" when it was distant five miles. Furthermore, the inscription is not a "slab" *pace* Savage, but a rectangular block, probably a statue base. We are at a loss for its original context and thus its relationship to any architecture. To my mind, the situation does not call for more than one temple in Trastevere to *Fors Fortuna*: how the *aerarii* inscription got to be where it was found is uncertain, but it seems that Sp. Carvilius built a physical monument immediately next to an archaic cult site (where there was not necessarily a prior monument but only a *templum*). Tiberius then restored the same temple (Richardson: 154-55; Harmansah: 126). That Ovid refers to *dubiae templa propinque deae* in the Fasti can be explained by the fact that Carvilius' *templum* sat next to an augural space consecrated since the Archaic period.

Where was this temple? Three alternatives have been put forward, none with phasing earlier than the Imperial period.

1) Lanciani and Visconti identified a small concrete podium as a *distyle in antis* temple lying near Vigna Bonelli in Monteverde (1884); Palmer rejected this site as too far from the river (381). Alternatively, the site has been identified as a temple to the Palmyrene god Bel on epigraphic grounds (cf. *LTUR* Suburbium I "Beli Aedes"). Despite these problems, this hypothesis still finds some support, as with Harmansah, who notes that a group of bronze male figurines of the 6th C was found in the vicinity of Lanciani and Visconti's placement. However, the original excavator had already expressed doubts on the pertinence of such male

figurines, many with *pilei*, to the cult of the female deity Fortuna (Fiorelli 1888: 231).

2) Iacopi suggested a podium on the bank of the Tiber (1940: 97-107), but this is now identified as a tomb (Coarelli, Harmansah).

3) Coarelli identifies a structure on fr. 28a of the Severan *Forma Urbis*. It is interesting to consider his suggestion, as the placement appears sound topographically, but several issues are raised in particular with the form of the structure depicted on fr. 28a. First of all, the inscribed circle-within-a-square form as seen on the slab seems more fitting for a tomb monument with a round structure surmounting a square base. Second of all, fr. 28a appears to show the monument as integrated into surrounding structures on three of four sides.

In the *LTUR Suburbium*, Coarelli expands his earlier thesis with the suggestion that a passage in Plut. *Fort. Rom.* 5 refers to a third Trans Tiberim temple to Fors Fortuna built by Ancus Martius. This, he suggests, may be the temple identified by the inscription, whereas the temple in the *Horti Caesaris* was that of Servius/Sp. Carvilius. Notwithstanding the difficulties of trying to assign different Archaic temples to individual kings of Rome, there are two problems that must be reconciled before accepting his thesis: first of all, Plutarch only mentions a Temple to Fortune built by Ancus Marcius. He does not specify a temple *trans tiberim*, and thus he does neither precludes nor necessitates the temple's position across the river. Also problematic is Coarelli's separation of the temple of Carvilius with the *aerarii* inscription, as this leaves aside the aforementioned connection made between Carvilius and the two members of his *gens* in the inscription.

We are therefore at a loss for the topography of this monument, which for the time being is safest left unresolved.

Procedural: Cos. vow and probable censorial dedication by same individual.

Bibliography: Coarelli 1992; *isd.* in *LTUR* Suburbium III "Fortis Fortunae Fanum, Templum (I Miglio via Campana)" 270-71; Fiorelli 1888; Harmansah in *MAR* "Fors Fortuna, Fanum" 126-27; G. Iacopi 1940; Lanciani and Visconti 1884; Palmer 1981; Richardson *Dictionary*: 154-55; Savage 1940.

34. 278-275 – *Aedes, Summanus*

Sources: Ov. *Fast.* 6.731; Cic. *de Div.* 1.16; Liv. *Per.* 14.

Ovid dates the dedication of the *a.S. cum Romanis, Pyrrhe, timendus eras*. The date was fixed by Ziolkowski who noted that the *Periochae* mention the portent of the head of Capitoline Jupiter falling from a rooftop between Pyrrhos' departure to Italy and the second consulship of M.' Curius Dentatus. Cicero adds the detail that the head was of a terracotta statue (*qui tum erat ficitilis*) of Summanus that had stood on the gable of the Temple of Jupiter Optimus Maximus. The head was not found until it was sought by the prescription of the

haruspices; all of this, we presume, relates to the temple's foundations, but more details are lacking. Ziolkowski then goes on to suggest that the temple was vowed in response to a plague in 276 (Oros. 4.2.1-2; Aug. *CivDei* 3.17). This is not necessary, as we have several consuls triumphing from 278-275 (e.g. Q. Aemilius Papus, cos. II 278 [*MRR* I 194], C. Iunius Bubulcus Brutus, cos. II 277 [*MRR* I 194], Q. Fabius Maximus Gurges, cos. II 276 [*MRR* I 195]), but we have no way of choosing between them. The location given in the *Fasti* as *ad Circum Maximum* puts it in the general area of the Circus. Pliny's mention that dogs were crucified between the temples of Summanus and Iuventas suggests a proximity between the them, but as Ziolkowski notes, Iuventas' position itself is by no means secure.

Procedural: Unknown.

Bibliography: Coarelli in *LTUR* IV "Summanus, Aedes" 385-86; Ziolkowski 1992: 154-55.

35. 275 REPAIR TO THE *AEDES, SALUS* AND THE CIRCUIT WALL?

Source: Oros. 4.4.1.

In 275, lightening struck the Temple of Salus and prompted a destructive fire on the Quirinal. Orosius reports: *aedes Saluti ictu fulminis dissolute, pars muri sub eodem loco de caelo, ut dicunt, tacta est*. Nothing more about this fire is mentioned (and we do not have Livy's text at this point), but considering the attention paid towards keeping up the wall in the third century (cf. **Nos. 60**, **67**), we might assume that a repair project was undertaken in 275 as well.

Bibliography: Coarelli "Salus, Aedes" in *LTUR* IV, 229-30.

36. 272? *Aedes, Consus*

Sources: Fest. 228 L.

An *a.C.* on the Aventine is known from the *Fasti*, but is otherwise unidentifiable in the city. Platner and Ashby suggest that it should be attributed as a triumphal dedication of L. Papirius Cursor the younger (cos. 293, 272), as Festus records that a painting of the consul in triumphal robes appeared there (209 L): *pictum in aede Vertumni et Consi, quarum in altera M. Fulvius Flaccus, in altera [L.] Papirius Cursor triumphantes ita picti sunt.*[972] Ziolkowski argues that, as M. Fulvius Flaccus was the founder of the Temple of Vortumnus (**No. 41**), Papirius should be the founder of the *a.C.* Papirius dedicated his father's temple to Quirinus in his first consulship, so Ziolkowski assigns this temple to his second consulship in 272 when he triumphed over the Tarentines (cf. *MRR* I 197). If this

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[972] The mss. show T. Papirius Cursor, amended to L. by Lindsay.

is true, then the *votatio* fell in 272, but the rest of the process of building the temple remains irrecoverable. The *fasti* refer to *Conso in Aventino* placing the temple on the Aventine.

Procedural: Possible cos. vow.

Bibliography: Ziolkowksi *1992:* 24-25.

37. 270 – *Anio Vetus*

Sources: Cic. *Att* 4.15.5; Front. *de Aq.* 6, 13; *De Vir. Ill.* 33.

Frontinus records the construction of Rome's second acqueduct:

> *Post annos quadraginta quam Appia perducta est, anno ab urbe condita quandringentesimo octogesimo uno M'. Curius Dentatus, qui censuram cum Lucio Papirio Cursore gessit, Anionis qui nunc Vetus dicitur aquam perducendam in urbem ex manubiis de Pyrro captis locavit, Spurio Carvilio Lucio Papirio consulibus iterum. Post biennium deinde actum est in senatu de consummando eius aquae opere referente *** norumi *** praetore. Tum ex senatus consulto duumviri aquae perducendae creati sunt Curius, qui eam locaverat et Fulvius Flaccus. Curius intra quintum diem quam erat duumvirum creatus decessit; gloria perductae pertinuit ad Fulvium.*

He appears to be confusing the names of the consul and the censor, and possibly also the year: the *Fast. Cap.* give the censors as [L.? Pap]irius Praetextatus and M.' Curius Dentatus. If the consul and the censor in 272 shared the same *praenomen* as well as *gens*, then Frontinus' error is reasonable, and considering the two Papirii, it is understandable regardless (*MRR* I 198; cf. Suolahti 1963: 261). The censorship followed closely on that of 275/4 rather than observing the customary interval of five years *lustra*: Broughton suggests that the censors therefore may have been elected with the intention of building public works rather than holding *lustrum* (*MRR loc. cit.*, followed by Suolahti *loc. cit.*). Keeping in mind that only one acqueduct then existed, this may be evidence that the city's need for water may have been considerable at that moment.

This is the first censorial work designated explicitly as *ex manubiis* (*de vir. ill.*: *Aquam deinde Anienem de manubbis hostium in urbe induxit*), and the spoils likely came from Curius Dentatus' defeat and triumph over Pyrrhus at Malventum in 275 (*MRR* I 195). As the conqueror of Pyrrhus, Curius Dentatus had the responsibility for the aqueduct, as in two years, when the continuation of work came before the senate, he was noted as *qui eam locaverat*. What happened to bring the issue before the senate is obscured by the corrupt text of Frontinus, but it is normally assumed that the death of Papirius Praetextatus forced Curius Dentatus to abdicate his office in 270. The action of the *praetor* at that moment (the only word that can be securely read in the *lacuna*) is unknown. The aqueduct was then assigned by senatorial decree to *IIviri*, but when Curius Dentatus died within five days of assuming that post, his colleague Fulvius Flaccus completed the work (*MRR* I 299). Fulvius was possibly the same man who was then one of the *Tr. Plebis*. A kind of cursed project that saw the death of two of its

overseeing magistrates, the aqueduct project took no fewer than two years to complete.

Frontinus goes on to note that the aqueduct started at the twentieth milestone of the Via Valeria outside a gate at Tibur, the name of which falls in a textual lacuna (*extra portam* [*…*]*RRA*[*…*]*nam*). However, this statement as well as his following statement that the length was a full 43 miles has met skepticism. Mari studied a series of *cippi* relating to imperial repairs and giving distances along the aqueduct and determined that the distance was more likely 53 miles, the source being near S. Cosimato outside of Tibur in the upper valley of the Anio. Like its predecessor, its course mainly ran underground, passing only 221 *passus* (slightly over 325 m) on *substructio super terram*. Its outflow was reputedly a significant project, as Cicero refers to the cutting away of a mountain beside the Veline Lake that seems to have changed the hydrology of the region.

Procedural: Financed *ex manubiis* from the triumphal spoils of a consul who took on the project as censor (*locatio*). Project transferred to and completed by *duumviri aquae perducendae* after the end of the censorship presumably because of the death of one of the officeholders.

Archaeological: Ashby was able to map a great deal of the *specus* of the aqueduct outside of the city. Much of it was in concrete from Imperial period repair work, although at some points the channel was built in *opus quadratum* of the local tuff. The Ponti degli Arci outside of Tivoli still has the *opus quadratum* arch supporting the aqueduct encased in the later concrete work, and this is also seen at the Ponte Pischerio (see photographs in Pace: 122-23). The extensive track of the aqueduct in the Valle della Mola di S. Gregorio is entirely Hadrianic and of *opus mixtum reticulatum* (Ashby 67-69). It approached the city from Spes Vetus to the east, then met the Esquiline and ran underneath Stazione Termini where remains were found in the late 19th century (Mari in *LTUR*; updated plan with description of sites in Gautier di Confiego 2007: 231), and passed into the city, turning towards the Porta Esquilina. Frontinus says that it ended *intra Portam Esquilinum* (21.3), and in 1972, excavations under S. Vito produced the *specus* in slabs of "peperino" as well as the remains of the Augustan distribution tank in *opus caementicium* (Santa Maria Scrinari: 61). Three decades later, the excavations still have had only summary publication.

Photographs published by Van Deman show that the channel was made by digging a trench and laying *opus quadratum* where it could not simply be cut into the bedrock. The channel floor was in slabs with a vault *a cappuccina* of two slabs or, in some places, simply made by placing a horizontal slab to form a flat roof. Van Deman gives the dimensions as .85-.95 m wide and 1.25-1.75 m high, although reaching 1.25 x 2.00 m in places. The blocks are .45-.50 cm thick with low courses only .27-.28 cm high. The block surfaces are left only roughly dressed although some anathyrosis is seen in the joins. Tuff varies throughout due to local supply with some blocks of a local porous limestone used near the source at Vicovaro. Near the city, Van Deman reports that *tufo del Palatino* is

used almost exclusively (Van Deman: 58-59). As the aqueduct was restored in 144 by Q. Marcius Rex, it is difficult to determine with precision what remains date back to the 3rd C.

Bibliography: Ashby 1935: 54-87; Gautier di Confiego 2007: 231; Mari 1991; Mari in *LTUR* I "Anio Vetus" 44-45; Pace 1983: 121-24; Santa Maria Scrinari 1979; Van Deman 1934: 58-59.

38. After 268 *Aedes, Tellus*

Sources: Suet. *Gram.* 15; Serv. *ad Aen.* 8.361; Flor. 1.14.2; Val. Max. 6.3.1b; Dion. Hal. 8.79.3

The consul P. Sempronius Sophus vowed a temple to Tellus when an earthquake was felt during an ultimately successful battle against the Picentes at Asculum (*MRR* I 200). Florus gives the clearest evidence, *Sempronio duce, qui tremente inter proelium campo Tellurem deam promissa aede pacavit.* Sempronius Sophus was censor in 252, and he could have dedicated the temple then; however, Dionysius says that the temple was built by the *polis* on land that formerly contained the condemned house of Sp. Cassius (on the condemnation of Sp. Cassius see *MRR* I 20). The *Fasti* locate the temple *in Carinis*, as do Suetonius and Servius. Coarelli suggested a location west of the *Compitum Acili*, which was excavated by Colini, and he associates the temple with a regular concrete podium of Neronian date. As has been pointed out, however, the *Compitum Acili* was not in the Carinae but in the Velia (Palombi 154; Dumser). Alternatively, Ziolkowski chooses a location in the area of the modern Via dei Fori Imperiali just N of the Temple of Venus and Roma based on early modern drawings of that area, especially that of Pirro Ligorio. Palombi brought clarity to the situation by locating a hitherto unknown join in two fragments of the Severan *Forma Urbis* (fr. 672 to 577) that demonstrate that the area *in Tellure* cannot be placed along the Via dei Fori Imperiali but instead should be located as one of the two temples shown on *FUR* fr. 672, just NW of where the Colosseum would be built (154-58, followed by Dumser).

Procedural: Vowed by cos., probably dedicated by same man as cens.

Bibliography: Coarelli in *LTUR* V "Tellus, aedes" 24-25; Dumser in *MAR* "Tellus, Aedes" 241; Palombi 1997: 140-68; Ziolkowski 1992: 155-62.

39. 267 – *Aedes, Pales*

Sources: Florus 1.15

Florus records that M. Atilius Regulus vowed a temple to *Pales Pastoria* during the course of his campaign against the Sallentini. Two scholiasts to Verg. *Georg.*

3.1 (cited by Ziolkowski and Aronen) support Florus' information. The chronology of the temple is unclear. M. Atilius Regulus was suffect consul in 257 when his son Gaius served as consul (s.v. *MRR*), but Marcus led the Roman invasion of Africa in that year and remained there with his command prorogued the next. It is unclear whether he would have had the opportunity to dedicate a temple in Rome: the temple may just as well have been dedicated by *IIviri* or by the son C. Atilius Regulus in the intervening decade. The possible etymological link Pales/Palatinus, as well as the fact that the Parilia (Parilia/Palilia, cf. Ov. *Fast.* 4.721-862) fell on the birthday of Rome, suggest a connection to the Palatine and perhaps to the SW corner, so closely associated with Roman foundation mythology. Richardson objects that a victory temple ought to be located on the *Via Triumphalis*, not on the Palatine, but against this is the fact that the Temple of Victory itself was on the SW corner of the Palatine hill. Beyond this, no precise location can be offered.

Procedural: Consular vow.

Bibliography: Ziolkowski 1992: 126; Richardson *Dictionary* 282; Aronen *LTUR* IV "Pales, Templum" 50-51.

40. C. 264 – MONUMENTS OF M. FULVIUS FLACCUS IN FRONT OF *AEDES, FORTUNA* AND *MATER MATUTA*

Sources: Epigraphic (see below).

In 1961-62, excavations under the central paved area of the *area sacra* at S. Omobono revealed two monument bases, one round, one square, both with fine moulding (Mercando 1963-64: 43-63; Ioppolo 1963-64 on the round *donario*). Several blocks were inscribed: the initial interpretation was that the two structures bore the inscribed names of several members of the gens Fulvia who had made donations in the sanctuary of Fortuna and Mater Matuta (Degrassi 1963-64). In 1968, however, Torelli noted that the inscriptions were identical and restored the full text on the basis of their combination: *M. Folvio*(s) *Q.f. cosol d*(edet) *Volsinio capto*. The two monuments commemorate the conquest of Volsinii in 264 under the command of M. Fulvius Flaccus, cos. of that year. Coarelli notes the parallelism between Fulvius Flaccus and Camillus, both of whom reportedly built some monument in the area of the twin temples at S. Omobono. Both captured major Etruscan towns (Veii/Volsinii), and both called out by *evocatio* those towns' gods to new temples at Rome on the Aventine (Juno Regina/Vertumnus respectively) (1988: 214-15). Torelli connects several small holes on top of the round base with the notice from Pliny (*NH* 34.34) that Fulvius Flaccus brought 2000 bronze statues back with him from his conquest. The area of the Forum Boarium, connected by Coarelli with the triumph, is thus an important locale for a triumphal monument perhaps displaying some of Flaccus' spoils (1968; *RMR*).

We are badly lacking in sources for this particular period in the years just prior to the opening of the First Punic War—Livy is lost, Dionysios and Diodorus are incomplete, and Polybius has not started his narrative. Coarelli suggests that we have lost literary testimony of a larger building phase relating to the area of the temples by Fulvius Flaccus, represented by these two smaller monuments (see discussion at **No. 1**). This is not made certain by the archaeological evidence discussed below, though it is not impossible.

Procedural: Consular construction related to the triumph.

Archaeological: Both bases are primarily of *lapis Albanus*, but in this regard the round altar is especially interesting: it consists of a shell of *lapis Albanus* built around a core of 6 slabs of *tufo del Palatino*. The *lapis Albanus* is in two courses; the lower is .296 m high, precisely a foot. The fine level of preservation of the moulding is due to the fact that the monument was dismantled and buried in a later phase (**No. 66**). A bronze coin was found in the *tufo del Palatino* nucleus of the round monument but in too corroded a state to be read (Ioppolo 1963-64: 73).
Coarelli's argument for connecting the round monument to a full-scale restoration of the *area sacra* and the temples of Mater Matuta and Fortuna depends on his opinion that the paving in *tufo del Palatino* beneath the round monument belongs to the same phase as the monument. The monument sits flush on top of the paving, but there is nothing to suggest for certain that they were built together, and the obscure relationship of the round monument to the paving is noticed by Ioppolo (1963-64: 73). At one point, the pavement appears cut back slightly to receive the lower curve of the monument, but this could have been done either later or contemporary to the placement of the monument. Coarelli's argument about a small fragment of pottery beneath the paving has not received much support (1988: 214-15; see the discussion of phasing by Pisani Sartorio in *LTUR* that makes no mention of this fact).

Bibliography: Coarelli 1988: 214-15; Degrassi 1963-64; Ioppolo 1963-64; Marcando 1963-64: 43-63; Torelli 1968; *isd.* in *RMR* 103-4 n. 89.

41. After 264 – *Aedes, Vortumnus* or *Vertumnus*

Sources: Fest. 228 L.

Under his entry for *picta*, Festus tells us that the Temple of Consus had a painting of the triumphator L. Papirius Cursor, and the *a.V.* had one of M. Fulvius Flaccus (*pictum in aede Vertumni et Consi, quarum in altera M. Fulvius Flaccus, in altera L. Papirius Cursor triumphantes ita picti sunt*). The temple is usually thought to be the foundation of M. Fulvius Flaccus, who triumphed over Volsinii as cos. in 264 (*MRR* I 203; also the inscription on the round altar at S. Omobono, **No. 40**). Vortumnus was at some point associated with the Etruscan deity *Velθumna*, a god particularly venerated at Volsinii (Aronen), and Ziolkowski has suggested that the

cult was transferred as an *evocatio* by the successful Fulvius Flaccus. Aronen, however, points out that a statue or *signum* of Vortumnus had existed at Rome since the Archaic period, and so an *evocatio* at this much later date is unlikely.

The location of the temple is given by the *Fasti Allifani* and *Amiterni* as *in Aventino*, more specifically by the *Fasti Vallenses* as *in Loreto maiore*. The *Loretus Maius* on the Aventine was near the Armilustrium (cf. Plut. *Rom.* 23.3), connected by Varro to the tomb of Titus Tatius (*DLL* 5.152) and the area around the Temple of Diana perhaps in the central part of the hill (cf. Haselberger "Lauretum/Loretum" in *MAR* 160-61).

Procedural: Probably a consular vow.

Bibliography: Aronen "Vortumnus, Aedes" in *LTUR* V 213-14; Torelli 1968; Ziolkowski 1992: 183-85.

42. 260 *Columna rostrata C. Duilli*

Sources: Liv. *Per.* 17; Plin. *NH* 34.11.20; Quint. *Inst.* 1.7.12, 6; Serv. *ad Virg. Georg.* 3.29.

C. Duillius defeated the Carthaginian fleet at Mylae, a marine victory that would serve in our sources to mark the rise of Roman naval power. He celebrated the first *triumphus navalis* at Rome and erected a column in the Forum with the prows of the enemy ships. Servius is the only authority for two columns—one *in rostris* and the other in the Circus—but the latter is otherwise unattested and doubtful for that reason (*contra* Pietilä-Castrén: 30 who suggests that Servius' verb choice of *videmus* suggests he relied on direct knowledge). The column is associated with a large marble base with a long *elogium* inscribed on one side, excavated in the 16th century at the foot of the Capitoline and near the Arch of Septimius Severus. The base is now in the Capitoline Museums. While the elogium preserves (or re-creates) many of the archaisms of the earlier text, it is of Augustan Date (Degrassi no. 69) and represents a restoration of the column that was most likely in tuff (Chioffi). The elogium for Duillius in the Forum of Augustus also mentions a *[st]atua c[u]m [columna] pr[ope a]rea Vulc[ani p]os[i]t[a]* (Degrassi no. 13). This confirms the location somewhere near the Arch of Septimius Severus and suggests, too, that the column was surmounted by a statue of the triumphator.

Procudural: Triumphal building.

Bibliography: Chioffi in *LTUR* I "Columna rostrata C. Duilli (Forum)" 309; Degrassi in *Insc.Ital.* XIII 3 nn. 13 and 69; Pietilä-Castrén 1987: 30.

43. 259 *Aedes, Tempestas* or *Tempestates*

Sources: *CIL* VI 1286-87 = *ILS* 3 = *ILLRP* 310; Ov. Fast. 6.191-94; Not. Regio I.

After defeating a fleet of Sards, Corsicans, and Phoenicians in 259, the consul L. Cornelius Scipio, son of Scipio Barbatus, vowed a temple to Tempestas (Ov.) or Tempestates (*ILLRP* 310): *Hec cepit Corsica Aleriaque urbe* / *dedet Tempestatebus aide mereto(d)*. This text from his sarcophagus in the Sepulcrum Scipionum is among our very earliest Latin description of the dedication of an *aedes*, probably dating not later than 200 (cf. Zevi in *LTUR* IV "Sepulcrum (Corneliorum) Scipionum" 284-85). The final line breaks off after *mereto*, and in fact Ritschl suggested a restoration of *mereto*(*d votam*) (cf. Dessau in *ILS* for this and other suggested restoration), but this is unnecessary: considering that the accusatives "Corsica" and "Aleriaque urbe" also lack a terminal *–m*, *aide* can itself be the accusative object of *dedet*, and *meretod* is the archaic ablative with a terminal *–d*. To complete the Saturnian verse, something is needed after *meretod*, but we do not lack an object for *dedet*. All of this is important because here in this example from around the time of the Second Punic War, all hints of the dedicatory formula of *votatio*, *locatio*, *dedicatio*, typical in our later sources, are absent: instead we find the phrase *dare aedem*, which is otherwise unknown, but is reminiscent of the use of *dare* for a victory dedication found on the Fulvius Flaccus base.[973] *Meretod* is in reference to Tempestas herself, as some chance of weather must have aided Scipio's fleet. Ovid continues this same theme, *Te quoque, Tempestas, meritam delubra fatemur, cum paene est Corsis obruta classis aequis*. Ovid mentions the *delubra* on the Kalends of June along with the Temple of Mars *extra Porta Capena*; the *Fasti Antiates Maiores*, however, list a feast day for the Tempestates on the 23rd of November. Ziolkowski correctly points out that Ovid's passage is in relation to the feast of the Temple of Mars, which must have stood in close proximity to that of Tempestas, the latter being mentioned due to its physical relationship to the first. He goes on to demonstrate that the Regionary catalogs also place a Temple to *Tempestatis* in proximity to the Temple of Mars, again beyond the Porta Capena. Thus, the temple was likely located beyond the Porta Capena served by the Via Appia as it made its way outside the walls. This stretch of the Appia on the way to Porta S. Sebastiano was also the same street adjacent to which was found the entrance to the Sepulcrum Scipionum, and Coarelli among others has suggested that the temple could have been placed on land belonging to the Cornelii Scipiones (cf. Zevi *loc. cit.* and Ziolkowski: 298).

Procedural: The temple is given to the deity *e merito*, but presumably behind this is a consular vow. The same man was censor the year following his consulship, and the temple may have been dedicated during his censorship (*MRR* I 206).

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[973] Compare *infra alia CIL* I^2 32 = VI 30896 = *ILLRP* 247 (limestone base [---]*onius Q.f.* / *Numisio Martio* / *donom dedit* / *meretod*); *CIL* I^2 45 = *ILLRP* 81 (a bronze spear head from the Temple of Diana at Nemi with a late 4th/early 3rd C century inscription: *DIANA MERETO* / *NOUTRIX PAPERIA*); *CIL* I^2 360 = *ILLRP* 163 (a bronze lamina from Norba of the late 3rd / eary 2nd C inscribed *P. Rutilius M.f.* / *Iunonei Loucina* / *dedit meretod* / *Diovos castud*).

Bibliography: Coarelli 1996a, 208-9; Ziolkowski 1992: 162-64; *isdem* in *LTUR* V "Tempestates, Aedes" 26-27.

44. 258 – *Aedes, Ianus*

Sources: Tac. *Ann.* 2.49; Fest. 358 L; Serv. *ad Aen.* 7.607.

Tacitus, describing temples repaired by the emperor in 17, notes the repair of the *Iano templum, quod apud forum Holitorium C. Duillius struxerat, qui primus rem Romanam prospere mari gessit triumphumque navalem de Poenis meruit.* Festus' mention of a *senatus consultum* promulgated in the *aedes Iani* prior to the expedition of the Fabii at Cremera had been suggested as evidence of a pre-extant cult site, but this is now regarded as an anachronism (Ziolkowski discusses the previous bibliography). Thus, the vow is dated originally to 260, the date of Duillius' cos., and the date of his victory at Mylae and consequent *triumphus navalis* for which he also was awarded the *columna rostrata* in the Forum. Duillius served as censor in 258, and we may presume that he took the opportunity to dedicate the temple then.

  The location is *apud forum Holitorium* in Tacitus, *extra porta Capenam* in Festus. Servius and the *Fasti* put the temple in proximity to the Theater of Marcellus. With the Temple of Bellona identified by Coarelli as that N of the Theater of Marcellus, the best option is the N most temple under S. Nicola in Carcere.

Procedural: Vowed by a consul; probably dedicated by the same man as censor.

Archaeological: The temple is the only one of the three underneath S. Nicola in Carcere that has no identifiable remains of its pre-Augustan phases.

45. 254 – *Columna rostrata M. Aemilii Paulli*

Sources: Liv. 42.20.1.

A prodigy is described by Livy as follows: *nocturna tempestate columna rostrata in Capitolio bello Punico priore posita ob victoriam M. Aemili consulis, cui collega Ser. Fulvius fuit, tota ad imum fulmine discussa est.* The Aemilius in question, consular colleague of Ser. Fulvius, is M. Aemilius Paullus, cos. 255. In the next year, he celebrated a naval triumph; presumably the column was erected by the consuls of 254 (*MRR* I 209-10). It was on the Capitoline, but we cannot say exactly where. Palombi raises the interesting idea that the erection of a tall columnar structure may have influenced the decision of the younger M. Aemilius Paullus, triumphant at Pydna, to build his famous monument at Delphi. But the Delphic monument was, as the inscription on it and Plutarch make clear (cf. *Aem.*

28.4), made from stone already in part prepared for a monument to King Perseus. The Roman monument was *rostrata* and of a vastly different form.

Procedural: Consular dedication following triumph.

Bibliography: Palombi in *LTUR* I "Columna rostrata M. Aemilii Paulli" 307-8.

46. 252 – REPAIR AND PAVING OF THE *COMITIUM*

Source: Not directly attested.

Coarelli argues on the basis of two notices concerning the career of M. Valerius Maximus Messalla that he was instrumental in a reconstruction of the Comitium area of the forum, the full extent of which is irrecoverable but is associated with the fifth pavement level of the Comitium. The first notice is the introduction to Rome during the course of the 1st Punic War of the first *horologium* from Catania by M. Valerius Maximus Messalla, cos. 263 (Plin. *NH* 7.214). Coarelli notes an older function of the *comitium* with the angle of the sun: e.g. Pliny refers to the *accensus consulum*, when the movement of the sun from the Columna Maenia to the Carcer marked the final hour for Comitial activity (*NH* 7.212). Turning to the archaeology, he argues that the fourth paving of the Comitium also entailed a change in the structure from a quadrangular to a round plan with an altered axis. The changed plan would have rendered this system of time-telling impossible, and this function could have been replaced by a proper *horologium* in the area. Thus, the *horologium* and the change of plan are read together. Coarelli uses a second notice on Valerius Maximus to support this complex reasoning: Pliny mentions a *tabula* placed on the *Curia* by Valerius Maximus (*NH* 35.22). Cicero also twice refers to an area of the Forum known as the *Tabula Valeria* (*ad Fam.* 14.2.2; *in Vat.* 21). Thus, combined, we see Valerius Maximus as responsible for smaller monuments (sundial, *tabula Valeria*) but also probably larger repair work in the NW area of the Forum. The repair work, then, can be connected to his term as censor in 252 (*MRR* I 212).

 While Coarelli's idea of a fully-circular *comitium* mapped onto a previous rectangular space does not match the archaeological data (Amici 359-61 esp. n. 8 and fig. 11), his combining of these two notes that Valerius Maximus Messalla brought a *horologium* to Rome, and that Valerius was involved with some modification to the Curia, suggests that Valerius Maximus may still be associated with the second Mid-Republican paving of the Comitium.

 Alternatively, we might propose that this phase of the Comitium be associated with the placement of the column of C. Duillius (**No. 42**) in the Vulcanal, echoing the actions of C. Maenius (column, pavement) a half-century earlier (**No. 13**). Either way this phase belongs to the the period of the First Punic War. Carafa's reassessment of the pavements of the Comitium do not contradict such a general date.

Archaeological: The corresponding pavement of the Comitium identified by Coarelli with Valerius Maximus Messalla was in *tufo lionato* from Monteverde. Recent three-dimensional modeling of the site has demonstrated the impossibility of Coarelli's reconstruction of a fully-circular Comitium: a curvilinear structure consisting of a stepped platform with an altar and various small monuments is now reconstructed extending in an incomplete arc south of the Curia (Amici: 354-63). Amici has also argued against much reconstruction of this curvilinear platform until the Sullan period, leaving the restoration of Valerius Maximus Messalla confined largely to the paving of the area in front of the platform. The recent publication of Nino Lamboglia's excavations in the 1960s N of the Curia may also hold evidence from this phase. Excavated were two wells at the bottom of which was a pavement of the 5th/4th C superimposed by a significant fill containing ceramics of the late 4th/early 3rd C (Amici *et al.*: 160, 162). The fill appears too late to belong to Maenius' earlier work and represents abandonment rather than construction. I might tentatively connect this fill with the clearing of the area around the Curia and into the Argiletum in preparation for Valerius Maximus Messalla's work, to which some scanty tuff walls in the area may also belong.

Bibliography: Coarelli *FR* I 126 §*Pavimento V* (*strato 8*); *FR* II 19-20, 55-56; Carafa 1998; Amici 2004-2005; Amici *et al.* 2007.

47. Mid-3rd C – Temple A in the *area sacra di Largo Argentina*

Sources: None.

The most attractive identication for the northernmost temple of Largo Argentina is that of Juturna, although there remain some problems with this identification. Castagnoli and Ziolkowski promoted identifications with Iuno Curritis and Feronia respectively, but the cults of both of these deities, while probably introduced in relation to the sack of Falerii in 241, are too poorly known. In all likelihood, the temple belongs to that period when we lack Livy's narrative, and it is safest to treat it broadly within that period, leaving its identification aside.

Procedural: Uknown.

Archaeology: The temple is the furthest north in the area and was occupied in the medieval period by S. Nicola in Calcario or ai Cesarini. As with Temple C, Temple A was initially founded directly on the ground of the Campus Martius, but was restructured when the ground level of the area was raised and paved in the middle second century. Unlike Temple C, however, Temple A was radically restructured in its later phases with a much enlarged podium and an entirely different plan. The phases from earliest to latest can be summarized as follows:

i. A small prostyle temple 9.50 x 16 m in dimensions, now represented only by the lowermost courses of the podium in blocks of *tufo giallo della via*

Tiberina laid in alternating courses of headers and stretchers. Only two courses are still visible: blocks avg. .56 x .56 x 1.12 m (1:1:2), but are difficult to measure. Marchetti Longhi records that the wall was 1.50 m thick, and he notes the presence of masons' marks (87-91). The upper course is cut back at its upper edge .11-.12 cm; this conceivably could have been done once the next blocks were added above (see the next phase). The lowest course of blocks have a simple *listello* moulding, now buried, but reported by Coarelli. The front of the temple was reached by a series of steps: these were supported by the extension of the walls of the podium, which were carved to support the treads of the stairs, although no stairs still exist.

ii. In the second phase, the lowermost courses of *tufo giallo* were superimposed with a moulded podium of a harder lithoid tuff identified as *tufo lionato* from Monteverde. Coarelli suggests that fire may have injured the previous temple, as it is now buried to a depth of 2.40 m below the new podium. As the stone of the new podium has several inclusions of white zeolite cement, an identification as *tufo lionato* appears to be correct. These blocks make up a podium 1.85 high with a fascia followed by two *cyma reversa* mouldings, one at the top and one at the bottom. Because this was buried in the next phase (see below), the details of the moulding are extremely fresh and sharp. On top of the moulded podium sit two courses of *tufo rosso con scorie nere*.

These blocks of the temple walls have holes for lifting tongs consistently on every block in a pattern of material/lifting technique paralleling the walls of the twin temples at Sant' Omobono. This would suggest a date in the late-third to early-second century. The area in front of the temple is paved at this point with *tufo lionato*, and, underneath this paving, Marchetti Longhi reported a coin of the third century (96, no more precise information). An altar in *lapis Albanus* similar to that of A. Postumius Albinus in front of Temple C, but without an inscription, was placed in the middle of this paved area. Coarelli relates fragments of a peperino column reused in the stairs of the third phase to the superstructure of the second phase.

iii. In the early 1st century, the entire temple was rebuilt, and the old plan was incorporated into a more ample peripteral podium: the old temple walls now became the cella of the new temple. The entirety of this phase was constructed of *tufo lionato* from Anio with details in travertine. An open space between the exterior podium wall and the wall of the interior cella was probably now filled with earth.

Almost nothing is known of the earliest temple (i), which belonged to third century and is now represented only by the lowest courses of its podium. With no more of the structure remaining, we cannot state with confidence that it was built exclusively in *tufo giallo* (*pace* Coarelli). From the material, the masons' marks, and the coin under the second phase, we can say that a date in the third century,

probably the late third century, is likely for the second phase. The first phase, then, belongs to the period of the First Punic War.

Bibliography: Marchetti Longhi 1936; Coarelli 1981: 16-18; Ziolkowski 1992: 25-28.

48. circa 250 – *Aedes, Fides*

Sources: Cic. *Nat. Deor.* 2.61; Plin. *NH* 35.100; Cato *ap.* Cic. *Off.* 3.104; *CIL* XVI 26.

Cicero describes an *a.F. consecrata* by A. Atilius Caiatinus, though no source specifies in which position among the many Atilius Caiatinus held (cos. 258 and 254, *propr.* 257, dict. 249, cens. 247) he either vowed or consecrated the temple. Because of this, Reusser, Thein, and Ziolkowski all leave the date open. Only one of his magistracies produced a triumph, the propraetorship in 257 *ex Sicilia de Poenis* (*MRR* I 208), and that becomes the best guess for the origin of the vow. It is doubtful that he dedicated the temple as dictator in 249: as Ziolkowski notes, Zonaras (8.15) suggests that Atilius Caiatinus achieved nothing of significance during that office. Instead, the temple is best located during his censorship of 247, when he also could have dedicated the temple to Spes (**No. 49**).
    The *a.F.* was *in Capitolio* (Cic., Plin.) near the Temple of Jupiter Optimus Maximus (Cato). A military diploma was displayed *post aedem Fidei p.R. in muro* (*CIL* XVI 26), and this suggests that the temple was close to the boundary wall of the Capitoline. Studying those finds said to have fallen down the slope of the Capitoline into the area of S. Omobono, Reusser argues that the Temple of Fides was at the SW spur of the Capitoline, where it slipped down the hill in landslides in the area during the Medieval period. The material he associates with the temple belongs entirely to later phases, predominantly from the Marian reconstruction; this later temple may be represented on the Severan *Forma Urbis Romae* fr. 499. Nothing can be said of the temple's earlier architecture.

Procedural: *Consecrata* by a magistrate, position and process beforehand is unclear, but Atilius Caiatinus held the censorship 11 years after his triumph and the *a.F.* could have been dedicated then.

Bibliography: Reusser 1993; Thein in *MAR* "Fides, Aedes" 123-24; Ziolkowski 1992: 28-31.

49. 247 – *Aedes, Spes*

Sources: Cic. *de Leg.* 2.28; Tac. *Ann.* 2.49.2;

Cicero records a temple to *Spes a Caiatino consecrata est*. Tacitus affirms the association when noting that Germanicus repaired and consecrated the temple

with several other structures damaged by age or fire: *Spei aedes a Germanico sacratur: hanc A. Atilius voverat eodem bello*. The antecedent for *eodem bello* is C. Duilius' naval triumph in the First Punic War, so that the vow by A. Atilius Caiatinus occurred sometime in the course of the First Punic War. Unfortunately, Atilius Caiatinus held *imperium* three times in that span, as discussed with his Temple to Fides resulting from the same period (**No. 48**). The building in all likelihood was finished in 247, when Atilius was censor, his last known office, and Cicero specifies that Atilius himself dedicated the temple (*MRR* I 216).

The temple is identified as *in Foro Holitorio* or *ad Forum Holitorium* in the *fasti* as well as in later references (e.g. Liv. 21.62.4), otherwise as *extra Porta Carmentalem* (Liv. 25.7.6). These references suggest that it should be identified with one of the temples underneath S. Nicola in Carcere. The repair of the temple after fire (**No. 65**) in 213 when the adjacent Temple of Janus seems to have been spared suggests that it was the temple closest to those of Mater Matuta and Fortuna, which burned in the same fire. Frank noted that it hardly could have been the central of the three temples, but that some space between Spes and Janus must have allowed the fire to be contained. The central temple then becomes the latest, the only one of the three not yet built at the time of the fire (see Juno Sospita, **No. 78**), and the S most temple should be identified with Spes.

Procedural: Vowed by a consul or praetor; dedicated by a censor.

Archaeological: Excavations in 1961-62, to the south of and underneath S. Nicola in Carcere, revealed a wall in the gap between the Tiberian-period podium of the Temples of Spes and the adjacent podium of the Temple of Juno Sospita (Crozzoli Aite 58-61). The wall was 13.70 m long with a slightly oblique orientation to the later three temples, which suggests that the Temple was completely rebuilt at some point. Therefore, this lowest wall is in all likelihood evidence of the phase prior to the fire of 213 (cf. Liv. 25.7.6). The wall is preserved to a height of three courses, at which point it was removed by later construction. The lowest two courses are .58 cm high, the uppermost is only .50 cm high, but Crozzoli Aite suggests that it was cut down to allow for the superimposition of the later temple phase. The stone is entirely *tufo giallo della via Tiberina* with the exception of the two E most blocks of the upper course, which are of *tufo lionato* from Monteverde. All blocks that are able to be measured (many are encased underneath the later temple foundations) are cut close to a module of .51 x .58 x 1.10 m.

This is all that remains of this first phase, and no reconstruction is possible. However, it is worthwhile to note the combined use of two building stones. As was continued with the other temples, the E most side of the wall was the entrance to the temple, and thus the *tufo lionato* may represent an exterior cladding in a harder stone or even the beginning of the staircase of the temple. An almost identical technique was found in the earliest phase of the adjacent Temple of Juno Sospita (**No. 78**).

Bibliography: Crozzoli Aite 1981; Frank 1924; Ziolkowski 1992.

50. 241 – *Via Aurelia*

Sources: None.

The *v.A.* was the road that crossed the Tiber on the *Pons Aemilia* and continued into Trans Tiberim, over the Janiculum, and then N inland along the coast. Its original destination is debated, but was probably somewhere in the *ager Cosanus*; in any event, it linked up with those routes that would eventually lead NW-W into Gaul. One left Rome by this route to head, eventually, to Massilia (Cic. *Cat.* 2.6, .14; Fentress: 72 n. 2; Patterson; Wiseman). The date is similarly debated, but with Coarelli's dating of the *Pons Aemilia* into the 3rd C (**No. 102**), we can plausibly see the road as a third century construction and connect it either with C. Aurelius Cotta, cens. 241 (Wiseman), or C. Aurelius Cotta cos. 200 (Fentress). To my mind, there is no reason to doubt the argument of Wiseman that the road relates to the foundations of Fregenae and Alsium in 245 (cf. Vell. 1.14), both of which were apparently along its route (Carnabuci: 32-34, 44-47). The alternative relates to the use of Pisa as a staging ground for the Ligurian Wars from 195 onwards. But this suggests that already five years prior to those campaigns, the Romans were planning a route of action (*pace* Fentress 74-75). Furthermore, like the Appia and Flaminia, this road would be a censorial, rather than consular, project.

Procedural: Likely censorial work.

Bibliography: Carnabuci 1992; Fentress 1984; Patterson in *LTUR* V "Via Aurelia" 133-34; Wiseman 1970: 133-34.

51. c. 241 – *Aedes, Iuturna*

Sources: Serv. *ad Aen.* 12.139; Ov. *Fast.* 1.463-64.

Servius says only that *Lutatius Catulus primum templum in Campo Martis fecit*, but this is normally taken to be the C. Lutatius Catulus cos. 242, who returned to Rome the next year to celebrate a *triumphus navalis* over Carthage. A second argument would see this as Q. Lutatius Catulus, cos. 102. But since the later Lutatius Catulus fought against the Cimbri in his consulship, whereas the earlier consul won a naval victory, the choice to dedicate to an aquatic deity nymph fits the earlier consul.
    The location of the temple depends on how we read Ovid: *Te quoque lux eadem, Turni soror, aede recepit / hic ubi Virginea campus obitur aqua*. The *aqua Virginea* is the Aqua Virgo, and Frontinus locates its outflow *secundum frontem Saeptorum*. Noting that the Virgo approached Rome from the N, several

scholars (Kondratieff, Richardson) locate the temple N of the Saepta within an as-of-yet unexcavated area of Rome to the N of S. Maria sopra Minerva.

Doing so, however, would disassociate the Aqua Virgo from the Stagnum Agrippae and the Thermae Agrippae, which both lay to the W of the Saepta. Both the baths and the large artificial lake were connected in some way with the fresh water source of the aqueduct, all located in the central area of the Campus Martius. Whether or not the aqueduct fed directly into the Stagnum, as is often thought, or whether the Stagnum received the run-off from the baths (both arguments in Dumser) is immaterial: in the time of Agrippa, the waters of the Aqua Virgo served the central Campus Martius and its various water-works. Ovid may himself help us intepret the topography in another rarely discussed passage from the *Epistolae ex Ponto* where he recalls the Campus Martius: *gramina nunc Campi pulchros spectantis hortos / stagnaque et euripi Virgineusque liquor* (1.8.37-38). The plural *stagna* must be in reference to the recently built and massive (Dumser: c. 240 x 190 m) Stagnum Agrippae. Ovid is describing a conglomeration of water works to the W of the Saepta: the Stagnum, the Euripus that drained the Saepta into the Tiber, and the Aqua Virgo. Between the Euripus and the Stagnum, we know that there was a grove as Strabo explicitly tells us (Str. 13.1.19).

We then have to search along the S or N of the Stagnum to locate the Temple of Juturna. One possibility remains that Temple A in Largo Argentina, the N most of the four temples there and the closest to both the Stagnum and to the Saepta, is indeed that of Juturnus, and the phases of the temple fit (Coarelli following Castagnoli; Pietilä-Castrén). Kondratieff rejects this identification, which he suggests stems from Coarelli's broader (and wrong) vision of the Largo Argentina area as the *Porticus Minucia Vetus*. However, unlike Coarelli's reconstruction of the Temple of the Nymphs, his restoration of the Temple of Iuturna rests more heavily on the independent evidence of Ovid, and can stand outside of the argument for the location of the *Porticus Minucia*. Temple A has a significant phase in *tufo lionato* from Anio, probably in the late 2nd century and perhaps at the same time as Temple B (that of Fortuna Huiusce Diei) was built in the same stone by Q. Lutatius Catulus. It is enticing to imagine the cos. of 102 building his triumphal temple next to a foundation of his ancestor, which he also restored. Ziolkowski's observation that Temple B is "markedly closer" to Temple C than to Temple A seems misled, especially when we note that Temple A and B share a phase in *tufo lionato* that Temple C lacks.

Still, the identification of Temple A as that of Juturna depends on how closely we want to read Ovid and Frontinus. In Ovid's day, the Temple of Juturna was obstructed from both the Saepta and the Stagnum Agrippae by the Hecatostylum. Temple A was in the area of both Agrippan structures, but it was probably not exactly where the waters of the Aqua Virgo met the Campus Martius. And it was certainly not *secundum frontem Saeptorum*, where Frontinus puts the outflow of the Aqua Virgo. Ziolkowski argues that Ovid merely meant to associate the virginity of Juturna loosely with the *aqua virginea* of the aqueduct,

but by this reasoning, most of the Campus Martius comes into play and the Ovidian passage ends up telling us nothing specific.

If we want to preserve the topographic specificity of the poet, then the issue cannot be resolved, no matter how attractive the Catulan relationship between Temples A and B appears to be. We also have to keep under consideration structures that may or may not have been temples in the area of the Stagnum, both at Via del Melone to the N of the Saepta and underneath S. Maria in Monterone to the SE (see the comments of Buzzetti in *LTUR* I "Bonus Eventus, Templum" 202-3). Until we have a better notion of those areas closer to the Stagnum, the question of the temple's location is an open question, although Temple A remains an attractive option.

Procedural: we only know that it was built (*fecit*), though it is reasonably connected to a *triumphus navalis*.

Bibliography: Richardson 228; Ziolkowski 1992: 94-97; Kondratieff in *MAR* "Iuturna, Aedes;" Coarelli in *LTUR* III "Iuturna, templum" 162-63; Pietila-Castrén: 44-48.

52. 241-38 Creation and paving of *Clivus Publicius*

Sources: Liv. 26.10.6, 27.37.15; Fest. 276 L; Varr. *DLL* 5.158; Ov. *Fast.* 5.297ff.; Tac. *Ann.* 2.49.

The plebeian aediles L. and M. Publicii Malleoli were responsible for the construction of a road leading up the N slope of the Aventine. They were also responsible for the Temple of Flora (Tac.), and the difficulties of dating and identifying their magistracies are discussed below. The roadwork was financed by fines paid by *pecuarii*, presumably those illegally grazing cattle on public lands; similar fines on *pecuarii* had also been put to use for public road work in 292 (Liv. 10.47.4). The course of the road can be located by several mentions in Livy (Coarelli, followed by Borbonus and Haselberger, who discuss previous alternatives). It was within the walls and visible from the Arx and the Capitoline (26.10.6). Thus, it ran up the N side of the Aventine, and it was just past the Forum Boarium (27.37.15) probably right after the Porta Trigemina. Frontinus connects the *c.P.* with the Trigemina and the outflow of the Aqua Appia: *incipit distribui Appia imo Publicio clivio ad portam Trigeminam* (*De Aq.* 5).

The construction project itself is variously described—Ovid comments that the road transformed *ardua rupes* into a *utile iter*. Festus is most explicit although the manuscript is difficult at that point: *munierunt ut in Aventinum vehiculi<s> †hel venire† possit*. *Munire* implies that engineering works of some sort not limited to paving were undertaken to make the steep N face of the Aventine passable to wheeled traffic. Whatever it consisted of, it was substantial enough in its original phase to burn to the ground in 203 (**No. 74**).

Procedural: Aedilician construction *ex multatico*.

Bibliography: Borbonus and Haselberger in *MAR* "Clivus Publicius" 90; Coarelli in *LTUR* I "Clivus Publicius" 284.

53. 241-238 – *Aedes, Flora*

Sources: Fest. 276 L; Ov. *Fast.* 5.277-94; Plin. *NH* 18.286; Tac. *Ann.* 2.49; Vell. 1.14.8.

In recording those temples restored by Tiberius, Tacitus notes the rededication of *aedem Florae, ab Lucio et Marco Publiciis aedilibus constitutam.* He puts the temple in the same place (*eodemque in loco*) as that of Ceres *iuxta Circum Maximum*, but really on the Aventine. The date of the aedileship of L. and M. Publicius Malleolus is of some dispute, but can be placed between 241 and 238 (*MRR* I 220 n. 3). Ziolkowski reasonably connects the temple with the foundation of the *Floralia* in 241/40 (cf. Ov., Plin., Vell.). Our sources are agreed that the Publicii were plebeian aediles with the exception of Festus who has them as curule aediles. However, as Broughton points out in *MRR* (*loc. cit.*), the Floralia were certainly given by the plebeian aediles at a later date. The temple was also strongly plebeian: it was located on the Aventine, and Ovid suggests that the Floralia (and, following Ziolkowski, the temple) was instituted from fines paid on those encroaching on public land. An alternative tradition found in Pliny holds the games' origin in response to the consultation of the Sibylline books after a drought, and Orlin feels that this event also occasioned the temple construction. However, in context of the plebeian nature and aedilician origin, fines on agrarian infringements make more sense.

The address *iuxta* (Tac.) or *ad* (*Fasti*) *Circum Maximum*, and Tacitus' association with the Temple of Ceres, all suggest a spot on the N slope of the Aventine overlooking the Circus. The fact that the Publicii also built the ascending road up the N Aventine, the *Clivus Publicius*, probably suggests that the temple was along or even at the end of its course.

Procedure: Founded (*constitutam*) by the plebeian aediles, probably *ex multatico*.

Bibliography: Borbonus in *MAR* "Flora, Aedes (Aventinus)" 124; Orlin 1997: 101; Papi in *LTUR* II "Flora, aedes" 253-54; Ziolkowski 1992: 31-34.

54. 238 – *Aedes, Libertas*

Sources: Liv. 24.16.19; Paul. Fest. 108 L.

Upon returning from his proconsulship in Apulia in 214, Ti. Sempronius Gracchus dedicated a triumphal painting *in aede Libertatis, quam pater eius in Aventino ex multaticia pecunia faciendam curavit dedicavitque* (Liv.). Paulus'

excerpt of Festus confirms the location: *Libertatis templum in Aventino fuerat constructum*. The dedicator would thus be Ti. Sempronius Gracchus (cos. 238), and the vow must have taken place during his aedileship in 246 (*MRR* I 216-17). The source of the *multaticia pecunia* is likely to have been the 25,000 asses that Claudia, sister of P. Claudius Pulcher, was fined for announcing publically that she wished her brother were still alive and in command of the Roman navy—an insult to the *maiestas* of Roman society (Liv. *Per.* 19; Gell. 10.6; Suet. *Tib.* 2.3; Val. Max. 8.1.damn.4).

The temple is often connected to a temple to Iuppiter Libertas on the Aventine, which Augustus is known to have restored (*RG* 19), and Ziolkowski points to the fact that Libertas and Jupiter appear together on denarii of 75 (*RRC* 391). Andreussi rejects this in favor of an identification with the temple of Iuppiter Liber mentioned in the *fasti Arv.* Either way, we are no closer to locating Gracchus' temple on the Aventine. Ziolkowski proposes it be associated with Republican remains under S. Sabina, but Haselberger following the published report in Krautheimer's *Corpus Basilicarum Christianarum Romae* rightly rejects such a possibility.

Procedural: Vowed *ex multaticia pecunia* by an aedile; presumably dedicated by the same man as consul.

Bibliography: Andreussi in *LTUR* III "Iuppiter Libertas, Aedes" 144; Haselberger in *MAR* "Aventinus: Colonnades" 63-64; Ziolkowski 1992: 85-87.

55. 231 *Delubrum, Fons*

Sources: Cic. *Nat.D.* 3.52; *Insc.Ital.* 13.2

A shrine to Fons was dedicated by L. Papirius Maso cos. 231 (*MRR* I 225-26) from his Corsican spoils (Cic. *Nat. Deor.* 3.52: *Fontis delubrum Masso ex Corsica dedicavit*). Refused a proper triumph, Papirius Maso was the first to celebrate a triumph on Mons Albanus. Based on the *Fasti viae Ardeatinae*, the temple is often placed just beyond the Porta Fontinalis in the area of Piazza Venezia, though Coarelli cautions that the *Fasti* only mention a feast to *Fonti* (the *Fontinalia*), not specifically a feast celebrated at the *d.F.*

Procedural: Consular vow? We do not know of Maso holding any other position after his consulship, so the complete history of the dedication is unclear.

Bibliography: Coarelli in *LTUR* II "Fons, Delubrum" 256-57.

56. 241-221 – *ATRIUM* AND *AEDES, VESTA* BURN AND ARE REBUILT

Sources: Liv. *Per.* 19.14; Plin. *NH* 7.141; Cic. *Sen.* 30, 61; Val. Max. 8.13.2.

The *Periochae* report that *cum templum Vestae arderet Caecilius Metellus pontifex maximus ex incendio sacra rapuit*. This follows immediately on the conclusion of the First Punic War, and thus occurred after 241: it is often placed in that same year, but there is reason to think it happened as much as two decades later. The actor is L. Caecilius Metellus, one of the heroes of the first Punic War. Pliny adds two details: that Caecilius saved the *Palladium* of the Vestals, but that he lost his eyesight in doing so. Valerius Maximus knows the same story. Both Cicero and Valerius state that Caecilius Metellus was made *pontifex maximus* in the fourth year after his second consulship. This means that he entered office in 247, so the first feasible year the fire could have taken place was 243 (cf. *MRR* I 218 for the year 243). Valerius furthermore states that Caecilius served 22 years as *pontifex maximus*, so we have a time range of 243-221; in actuality, 241-21, following the order of events in the *Periochae*. There is one final detail: Caecilius was known for his vigor in old age, a fact twice stated by Cicero. In 224, Caecilius was *dictator* for holding elections, as he is mentioned in the *Fast. Capitolini* (the position is also referred to by Pliny). While it is not necessary that he have his eyesight at this point, it is reasonable to think that he lost his vision *after* his dictatorship, at the very end of his otherwise improbably fit old age. Thus, we may even want to relegate this fire to the years 224-21, although it is often dated to 241 in topographical catalogs without further comment. That the temple was quickly rebuilt is suggested by the fact that Livy specifically mentions that it did not burn in the fire in the Forum of 210.

Procedural: No discussion of the rebuilding phase is preserved.

Archaeological: Even in recently published excavations, there is an insistence on referring to *two* rather than one fire of the *area sacra* of the Vestals (Scott 2009: 21; Arvanitis: 48-49), but this is not the case. Livy explicitly states that in 210 *aedes Vestae vix defensa est* (26.27.3); a close call, but a success nonetheless. This makes the situation easier to comprehend as neither the excavations of Scott or Arvanitis have attempted to distinguish two mid-3rd C phases. Instead, we can discuss the archaeological record of the late 3rd or early 2nd C building phase with less confusion over its date. Scott notes the presence among these remains of late 3rd C black gloss ceramic fragments (2009: 21), further shoring up the identification, although nowhere is any burn layer related to a fire reported.

The excavators reconstruct a semi-rectangular walled courtyard, which was confined on the S by the road between it and the Regia. This road was possibly the pre-Neronian Via Nova, although see the debate between Hurst and Cirone 2003 and Wiseman 2004 (Filippi in Arvanitis ed. fig. 22 identifies as the "Vicus Vestae" mentioned only in *CIL* VI 30960, but see Platner and Ashby on this toponym). On the E lay the ramp leading up the Palatine by the Lacus Iuturnae. These courtyard was delineated with a wall of *tufo giallo della via Tiberina*. Scott associates this phase with walls of *opus incertum* (2009: 28; presumably this is what is meant by "rubblework"), whereas Arvanitis has the

whole structure in *opus quadratum* in *tufo giallo* with a later, undated phase of *opus incertum* (48-51, although the *opus incertum* is not mentioned). On the basis of the chronology of mortar-and-rubble masonry, Arvanitis' decision to exclude non-ashlar work from this phase is preferable, as this otherwise would be a strikingly early example of *opus incertum*. Blocks of *tufo giallo* of this phase measure 1.20-.30 long and .60 wide (Scott 2009: 28); and some salvaged blocks of similar size and material underpin the later (Caesarian-era) paving. Two blocks had masons' marks on them: both V-shaped, they have been interpreted by Arvanitis as being marked out for *V*[*ESTAE*] (48-49). This is not necessary: such marks on *tufo giallo* are commonly found in this period, but nowhere else do the marks make such explicit references to the material's destination.

Access was from the S side towards the Regia with a small staircase of *tufo del Palatino* treads built over a drain in "squarish blocks" of *tufo lionato* from Monteverde (Scott 2009: 24). The structure had a central paved courtyard in pavers of *tufo del Palatino* (Scott 1993: 166). Arvanitis suggests that this area was already paved in the sixth century (45-47). Scott notes that paving in *tufo del Palatino* fell out of favor in the adjacent streets by the 6th century when *via glarea* was instead preferred (2009: 9-11). On these grounds, this pavement could be earlier, but this depends on the reconstruction of the Archaic complex. Arvanitis' plan of the sixth century structure lacks any evidence of an E wall, and it is not as clearly a rectangular structure with an interior courtyard as the third century structure certainly was.

To the SW of the rectangular structure was a "house" with a series of six rooms interpreted as the residential quarters of the six Vestal Virgins; additionally a series of rooms to the E side of the courtyard were built in the same *tufo giallo* (Scott 2009: 28).

Finally, to the NW of the structure was the temple on a podium of "red-brown tufa blocks" (Scott 2009: 21 is less than precise; *contra* Arvanitis 57-58, who sees this as no earlier than the mid-1st C). The shape of the temple is presumed to have been round. Scott identifies a small rectangular ashlar structure to the east of the temple as a planting for the one of the trees of the *lucus Vestae* as depicted in several imperial-era depictions of the temple (2009: 23). This is roundly dismissed by Arvanitis, who argues that the rectangular structure was out of use by the 4th C when it was cut by a foundation trench for a possible predecessor to the temple (44-46 n. 6, 56).

The entire structure and its phasing is remarkably complex; despite intensive study during the last three decades, the archaeological situation is by no means resolved.

Bibliography: Scott 1993; Scott 2009; Arvanitis, ed. 2010.

57. 220 – *Via Flaminia*

Sources: Liv. *Per.* 20; Plut. *q. Rom.* 66.

The Flaminia was Rome's major highway to the north: it extended from the foot of the Capitoline and the *Clivus Argentarius* upwards through the Campus Martius (modern via del Corso), and then to the Pons Mulvius, where it crossed the Tiber outside of the city. In 187, it still terminated in Ariminum (Rimini) on the E coast in the *ager Gallicus* (cf. Liv. 39.2.10 and Wiseman). The track of the *v.F.* from the city wall to the *Pons Mulvius* was also important because several other Republican roads entered the city along the same route, converging with the *v.F.* along its course: among them the Via Cassia, which split off shortly N of the bridge, and the Via Clodia, which served to connect the city to S Etruria.

The *v.F.* took its name from C. Flaminius, and the roadwork is attributable to his consulship in 223 or preferably to his censorship in 220 when he also defined the Circus Flaminius (Liv., Plut.). Ashby and Fell: 126 emphasize Flaminius' connections with the area of the *ager Gallicus* already in his tribuneship of 232 and his campaigning in the Po Valley during his consulship. Strabo's date of 187 has been taken as confusion over the fact that another C. Flaminius was consul in that year when M. Aemilius Lepidus built the Via Aemilia (cf. Str. 5.1.11, *MRR* I 366-67 for additional sources; Ashby and Fell: 126 and Wiseman).

The greatest construction effort involved was likely to be the bridges: the *Pons Mulvius* is mentioned in the year 207 (cf. Liv. 27.51.2), and it must have been part of the greater roadwork effort. Ashlar foundations comprising the earliest part of the bridge are attributable, however, to the refacing of M. Aemilius Scaurus in 109 (Messineo and Carbonara: 16); Ashby and Fell: 137 suggest plausibly that the earlier bridge may have been wooden or else was completely removed with the later iteration. At the 18th km, at Pietra Pertusa, an outlet road let down from the Flaminia and was tunneled through an outcrop of tuff: it probably served as an access way to nearby tuff quarries worked in the Roman period, though no specific date is known (Messineo and Carbonara: 39-40). At certain stretches, the road has been cut into the terrain or shows embankment walls with ashlar tuff blocks (e.g. Ashby and Fell 1921: 162), but again there is no way to determine the specific date of these works or if they pertain with certainty to the road of Flaminius rather than to, for example, the Augustan restoration referred to at Aug. *RG* 20.

Procedural: Most likely censorial *locatio*.

Bibliography: Ashby and Fell 1921; Messineo and Carbonara 1993; Patterson in *LTUR* V "Via Flaminia" 135-37; Wiseman 1970: 138.

58. 220 – *Circus Flaminius*

Sources: Liv. 3.54.15, 3.63.7, *per.* 20; Plut. *q. Rom.* 66; Vitr. 9.8.1.

The *Periochae* summarize the activities of C. Flaminius in 220: *C. Flaminius Censor viam Flaminiam muniit et circum Flaminium extruxit* (on the date, *MRR* I

235-36). In truth, there was very little to build, as the *c.F.* was an open area in the southern Campus Martius that would be defined more by the monuments along its edges than by any of its own architecture—no remains of the *c.F. per se* have ever been found. Gatti's join of fragments in the Severan *FUR*, however, confirmed its existence. It would quickly become one of the most recognizable topographical markers in Republican Rome, and by the mid 2nd C, it was ringed by temples. As Wiseman points out, it was not necessarily a track for horse-racing, but its curved shape (though probably elongated rather than circular, as he suggested) gave it the name *circus*. Evidence of a sundial being there (Vitr.) also suggests the presence of market activity, but mostly the open area was well suited for public assemblies. Along with being the spot for a variety of *ludi*, it was the staging ground for the triumph, and the visibility of public monuments located there meant that building activity commenced quickly and energetically after the area was established.

What exactly, then, did the censor Flaminius do? Plutarch suggests that the name derives from the fact that a Flaminius donated land to the state to make the *c.F.* It would be difficult for any Flaminius to have given land known to have been *ager publicus* to the Roman state, and after the expulsion of the Tarquins, that is technically what the Campus Martius, and vis-à-vis the *c.F.*, was. Plutarch's notion that this was land gifted to Rome is thus incorrect (*pace* Petruccioli).

An older toponym bearing the name *Flaminia* seems to have existed in the area of the Temple of Apollo Medicus, that borders the E side of the *c.F.* Twice in relating the events of 449, Livy makes reference to it: *ea omnia in pratis Flaminiis concilio plebis acta, quem nunc circum Flaminium dicunt* (3.54.15). And elsewhere, he notes that the consuls advised the senate *in prata Flaminia ubi nunc aedes Apollinis est* (3.63.7). Orosius states that the flamens owned property around the Capitoline until the time of Pompey, when they were sold, and we may guess that these *prata Flaminia* took their name from the priestly college rather than from the *gens Flaminia*: *loca publica quae in circuitu Capitolii pontificibus, auguribus, decemviris et flaminibus in possessionem tradita erant, cogente inopia vendita sunt* (5.19.27).

All of this is problematic as it suggests that the area was associated with the name *Flaminia* long before the career of any C. Flaminius, and Wiseman suspects that the attribution to the censorship of 220 could be apocryphal. Further problematizing matters is the fact that Festus attributes the *c.F.* to the same C. Flaminius, but during his consulship, not during his censorship (79 L: *Flaminius et via Flaminia a Flaminio consule dicta sunt, qui ab Hannibale interfectus est ad lacum Thrasimennum*). However, the open space with little architectural adornment makes no sense as a triumphal monument. More comparable would be the "construction" of the early Villa Publica, also an open area for assembly in the Campus Martius; the task of demarcating the open space that comprised the Villa Publica fell to the censors of 435 (cf. Liv. 4.22.7).

If we prefer to see the *c.F.* as a censorial action, then we need to understand why toponyms (*prata Flaminia*, *campus Flaminius*) bearing the name *Flaminia* and related to the *flamines* existed in that area well before the actions of

C. Flaminius in 220. The key may be the fact that a real change in the orientation of buildings in the lower campus Martius seems to happen around the early 2nd C: on the N side of the *c.F.*, the new temples to Juno Regina and Hercules Musarum are turned so that their orientation matches that of the *c.F.* On the other hand, an older structure such as the Temple to Neptune just to the W of Hercules Musarum still shows the orientation along cardinal lines of those earlier structures in the Campus Martius. There is little sense in arguing that the orientations of Juno Regina and Hercules Musarum reflect later repairs when the Temple of Neptune also underwent a later restoration in the end of the 3rd C, and its earlier orientation was preserved (Tucci).

To recapitulate, at some point the edge of the *c.F.*, which had previously included some open land owned by the *flamines*, becomes a reference point for surrounding architecture. Something changed. This is most easily explained by some sort of formal demarcation of space, akin to the earlier Villa Publica, where the boundaries of the *c.F.* (and thereby its orientation) were laid out and defined. This makes sense as censorial work, and we now can explain the involvement of C. Flaminius as censor in the *c.F.* The double etiology of the name was no coincidence: a clever pun allowed the censor to connect his gentilician name with a toponym of earlier fame, and our confusion over the etymology of the name may have been C. Flaminius' intention (cf. Coarelli).

Procedural: Censorial (*extruxit* given by the *Per.* is probably exaggerated).

Bibliography: Coarelli in *LTUR* IV "Prata Flaminia" 160-61; Gatti 1960; *isdem* 1961; Pettrucioli in *MAR* "Circus Flaminius" 86-87; Tucci 1997; Wiseman 1974; Viscogliosi in *LTUR* I "Circus Flaminius" 269-72.

59. By 219 – *Taberna* in the *Compitum Acilium*

Sources: Plin *NH* 29.12.

Pliny tells us that in 219 (*a.u.c.* DXXXV), the Greek physician Archagathos son of Lysanias, of Peloponessian origin, had a *tabernam in Compito Acilio emptam ob id publice*. In 1932, Colini excavated a small shrine identified by an inscribed lintel as the *Compitum Acilium* in work to open the via dei Fori Imperiali. The Plinian reference is to the sale of a *taberna*, not to its construction, though besides the *compitum* itself, no public building is known here from an earlier period.

Procedural: unclear if this represents a construction project.

Bibliography: Pisani Sartorio in *LTUR* I "Compitum Acilium" 314-15.

60. 217 – WALL REPAIR

Sources: Liv. 22.8.6.

In 217, after the disaster at Lake Trasimene, Q. Fabius Maximus is elected dictator and M. Minucius Rufus is elected his master of horse. Before relieving the command of the army from the surviving consul Cn. Servilius Geminus, the two tend to domestic business, as Livy reports: *iisque negotium ab senatu datum, ut muros turresque urbis firmarent et praesidia disponerent.* Appian (7.11) records the collection of stones on the walls here and later in 211, but as in 211 when *lithous kai belê* are collected (7.29), this is probably in reference to the stockpiling of munitions rather than to repair.

Procedural: Repairs undertaken by the *dictator* and *magister equitum* apparently *ex senatus consulto* as Livy states the undertaking was *ab senatu datum*.

Archaeological: The third century repairs of the wall are not certain; Säflund does not identify any specific evidence between the 4th century circuit and the repairs of the Sullan period, which include *opus caementicium* (although see his tentative comments at 250-52).

Bibliography: Säflund 1932: 212 and 250-52.

61. 216 – *Aedes Concordia in arce*

Sources: Liv. 22.33.7-8; 23.21.7.

Livy is our sole historical source for a temple to Concord on the Arx. Information on the vow comes in the course of the year 217: *in religionem etiam venit aedem Concordiae, quam per seditionem militarem biennio ante L. Manlio praetor in Gallia vovisset, locatam ad id tempus non esse. Itaque duumviri ad eam rem creati a M. Aemilio praetore urbano C. Pupius et K. Quinctius Flaminius aedem in arce faciendam locaverunt.* The military revolt in which the vow occurred is not otherwise mentioned although we know of Manlius' campaign in Gaul (*MRR* I 238 with n. 4 for problems with assigning the date and magistracy). Why was the religious duty to fulfill Manlius' vow left for two years, and why was it deemed pressing at this particular moment? Unusually, the urban praetor is assigned the task of forming the *IIviri ad aedem locandam*. Then, the following year (the *Fasti* specify February 6th) we hear of the dedication, again by *IIviri*, M. and C. Atilius (*MRR* I 252). Very shortly thereafter, in 211, a statue of victory on the roof of the temple was struck by lightening (Liv. 26.23.4).

While some have tried to relate this temple to the Opimian Temple of Concord at the foot of the hill (Richardson 1978; his opinion changed in 1992), that was not *in arce*, as Livy and the *Fasti Praenestini* note, only *in Capitolio*, as the *Fasti Antiates Maiores* state. Furthermore, there is still very thin evidence for any phase prior to the Opimian temple at the foot of the hill (**No. 6**). Instead, this was a second temple of Concord—actually a first, chronologically, if we dismiss the debated temple of Camillus at the base of the hill. Thein tries to relate it to the

remains in the Aracoeli Garden, but these are better associated with the earlier Temple of Juno Moneta because of the two types of stone, a complete lack of lifting evidence, as well as the use of *tufo del Palatino* (**No. 10**). The position of this temple was somewhere else on the Arx, perhaps under S. Maria in Aracoeli or the Ara della Patria. The latter position makes some sense: given the fact that this was only a few years after the construction of the Via Flaminia into Gallic territory (where the temple was vowed), it would make sense that we see at this point a temple built on the N side of the Arx, overlooking the *Porta Fontinalis* and the beginning of the Flaminia. This accords with Giannelli's placement of the temple N of the transept of S. Maria in Aracoeli, where a long *opus quadratum* wall in tuff was excavated in 1887. On the other hand, a location on the other side of the Arx (*pace* Thein) would have made for a duplication whereby, in 121 with Opimius' construction of another Temple to Concord at the base of the hill, one Concord would have loomed almost immediately over the other.

Procedural: Vowed by a praetor (perhaps *pr. peregrinus*, cf. *MRR* I 238); two years later the vow was unfulfilled and the *locatio* and *dedicatio* were performed by *IIviri*. We might assume from this that the original vower was dead.

Archaeological: Giannelli suggests an association with an ashlar wall discovered to the N of S. Maria in Aracoeli in 1887, but the excavator G. Gatti's notes in the *Bullettino* are so vague in nature (besides relating that the wall was of *opus quadratum*), that nothing can be said, not even the fact that what was discovered was a temple podium of any sort.

Bibliography: Giannelli in *LTUR* I "Concordia in Arce, Aedes" 321; Momigliano 1942; Richardson 1978; *isdem* 1992: 98; Thein in *MAR* "Concordia, Aedes (Arx)" 96-97.

62. Before 215 – *Piscina Publica*

Sources: Liv. 23.32.4; Fest. 232L; Amm. Marc. 17.4.14

The *p.p.* is first mentioned in Livy's narrative of the Second Punic War when, in 215, the senate met *ad piscinam publicam* and thus nearer to the Porta Capena where news of the Italian campaign against Hannibal would first reach the city (Liv. 23.32.4). The origin of the structure before that point—as well as its form— are irrecoverable. Its site has to be near the Porta Capena, but not adjacent: as Dumser and Haselberger point out, it was somewhere not too far from where the *Via Ostiensis* split the Major and Minor Aventine hills, just SW of the Circus Maximus , as is suggested by its appearance in the detailed route given by Ammianus by which the obelisk of Constantius II was dragged into the circus by the *Porta Ostiensis* and then past the *p.p.* This would appear to deny the possibility, still raised by Coarelli, that the *p.p.*, no longer a structure but only a toponym in Festus' time (*hodieque nomen manet, ipsa non extat*) was located in

the vicinity of the Baths of Caracalla along the Via Appia. Those baths were extramural and thus hardly a good fit for a senatorial meeting while Hannibal was still a threat to Rome itself.

In the vicinity of Dumser and Haselberger's location of the *p.p.* is one of the rare stretches of the Aqua Appia (**No. 18**) in the city still preserved, underneath the Viale Aventino just N of Piazza Albania. The public nature of the *p.p.* is apparent from its name, and it would make sense to see this as a censorial project. Considering that it needed a water source, it makes sense to connect it with the Aqua Appia and perhaps even with the efforts of Ap. Claudius Caecus in the late 4th or early 3rd C, although no direct evidence can confirm this conclusion.

Procedural: Censorial?

Bibliography: Dumser and Haselberger in *MAR* "Piscina Publica" 190-91; Coarelli in *LTUR* IV "Piscina Publica" 93-94.

63. 215 – *Aedes, Mens in Capitolio*
64. 215 – *Aedes, Venus Erucina in Capitolio*

Sources: Liv. 22.9.9-10, 22.10.10, 23.31.9, 23.32.20;

After the battle at Lake Trasimene, the *Xviri* consulted the Sybilline Books and recommended to the senate a host of religious duties to gain the favor of the gods in the face of the devastating defeat. Among other sacred rites, these included that *aedes Veneri Erycinae ac Menti vovendas esse* (Liv. 22.9.10). On this recommendation, both temples were vowed immediately in 217 by standing magistrates. The books prescribed that the first temple should be dedicated by *is voveret cuius maximum imperium in civitate esset* (Liv. 22.10.10). One consul had perished at Trasimene and the other had given over his command to the dictator Fabius Maximus, so that the dictator Q. Fabius Maximus Verrucosus vowed the first to Venus. The other temple to Mens was vowed by the praetor T. Otacilius Crassus (Magistrates for the year 217 in *MRR* I 242-47). Two years later, the same men dedicated their respective temples in the office of *IIviri aedis dedicandae causa*. Livy 23.30.19 describes the process of their appointment: Fabius Maximus requested of the senate that he be permitted to dedicate his temple; the senate decreed that upon taking up his office, the cos. Tib. Sempronius Gracchus should bring the issue of the creation of *Iiviri* before the people. At 23.31.9, both Fabius Maximus and Otacilius here were made *Iiviri*, and they dedicated their temples. Interestingly, both men held office at the time of their assumption of the duties of *Iiviri*: Fabius was a suffect cos. (*MRR* I 254) and Otacilius was granted *imperium pro praetore* after he dedicated the temple (Liv. 23.32.20). Clearly both temples were dedicated with some urgency at the beginning of entrance of Tib. Gracchus into office rather than at the end of the campaigning season when both men would have held imperium of their own accord.

Livy tells us that the temples are *utraque in Capitolio est, canali uno discretae* (23.31.9); that is, they were placed in the same area of the Capitoline, separated only by a small water channel. Thein supports the identification of these two adjacent temples with those tentatively seen on the Severan *Forma Urbis* frr. 31a-c by Rodriguez Almeida, though he does allow that the fires on the Capitol of 69 and 81 CE may have affected the form of these structures, and as it now stands there is no recovering their earlier shape.

Procedural: Vowed by two *imperium* holding magistrates on the prescription of the Sybilline books. Dedicated by those two same men as *Iiviri*.

Bibliography: Rodriguez Almeida 1991; Thein *MAR* "Capitolium: Marble plan temples" 79-80.

65-67. 213-212 REPAIRS IN THE AREA OF THE *PORTA CARMENTALIS*

Sources: Liv. 24.47.15-16; 25.7.5-6.

Livy describes a particularly bad fire in 213: *Romae foedum incendium per duas noctes ac diem unum tenuit. Solo aequata omnia inter Salinas ac portam Carmentalem cum Aequimaelio Iugarioque vico et templis Fortunae ac matris Matutae, et extra portam late vagatus ignis sacra profanaque multa absumpsit.* The topography of *omnia inter Salinas* means that much of the Forum Boarium must have been badly damaged, but the destruction was particularly bad at the N of the area around the Portam Carmentalis and along the road leading to the Forum (the Vicus Iugarius). In 212, he refers to the repair of the walls and three specific temples: *creati sunt quinqueviri muris turribusque reficiendis, et triumviri bini, uni sacris conquirendis donisque persignandis, alteri reficiendis aedibus Fortunae et matris intra portam Carmentalem et Spei extra portam, quae priore anno incendio consumptae fuerant.*

65. 212 – REPAIR OF *AEDES, SPES* IN THE *FORUM HOLITORIUM*

The *a.S.* burned, but it appears its unmentioned neighbor, the Temple of Janus, was spared, and this has been taken as evidence for the placement of the *a.S.* as the S most of the three temples under S. Nicola in Carcere, closest to the Porta Carmentalis, which was the focal point of the destructive fire.

Procedural: *triumviri reficiendis aedibus.*

Archaeological: The remains of the earliest phase of the *a.S.* could conceivably date to the rebuilding of this date rather than to the original date of 247 (**No. 49**), as Crozzoli-Aite notes (1981: 104). The next phase with Doric columns and entablature still embedded in the S wall of S. Nicola in Carcere is later and derives from the Tiberian reconstruction.

Bibliography: Crozzoli-Aite 1981: 104.

66. 212 – REPAIR OF *AEDES*, *FORTUNA* AND *MATER MATUTA* AT THE *AREA SACRA DI SANT' OMOBONO*

The phases of the two temples of Fortuna and Mater Matuta at this point were linked as they had been for some time set upon a single raised platform. The destruction of the site warranted a significant rebuilding program readily apparent in the archaeological record.

Procedural: *triumviri reficiendis aedibus*.

Archaelogical: Of all of the Republican phases at S. Omobono, this one appears least disputed. Over the entire podium beneath the temples, a thin pavement of *tufo lionato* from Monteverde was extended. Beneath this pavement, which was founded on a packed layer of sandy earth, were several fragments of ceramics dating to the late 3rd C as well as some carbonized material relating to a fire. Additionally, the uppermost stratum of fill adjacent to the podium contained terracotta architectural elements from those temples burned in the fire, and probably represented the clearing of the site before the repairs (Pisani Sartorio and Virgili 1979: 41).

At this point, the platform was almost entirely buried in earth. The round monument of Fulvius Flaccus (**No. 40**) was dismantled and buried in a compact layer of sandy earth on top of the earlier thick-slab *tufo lionato* paving, and the thin paving of *tufo lionato* was laid down on top: there it remained until its rediscovery in 1961 (Marcando 1963-64 especially with figs. 5-6).

The temples themselves were remade in part with a course of blocks of *tufo giallo della via Tiberina*. In drawings of the temple (e.g. that found in *LTUR* II fig. 114, and often reprinted elsewhere), this course of blocks E-W across the platform corresponds with the front of the podium and supports the reconstructed frontal colonnade of the twin temples. The blocks are ideally H:W:L::2:2:6 on a foot of about .295 m, and thus the wall is one stretcher thick = 1.79 m. This row of blocks runs the entire width of the podium and stands 2 courses high. As in other places where they are found, these blocks of *tufo giallo* have masons' marks: several different marks are seen, always on the header side of the block.

The *cellae* foundations of the temples are built in *tufo rosso a scorie nere*. Block sizes vary greatly as is often the case in this material, which must have been hard to cut accurately on account of the large scoria. The foundation walls are three courses high (the uppermost course is badly eroded) and sit on the underlying platform blocks while the paving runs up to and abuts the walls. It is on these stones for the first time (but probably parallel to Temple A in Largo Argentina, **No. 47**) that *ferrei forfices* holes are consistently found right-side up on almost every block. The courses do not seem to leave room for an entrance threshold block, and presumably both the interior of the cella and the area

between the cella and the podium walls were filled with earth. New excavations by Nicola Terrenato and Paolo Brocato within the cella have discovered several pavements. Nothing of the front stairs survives. The superstructure of the temple, of which no remains are known, was probably in perishable materials: mud-brick, wood, plaster, and terracotta.

Bibliography: Marcando 1963-64: 35-46; Pisani Sartorio and Virgili 1979: 41; Pisani Sartorio in *LTUR* II "Fortuna and Mater Matuta Aedes" 281-85.

67. 212 – WALL REPAIR

Sources: Liv. 25.7.5.

The job of the *quinqueviri muris turribus reficiendis* was in all likelihood connected to damage from the recent fire. Rome's defenses had just been strengthened in 217 (**No. 59**), but the fire that raged both inside and outside of the *Porta Carmentalis* must have meant that the wall too was compromised in that area. This would have been done with a sense of urgency with Hannibal in central Italy at the time. Repairs came in the nick of time, as Hannibal, then operating in southern Apulia, appeared before Rome's gates the following year (cf. Liv. 26.9.9; App. 7.29). Appian records that, at Hannibal's advance, old men went to the wall, and that women and children brought with them "stones and missiles" (*lithous kai belê*): this is probably reference to stockpiling arms rather to the engagement of the non-military-eligible population in actual wall repair.

Procedural: This is the only known composition of a panel of five (*quinqueviri*) in charge of repairing Rome's walls. There was difficulty in filling the military levy reported in the same year, cf. Liv. 25.5.4-9, but this unique composition was also warranted by the urgency of repairing the damaged walls in wartime.

Archaeological: See comments on the repair of the walls in 217 (**No. 60**).

Bibliography: Säflund 1932: 212-13, 250-52.

68.-71. 210-9 – FIRE AND REBUILDING OF THE *FORUM*

Sources: Liv. 26.27.1-10, 27.11.16.

Sabotage over the course of the second Punic War destroyed several buildings at the foot of the Clivus Palatinus. Livy (26.27.1-10) dates the event to the *nocte quae pridie Quinquatrus* (18 March) 210, states that *pluribus simul locis circa forum incendium ortum*, and then describes the entire event with some detail: the *septem tabernae quae postea quinque* burned as did the *argentariae quae nunc novae appellantur*. Then, several private structures went up in flames as, Livy states, *neque enim tunc basilicae erant*. Finally, the *atrium regium*, the

lautumiae, and the *forum piscatorium* burned. Only the *aedes Vestae* was spared by the quick work of 13 slaves who were bought by the state and manumitted. Arson was immediately suspected, as the fire broke out in several and different places at once (*pluribus simul locis et iis diversis*), and an investigation revealed that a group of Capuan *nobiles* were behind the conflagration. In 209, the censors Marcus Cornelius Cethegus and Publius Sempronius Tuditanus contracted out to have those buildings damaged by fire repaired (Liv. 27.11.16): *locaverunt inde reficienda quae circa forum incendio consumpta erant, septem tabernas, macellum, atrium regium*.

68. 209 – *TABERNAE ARGENTARIAE NOVAE*

Sources: Liv. 3.48.5, 26.27.2, 27.11.16, 40.51.5

The *tabernae argentariae*, which had existed in the forum since the 4th C (**No. 15**), burned and were replaced. Livy says that the *argentariae quae nunc novae appelantur* burned (26.27.2), but it seems clear from other references that the name (and probably the implied function?) *argentariae* persisted as well, so that the proper name for the new shops were the *tabernae argentariae novae* (cf. Liv. 40.51.5 where the Basilica Fulvia is *post argentarias novas*). Their location is given both as being adjacent to the Basilica Fulvia (later Aemilia) and next to the shrine to Venus Cloacina (Liv. 3.48.5: *Cloacina ad tabernas*). Here, at first, they were built into the side of the Basilica Fulvia, and finally with the Porticus of Gaius and Lucius were completely attached to the larger structure of the Basilica Aemilia.

Procedural: Censorial *locatio*.

Archaeological: Sub-foundations of the *tabernae* against the Basilica Fulvia were excavated under the direction of Bauer in the 1970s and recently published by Freyberger. The W two *tabernae* had lower walls of *tufo giallo della via Tiberina* four courses deep in the same position as the later *tabernae* of *tufo lionato* from Anio. A drain ran through the *taberna*, and the drain's top gave the original floor level (Freyberger 495). The blocks are laid in alternating courses of headers and stretchers and are cut on the usual module. Block measurements are H: .50-.52 m, W: .51-.59 m, L: variable, with one particularly large block in the SW most *taberna* stretching to 2.00 m in length. Blocks are worn, but what appear to be *ferrei forfices* holes appear in two places, one right-side-up, the other upside-down.

With the building of the Basilica Fulvia in 179, the back wall of the *tabernae* was abutted with the S wall of the Basilica Fulvia, but the two walls do not bond (Freyberger *loc. cit.*)

Bibliography: Freyberger 2007: 495; Papi in *LTUR* IV "Tabernae Argentariae" 10-12.

69. 209 – *QUINQUE TABERNAE*

Sources: Liv. 26.27.2, 27.11.16. Fest. 336 L.

After the fire of 210, the *septem tabernae* were reduced to five, as Livy states. Festus knows them as the *tabernae plebeiae*: *<plebeias tabernas q>uas vocant nos<tra aetate quinque tabern>as esse et septem ferun<t olim fuisse. Plebeias appell>amus a genere magistratus, eas enim faciendas curaverunt M. Iunius Brutus, Q. Oppius aediles plebei*. This, however, is dischordant with Livy's attribution of their repair to the censors of 209, P. Sempronius Tuditanus and C. Cornelius Cethegus (27.11.16). But as he also relates their reduction in number to the fire of 210 (26.27.2), and as the censors of 209 were responsible for all the other rebuilding projects on the forum after that fire, the date of 209 is preferable: Festus' name *Plebeiae* will have come from another origin. They were separate from the *tabernae novae*, which were on the N of the Forum adjacent to the Basilica Fulvia: Livy specifies both sets of *tabernae* burning in 210 (26.27.2). Their exact position is not clear. They may have been on the NW side of the Forum where Cato *quattuor tabernas in publicum emit* for his Basilica Porcia in 184 (cf. Liv. 39.44.7; Coarelli). But if Festus does actually know the *q.t.* "*nostra aetate*," then this is unlikely. Richardson hypothesizes that they continued the *tabernae novae*, but Papi notes that excavations at the Basilica Fulvia (**No. 95**) leave little space for this proposal.

Procedural: Censorial *locatio*.

Bibliography: Coarelli *FR* II 153; Papi in *LTUR* IV "Septem Tabernae" 266-67 and *LTUR* V "Tabernae circa Forum" 12-13; Richardson *Dictionary*: 375.

70. 209 – *ATRIUM REGIUM*

Sources: Liv. 26.27.2, 27.11.16

The *a.r.* is mentioned only twice in all extant sources, and it has proved somewhat of a puzzle. Livy only states that it burned in 210 and that a contract for its repair was let by the censors in 209. In both cases, he refers to it consistently as the "*atrium regium*." This is important to point out because earlier scholarship located it to the SE of the Forum, where it was associated it with one of the Regia or the Atrium Vestae, and suggested that Livy had somehow confused the name with one or the other structure (see citations in Zevi: 476). But Livy specifically states that the fire was staved off from the Temple of Vesta (26.27). Instead, the fire at the Atrium Regium is mentioned in sequence along with the *lautumiae* and the *forum Piscatorium*: it was instead at the N side of the Forum, rather than at the S side. Gaggiotti argues that it can be recognized in the area of the later Basilica Fulvia. Plautus located a *basilica* here at the turn of the 3rd C (*Capt.* 815; *Curc.*

472), although Livy notes in the fire of 210 that no *basilicae* yet existed on the Forum (*loc. cit.*). The answer, according to Gaggiotti, is that Plautus gives the more colloquial title of the official name of a structure called the *Atrium Regium*: the *basilica* plays upon the Greek translation of *Regium*. This would not have been surprising considering Plautus' easy slippage between Greek and Latin contexts, although in both cited instances he refers quite specifically to the topography of Rome itself. Gaggiotti furthermore suggests that the *a.r.* was originally an Archaic structure associated with Rome's own kings, and cites a passage of Dio stating that Numa had his *archaia* on the Via Sacra (1 fr. 6.2). Zevi is not convinced by this. Instead, he suggests that the *a.r.* belongs to the scope of the 4th and 3rd C when various other private houses were being claimed around the Forum for public use, e.g. the Basilica Sempronia, formerly the house of Scipio Africanus, or the Basilica Porcia for which Cato had to buy *atria duo*, *Maenium et Titium* as well as selling *quattuor tabernae in publicum* (**No. 92**). The *a.r.* then would be a public structure either generically connected with kingly status (less convincing), or perhaps connected with the lodging of diplomats from the kingdoms of the Hellenistic world; in particular, Zevi points to the housing of Hiero II at Rome in 237 (484: cf. Eutr. 2.1, mis-cited by Zevi).

Just as the other basilicas of this time period consumed pre-extant structures, the Basilica Fulvia was placed over the *a.r.* and obliterated it, and this also serves to explain why it was never heard of again.

Procedural: Censorial *locatio*.

Archaeological: Several older structures were found underneath the earliest phases of the Basilica Fulvium; the Atrium Regium is probably to be located here (Freyberger: 494). Among the material excavated by Carettoni in the SE of the *aula* of the Basilica Fulvia (later Aemilia) was a deposit of tile fragments, some animal bones, and pottery ("frammenti di vasellame grezzo, un fondo di coppetta a vernice rossa, e un frammento di vaso a vernice nera") with signs of burning. One tile was restorable in its entirety and measured .43 x .51 m (Carettoni: 113). While there is nothing to connect these remains to the Atrium Regium in particular, they may very well belong to the general clean-up after the fire destroyed structures including the Atrium Regium in this area.

Bibliography: Carettoni 1948; Freyberger 2007; Gaggiotti 1985; Zevi 1991.

71. 209 – *MACELLUM*

Sources: Val. Max. 3.4.4; Liv. 26.27; 27.11.6.

Two sources place the existence of Rome's *m.* before the Second Punic War: Valerius Maximus refers to a *taberna macellaria* belonging to the father of Varro, C. Terentius Varro cos. 216 (*MRR* I 247) and Livy reports the rebuilding by the censors of 209 of the *m.* among the building *quae circa forum incendio*

consumpta erant (27.11.6; fire at 26.27). Remains of a large structure excavated in the Argiletum in the 1980s, just N of the later Basilica Aemilia, however, led the excavators to propose that several previous commercial zones or structures (*forum cuppedinis*, *forum piscatorium*) destroyed in the fire of 210 were at that moment unified into a single *macellum* by the censors. Following De Ruyt, those earlier structures begin to appear there in the period between the first and second Punic War. Copious ceramic finds related to the structure date to the late 3rd/early 2nd C, and would appear to confirm this line of reasoning.

Procedural: Censorial *locatio*.

Archaeological: All that remains are several paving stones in *lapis Albanus* (dimensions not given) on a level similar to that of the Republican structures under the W end of the Basilica Aemilia (Tortorici 40). Tortorici suggests an open piazza surrounded on its outside by stalls for shops (the *tabernae maccelariae* of Varro). Underneath was a drain channel built in *tufo del Palatino* and vaulted *a cappuccina* within which were found ceramics of a late 3rd/early 2nd C date. The floor level was raised in the Augustan period and repaved, and traces of a circular structure there may suggest a *tholos Macelli*, a round fountain structure like those found at the center of comparable Roman markets (e.g. Puteoli, Alba Fucens). However, it is impossible to say whether or not this preserved an earlier iteration of the same structure (Tortorici 41-43).

Bibliography: De Ruyt 1983; Tortorici 1991.

72. 205 – *Aedes, Honos et Virtus ad Portam Capenam*

Sources: Cic. *Nat.Deor.* 2.61; Liv. 25.40.3, 27.25.7-9, 29.11.13; Val. Max. 1.1.8.

A temple with a particularly complex history, Cicero describes it as one to *Honoris a M. Marcello renovatum quod multis ante annis erat bello Ligustico a Q. Maximo dedicatum.* It was originally begun by the cos. Q. Fabius Maximus Verrucosus after his triumph over the Ligurians in 233 (*MRR* I 244); Verrucosus (Cunctator) served in four subsequent consulships and would have had ample time to continue his work. However, in the course of the year 208, Livy reports the following (27.25.7-9):

> *Marcellum aliae atque aliae obiectae animo religiones tenebant, in quibus quod cum bello Gallico ad Clastidium aedem Honori et Virtuti uouisset dedicatio eius a pontificibus impediebatur, quod negabant unam cellam amplius quam uni deo recte dedicari, quia si de caelo tacta aut prodigii aliquid in ea factum esset difficilis procuratio foret, quod utri deo res diuina fieret sciri non posset; neque enim duobus nisi certis deis rite una hostia fieri. Ita addita Virtutis aedes adproperato opere; neque tamen ab ipso aedes eae dedicatae sunt.*

Marcellus' vow to Honos and Virtus is thus placed during his first consulship in 222, when he triumphed over the Gauls and Germans (*MRR* I 232-33). 14 years later, in his fifth consulship, he had still not fulfilled the vow, and his attempt to co-opt his temple onto the dedication of Cunctator resulted in the fight with the

pontiffs over the temple's form. This suggests that the construction project was still ongoing, perhaps delayed by the course of the Second Punic War. The addition of the second *aedes* took three years, and the temple was finally dedicated by his son (Liv. 29.11.13), but Livy does not give the son's position, and the younger Marcellus does not appear to have held one that year (cf. *MRR* I 301-305). The following year, the younger Marcellus was *tr.pl.*, his first attested office.

The temple is located by the Porta Capena (Liv. 25.40.3 *ad Portam Capenam*), just beyond the gate (both Kondratieff and Palombi explain its extramural position), but cannot be more closely placed.

Procedural: Started or even finished in part by a cos. (Cunctator); incorporated into a later consular vow by an unrelated individual (Marcellus); form changed by ongoing discussions between the *pontifices* and the second individual (Marcellus); dedicated by the second individual's son, perhaps as *IIvir*?

Bibliography: Kondratieff in *MAR* 138-39; Palombi in *LTUR* III "Honos et Virtus, Aedes" 31-33; Ziolkowski 1992: 58-60.

73. 204 – *Via circa foros publicos*

Source: Liv. 29.37.2

Livy records that the censors M. Livius Salinator and C. Claudius Nero let out two projects in this year: one was the beginning of construction of the temple of Magna Mater, the other was for a *viam e foro bovario ad Veneris circa foros publicos*. This must have exited the Forum Boarium to the S near the *Porta Trigemina*. There, it shared its first stretch with the *Clivus Publicius* (**No. 52**) before the *Clivus* headed directly S up the hill. This road, instead, would have branched to the E, staying lower by the *foros publicos*, passing the seats along the long SW corner of the Circus Maximus before heading upslope to the Temple of Venus Obsequens (**No. 30**; this is the most logical Temple of Venus), somewhere on the N slopes of the Aventine. Coarelli (*FB* 12) suggests that the Forum Boarium extended as far as the "*carceres* del Circo Massimo a sud-est" where the road formed its border, giving rise to contrary arguments by Ziolkowski and Borbonus and Dumser. Surely this is a misprint: Coarelli must have meant "sud-ovest," where the *carceres* actually were (cf. Liv. 41.27.6), and nowhere does he otherwise imply that the road followed the entire S side of the circus. If this emendation of Coarelli, as it were, is correct, he conceived of the road following the path reconstructed above.

The course is much simpler and less uncertain than Borbonus and Dumser suggest; however, until we can positively locate the Temple to Diana (**No. 103**), we cannot exactly reconstruct the road's course.

Procedural: Censorial project, *locatio*.

Bibliography: Borbonus and Dumser in *MAR* "*Via circa foros publicos*" 259; Coarelli *FB* 12, 31, 34, fig. 20; Ziolkowski 1994: 190-91.

74. 203 – REPAIR OF *CLIVUS PUBLICIUS*

Sources: Liv. 30.26.5.

Livy reports in this year was marked by an *incendio ingenti, quo Clivus Publicius ad solum exustus est*. Presumably it was rebuilt as it is so frequently listed in later sources, although Livy never mentions such project. Unless the event occurred during the 18 month term of the censors of 204 and was quickly responded to by them, it is more likely that this project was seen to by the aediles, as the next censorial college was not until 199; the original aedilician nature of the structure makes such a connection sensible.

Procedural: Aedilician?

75. 196 – Two *Fornices* of Stertinius, *Forum Boarium*
76. 196 – *Fornix* of Stertinius, *Circus Maximus*

Sources: Liv. 33.27.

In 197, the two governors of Spain, Cn. Cornelius Blasio and L. Stertinius, return to Rome with their spoils. Cornelius Blasio was awarded an *ovatio* by the senate; Stertinius did not even try for a triumph: as Briscoe *comm. ad Liv.* 33.27 points out, there must have been dispute about the accomplishments of both generals. Instead, Stertinius simply deposited his winnings into the treasury, 45,000 pounds of silver, and as Livy tells us, *de manubiis duos fornices in foro boario ante Fortunae aedem et matris Matutae, unum in maximo circo fecit et his fornicibus signa aurata imposuit*. Rather than self-standing monuments, which Pliny says were novel inventions in the time of Augustus (*NH* 34.27), these early "arches" augmented pre-extant gates: the double-entrance to the Porta Carmentalis (cf. Liv. 2.49.7 and Ov. *Fast.* 6.475 for the double entrance of the Carmentalis) near the temples of Fortuna and Mater Matuna in the Forum Boarium, and at one of the entranceways to the circus, rather than on its spina (De Maria). These monuments blur the definition between private and public: they were explicitly not triumphal, but they were also built *de manubiis*. De Maria suggests that they were dedicated by Stertinius in the quality of a private citizen rather than as a magistrate. Stertinius held his proconsular governorship in Spain by plebiscite (cf. Liv. 31.50.11), but the arch was built *de manubiis* nonetheless, and the result appears to have been a public monument built by a *privatus* (Shatzman). His recourse to public funds after he had returned to Rome and resigned his position is not entirely clear.

Procedural: Building *de manubiis* by a *privatus*.

Bibliography: De Maria 45-48, 262-63; Shatzman 1972: 168 n. 112.

77. 194 – *Aedes, Faunus*

Sources: Liv. 33.42.10; Liv. 34.53.4; Ov. 2.193-94; Vitr. 3.2.3.

In 197, the plebeian aediles Cn. Domitius Ahenobarbus and C. Scribonius Curio brought several cattle ranchers (*pecuarii*) to trial and won conviction for three of their cases, presumably for illegal use of *ager publicus*. Livy tells us *ex eorum multaticia pecunia aedem in insula Fauni fecerunt* (33.42.10). Holding the position of *praetor urbanus*, Domitius Ahenobarbus dedicated the temple in 194: *ex multaticio argento faciendam locarant…praetor urbanus eam dedicavit*. The temple was on the N most end of the island, as Ovid says, *hic ubi discretas insula rumpit aquas*. Degrassi notes that in the sixteenth and seventeenth century large walls of marble were still reported in that area. When discussing prostyle temples, Vitruvius notes *huius exemplar est in insula Tiberina in aede Iovis et Fauni*. This is taken by Degrassi to refer to two temples *in insula*, but Vitruvius would appear to speak of a single temple to both Jove and Faunus, as Richardson suggests. Perhaps somehow the cult had changed by Vitruvius' time.

Procedural: Aedilician construction e*x multaticia*.

Bibliography: Degrassi in *LTUR* II "Faunus, Aedes" 242; Richardson 148.

78. 194 – *Aedes, Iuno Sospita*

Sources: Liv. 32.30.10, 34.53.3.

An *a.I.S.* was vowed by the cos. C. Cornelius Cethegus in return for victory against the Insubres over whom he triumphed in 197. During the censorship of Cornelius Cethegus, Livy tells us the following (34.53.3): *aedes…Iunonis Matutae in foro Holitorio, vota locataque quadriennio ante a C. Corenlio Cethego consule Gallico bello; censor idem dedicavit*. This is certainly a mistake; whether it is Livy's own or the fault of his source is unclear, but Juno is not otherwise known with the epithet Matuta, and so the reference is clearly to the same *a.I.S.* (Briscoe). The temple is assigned to the middle of the three temples *in foro Holitorio*, directly underneath the Church of S. Nicola in Carcere on the grounds that it is the latest of the three attested there (cf. Temple of Janus, Temple of Spes). Rebuilt in 90 B.C., little remains from the earlier phase.

Procedural: Vowed and contracted in the same year by a consul; dedicated in the same man's censorship four years later.

Archaeological: Excavations under S. Nicola in Carcere in 1961-62 revealed some limited elements of the earliest phase of the central temple. These consist of:

- A platform of two courses, both .58 m high, of *tufo giallo della via Tiberina* from Grotta Oscura. The platform may have extended downwards but this could not be confirmed in excavations (Crozzoli Aite 62). Well within the Tiber Floodplain, the placement of the temple upon a solid tuff platform finds many parallels (ee.g. the temples of Portunus, of Apollo Medicus, the twin temples in Sant' Omobono).
- On top of the platform were two walls of *tufo del Palatino* meeting in an L. Crozzoli Aite gives the dimensions as follows: H: .30 m, L: variable .70 – 1.00 m, W: also variable .60 - .65 m. Both walls have the thickness of a single block with the N-S wall with blocks disposed on their short side and the E-W wall with blocks on their long side. She observes *anathyrosis o*n the interior joins (*loc. cit.*).
- On the E side of the platform, thus the side towards the entrance of the church and the presumed entrance of the original temple, three courses of *tufo giallo* rise parallel to the wall of *tufo del Palatino* on top of which sits a fourth course of *tufo lionato* from Monteverde. Crozzoli Aite (62-63) suggests this to have been the external wall of the platform, and this is supported by the fact that the uppermost course of *tufo lionato* has simple fascia at its lowest point, which she calls a *risega di fondazione*. She then supposes this use of two building stones not have been original, but to reflect a subsequent repair to the podium, but this follows the fallacy of presuming different stones reflect different building phases, when more likely the harder *tufo lionato* was used for the exterior of the platform and to hold the offset. The fascia may instead reflect where the stairs to the original temple moved downwards in an arrangement similar to Temples A (**No. 47**) or C (**No. 24**) in Largo Argentina.

With only two sides excavated, the temple's original phase is difficult to reconstruct and was largely destroyed in the enlargement of the temple in the early 1st C. The walls in *tufo del Palatino* were probably load-bearing. If they were for the cella, and the platform was in fact a podium, the temple had a *peripteros*, but judging from the time period, a *peripteros sine postico* seems more appropriate. If the platform was indeed a platform, then the temple was simply prostyle. Either way, access provided by a staircase to the east was now completely destroyed.

The building material is notable both for the combined use of various stones, but also for the continued use of *tufo del Palatino* into the early 2nd C, and for the fact that *tufo giallo*, not *tufo del Palatino*, is restricted solely to the internal and foundation parts of the temple.

Bibliography: Coarelli in *LTUR* III "Iuno Sospita (in Foro Holitorio), Aedes" 128-29; Briscoe 1973, 227; Crozzoli Aite 1981, 62-64.

79. 194 – *Aedes, Fortuna Primigenia*

Sources: Liv. 29.36.8, 34.53.5-6; Vitr. 3.2.2.

In 194, the *IIvir* Q. Marcius Ralla dedicated a *a.F.P.* on the Quirinal. Livy's gives a fuller history at 34.53.5-6: *et aedem Fortunae Primigeniae in colle Quirinali dedicavit Q. Marcius Ralla, duumvir ad id ipsum creatus; voverat eam decem annis ante Punico bello P. Sempronius Sophus consul locaverat idem censor.* Livy has made some error here: ten years prior (*decem annis*), P. Sempronius Tuditanus, not Sophus, was consul, and Livy preserved his vow at 29.36.8: *consul principio pugnae aedem Fortunae Primigeniae vovit, si eo die hostes fudisset; composque eius voti fuit.* No Sempronius Sophus is known to have held either consul or censor in this period. Frustratingly, however, the cos. of 204 was cens. in 209 (*MRR* I 285). Either the vow is mistakenly placed in 204 when it ought to have been during Sempronius Tuditanus' pr. in 213, when he succesfuly captured Aternum and a large quantity of coined silver and bronze (cf. Liv. 24.47.14), or Livy has mistakenly referred to a *locatio* of the temple during a censorship. The *locatio* of the temple could have taken place immediately upon the return of the cos. to Rome, as is otherwise attested (cf. the procedure for **No. 78**), so we do not necessarily need an intervening censorship, and I prefer to keep to the tradition concerning the lapse of 10 years between vow and dedication.

The temple was one of a trio of Fortuna shrines located near the *Porta Collina* on the NE Quirinal (Vitr.). A temple platform excavated at the intersection of Via Servio Tullio and Via Flavia in the 19th century has been identified as one of the three temples (Coarelli; Pietilä-Castrén), but it is impossible to say which, and the identification as a whole has been doubted (Dumser; Ziolkowski: 45). At the least, its location in the area of the *Porta Collina* on the Quirinal is secure.

Procedural: Consular vow; dedicated by *IIvir*.

Bibliography: Coarelli in *LTUR* II "Fortuna Tres, Aedes" 285-86; Dumser in *MAR* "Tres Fortunae, Aedes" 248; Pietilä-Castrén: 67; Ziolkowski 1992: 40-45.

80. 194 –*Aedes Iove in insula*

Sources: Liv. 34.53.7, Vitr. 3.23, Ov. *Fast.* 1.293-94; *Ins.It.* 13.2.2, p. 111; *CIL* VI 379.

The identity of the diety to whom another temple was dedicated in this year is very confused, although the location of the temple itself on Tiber Island seems clear. Livy writes: *in insula Iovis aedem C. Servilius duumvir dedicavit; vota erat sex annis ante Gallico bello ab L. Furio Purpurione praetore, ab eodem postea consule locata.* Vitruvius and Ovid refer to Jove or Jupiter on the island as well.

Only the Fasti Praenestini list sacrifices to *Veiovis in insulam*, but as tempting as it would be to see a personal connection between Furius Purpureo and Veiovis expressed in two Roman temples to the particular deity (cf. **No. 85**), the weight of the evidence is on the side of Jupiter himself rather than his anti- or young self.

A mosaic inscriptions found in the area of S. Giovanni Calibita, now the Hospital of the Fatebenefratelli firms this connection of the north side of the island with a cult of Jupiter in various aspects. In 1854, an *opus signinum* floor was discovered, recorded, and then immediately covered or destroyed (Brucia 53) under the Cloister of S. Giovanni Calabita; it contained a tessellated inscription recording the dedication by a haruspex, C. Volcacius C.f. "*de stipe Iovi iurario*" of a *monumentom* or perhaps, as Mommsen restored it, of an [*aram cum m*]*onumento merito* (cf. his reading recorded in *CIL* VI 379). Iove Iurarius is otherwise unknown, but this is further testament to the presence of Jupiter in some aspect worshiped in this area.

Further excavations by the Soprintendenza in 1989-94 in present radiology department of the Hospital of the Fatebenefratelli turned up more related evidence. Although the full publication of this site is still expected, much of it can be seen in various areas of the hospital.[974] First of all, excavators found a votive offering to Jupiter made by a M. Valerius Fronto (Di Manzano and Giustini). More impressive was the discovery of walls in ashlar blocks (see below) associated with another mosaic pavement, now included in *CIL* VI 8.3 40896a with long commentary by G. Alföldi. His reading of the inscription in two fragments of black-and-white mosaic is as follows: *C(aius) Serveili M(arci) f(ilius) pr(aetor) [- - -? C(aius), M(arcus), P(ublius)?] (*vac. 3?*) Serveilieis C(ai) f(ilii) (*vac. 3*) faciendum coeraverunt eidemque*. Both Alföldi as well as the excavators have noted the fact that the dedicating party in this inscription comes from the *gens Servilia*, as also did the C. Servilius, who was *IIvir* responsible for the original temple.[975] Because the Servilius of 196 was C. Servilius Geminus C.f., *IIvir*, he cannot be the same as the man in this inscription, who is specified as C. Servilius M.f. praetor. Instead, Alföldi reconstructs the stemma of the Servilii and suggests the author of the mosaic (and the structure) was C. Servilius M.f. Vata, who had three sons (hence *filii*), rather than the moneyer C. Servilius M.f., who is not known to have had any male offspring. This would place the inscription shortly after 125/20, when we know that Servilius Vata would have reached the requisite age of 40 to hold the praetorship.

That said, the structure relating to the mosaic is probably not the *a.I.* itself, because this mosaic inscription refers to praetorian construction rather than aedilician or censorial repair (*contra* Di Manzano and Giustini). A plan of the structures associated with the mosaic has not yet been published, and to the eye, the area where the mosaic was discovered appears more like a temple precinct than a temple building itself (i.e. a paved area or platform with smaller structures).

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[974] I express my gratitude to M.A. Brucia for guiding me to these remains and for taking me around Tiber Island.

[975] The nominative singular Serveili and the nominative plural Serveilieis are Archaic and paralleled in several examples by Alföldy.

This is problematic, as Vitruvius calls the *a.I. in insula* an example of prostyle *in antis*, and we would expect a more typical temple structure. More problems with the site and its archaeology are discussed below. The whole situation remains confusing, however, and the eventual publication by Di Manzano will no doubt bring much needed clarity.

Procedural: Vow by praetor, *locatio* by same man as cos.; *dedicatio* by a *IIvir*.

Archaeological: Excavations from 1989-94 under the Hospital of the Fatebenefratelli revealed a series of structures in large ashlar blocks superimposed by a medieval church, which appears to have been inserted directly onto the ancient structure. The ancient structure is described by excavators as an *aula* and seems to have opened onto the ancient road that ran across the island from the *Pons Cestius* to the *Pons Fabricius*.

     So far, discussion has been limited to an addendum in *LTUR* V and to a note on a lecture on the topic given by Di Manzano in 1999. The entry in *LTUR* relates an *aula templare* of rectangular plan, 16 x 8 m in dimensions, with an adjacent platea in *lapis gabinus* and paved with travertine. However, more recently, Di Manzano has moved away from such a firm assertion that this *aula* was a temple: a note on a public lecture given by her in the *Rendiconti* 1999 concludes that it was no longer possible to state with confidence whether or not this was a temple. Finally, in an article on excavations under S. Bartolemeo published in 2006-7, Di Manzano expresses regret that further archaeological exploration was not possible in the area to clarify what must remain a difficult structure to interpret.

     In the hospital itself, in the radiology department waiting room and adjacent hallway, many sections of this excavation are visible. A marble Corinthian pilaster capital by the elevator has a lightening bolt at the center of its moulding and would confirm that this was an area associated with Jupiter. This architectural fragment, however, is of a later date, but some structures also appear to be much earlier. In particular, one wall described by Di Manzano and Giustini in detail can be made out for a height of three courses. The blocks are ashlars of *tufo giallo della via Tiberina*, cut in a module similar to that seen in other structures around Rome (i.e. 2 RF x 2 RF x 4-5 RF) and laid in alternating courses of headers and stretchers. In *LTUR*, the presence of masons' marks are indicated, but these cannot be seen. Anathyrosis is present at the joins, and the masonry looks very similar to that of the 3rd or very early 2nd century (cf. **Nos. 22, 78**). There is no reason to doubt from the masonry style that these walls come from the early 2nd century, and they could easily be earlier. The absence of *tufo lionato* would argue against a much later date, but one then has to wonder whether adjacent area with *lapis Gabinus* paved with travertine was contemporary, although at present there is no way of determining this. In another area of the same excavation, which is not currently visible, the *LTUR* entry records that interior walls of tuff were decorated with 1st style faux-marble painting and a podium with a simple moulding. Confronting the pure-*tufo giallo* construction of

the visible wall with such decoration as well as a mosaic that should date to after c. 125/20, we either have multiple phases or multiple adjacent structures, as it would be difficult to produce a single, coherent date. As discussed, however, the mosaic inscription is very unlikely to refer to repair. A plan of excavations here will be of great utility, but we cannot rule out yet that some part of these structure, perhaps those walls and blocks in *tufo giallo* derive from that structure begun by Furius Purpureo and dedicated by C. Servilius in 196.

As to what filled that area of the Island before the Jupiter cult, we are still awaiting clarification. One final interesting remark, however: Di Manzano, Cecchelli and Milella 2006-7 note that under the hospital there was a gap of 4 m between the oldest structures and the temple of the 2nd C, contrary to those remains under S. Bartolomeo where ground level stayed the same from antiquity into the medieval period. What is meant here by structures earlier than the 2nd C temple is not clear, as nothing earlier than what they call the temple (the *aula* with the inscribed mosaic) has previously been mentioned in print. But perhaps some part of the tuff structure is at a much deeper level, representing the 2nd C temple itself or even part of the early 3rd C sanctuary of Aesculapius.

Bibliography: Brucia 1990: 48-55; Di Manzano and Giustini in *LTUR* V "Iuppiter (Insula Tiberina);" Di Manzano, Cecchelli, and Milella 2006-7: *passim* esp. 126, 134; Harmansah in *MAR* "Iuppiter Iurarius" 155; Richardson 221, 406.

81. 194 – REPAIR AND ENLARGEMENT OF THE *ATRIUM LIBERTATIS*

Sources: Cic. *Att.* 4.17.7; Fest. 277 L; Liv. 25.7.12, 34.44.5, 37.3.8, 43.16.13; Tac. *Hist.* 1.32.

The censors of 194, Sextus Aelius Paetus and C. Cornelius Cethegus, saw to the restoration of the censorial seats outside the city in the Campus Martius (the Villa Publica) and inside the city on the Forum (the *a.L.*), as Livy tells us: *atrium Libertatis et Villa Publica iisdem refecta amplificataque* (34.44.5). The *a.L.* was where the censors kept their archive including *tabulae* with citizen registers on them (Liv. 43.16.13; Coarelli) The structure was near the *lautumiae* or *carcer* underneath San Giuseppe de' Falignani, and its proximity meant that it was already mentioned in 212 as being an alternative place for holding prisoners (Liv. 25.7.12: hostages from the Thurini and Tarantines). In this case, it probably burned down along with the *carcer* in the fire of 210 (cf. Liv. 26.27.3; Festus explicitly refers to a *lex fixa in Atrio Libertatis…incendio consumpta est*) warranting its rebuilding and expansion a few censorships later.

The location of the structure of Aelius Paetus and Cornelius Cethegus is debated. The crucial passage comes from a letter of Cicero to Atticus concerning land bought for the purpose of the construction of the Forum of Caesar: *itaque Caesaris amici, me dico et Oppium, dirumparis licet, (in) monumentum illud, quod tu tollere laudibus solebas, ut forum laxaremus et usque ad atrium libertatis explicaremus, contempsimus sexcenties HS*. This puts the *a.L.* near to, or on, land

on which the Forum of Caesar was built (Ulrich). It may very well be that the Republican *a.L.* was destroyed by the placement of Caesar's Forum: this would present the need for the rebuilding of the complex by Asinius Pollio in 39 (cf. Suet. *Aug.* 29; Isid. *Orig.* 6.5.2). Livy reports that the censors went up to the *a.L.* from the Forum Romanum (43.16.13: *escenderunt*). Using this uphill location and the proximity to the Forum of Caesar as his starting points, Castagnoli placed the *a.L.* on the saddle of land between the Quirinal and the Capitoline that was removed to build the Temple of Venus Genetrix at the W of the Forum of Caesar. He argued that after the 1st C, mentions of the *a.L.* become rhetorical and may just as well refer to the *Curia*. He pointed to a fragment of the Severan *Forma Urbis* (fr. 29) with the inscription *L[IBERT]ATIS* along the side of what appears to be the S apse of the Trajanic Basilica Ulpia just adjacent to Temple of Venus Genetrix, and he suggested that the Republican *a.L.* itself, destroyed by Caesar, was replaced by the *a.L.* in other locations afterwards. His interpretation continues to find favor (Coarelli; Meneghini), although it leaves some questions unanswered: the location is, first of all, very close to where we now think the circuit wall crossed from Quirinal to Capitoline, and it is further away than necessary from the *carcer*, which was much closer to the southeast corner of the Forum of Caesar.

There have been two recent alternatives. The first is that of Purcell, who argued for the *a.L.* being what we call the Tabularium on the east slope of the Capitoline. This runs against our uncertainty over what stood in that place before the Catulan 'Tabularium' was built in the early 1st C. It also requires us to interpret Cicero's letter in 54 as having a sense of the full extent of the Forum of Caesar including the Curia, which is doubtful considering that the inclusion of a new senate house would not have been on the minds of Caesar's architects prior to the death of Clodius and the destruction of the present *curia* (Amici 313; see further Ulrich).

The other alternative is that of Amici, who identifies the *a.L.* with remains of an obtusely angled tuff wall and platform excavated behind the Curia, underneath SS. Martina and Luca, by Colini 1941 and destroyed shortly thereafter (followed hesitantly by Dumser). There are some minor flaws in her line of thinking: she claims two more instances where Livy speaks of prisoners held in the *a.L.*, but both of her citations specifically refer to the *lautumiae* or the *carcer*; the *a.L.* is unmentioned. She claims that the southeast *tabernae* in the Forum of Caesar with their strangely shaped interiors preserve the imprint of an older building, and she suggests that the Forum of Caesar at that corner worked to preserve the earlier *a.L.* She cites an inscribed dedication to Aetius from the senate that was set up "*in Atrio Libertatis*" as evidence of the continued existence of the *a.L.* in its same place in the late fourth century, contrary to Castagnoli. Citing Rodriguez-Almeida, she argues that fr. 29 of the Severan *Forma Urbis* that located the *a.L.* in the Forum of Trajan has been changed to locate the *a.L.* at the north of the Basilica Ulpia, rather than the south near the Temple of Venus Genetrix. This is incorrect: Rodriguez Almeida only meant to point out that the apsidal line on the Renaissance depiction of fr. 29 of the *Forma Urbis* was

probably incorrect, freeing the a.*L.* from the apse but putting it somewhere indeterminate still within the Basilica Ulpia, and still likely to the north, to judge from the direction of the inscription. In any event, a position on the north apse of the Basilica Ulpia rather than the south does nothing to help Amici's argument that the *a.L.* remained in place essentially through the imperial period.

Still, all of this is not necessary to confirm her original assertion that the *a.L.* was behind the Curia and was subsumed into the Forum of Caesar—we do not need to presuppose the longstanding survival of the *a.L.* to locate the building of the censors of 194 where she places it. The proximity to the *carcer* and the Forum of Caesar, the position on the slight rise of the Argiletum outside the Forum, as well as the date of the architecture with which she associates the *a.L.* all match.

Procedural: Censorial *locatio*.

Archaeological: The structure under SS. Martina and Luca that Amici identifies is oddly shaped. According to her plan, it comprised a trapezoidal platform superimposed by a rectangular structure. The platform was made up of a wall in ashlars of different tuffs: Colini's drawing published by Amici shows a base course of *lapis Albanus* blocks measuring 0.69 x 0.845 x 0.39 m, then a thin course of *tufo del Palatino* blocks 0.20 m thick, followed by ashlars of *tufo giallo della via Tiberina* arranged in alternating courses of headers and stretchers with a few blocks of what Colini identifies as 'litoide' tuff (*tufo lionato* from Monteverde?) to one side of the *tufo giallo* (Amici 305 fig. 8). The tuff walls of the platform were associated with pottery of late 3rd/early 2nd C date, precisely what we would expect for the structure. The platform was 4.30 m high and was leveled with barrel vaults: the technique of making an artificial platform on a stone structure seen also in the Magna Mater/Victory complex on the Palatine is by no means strange for the date in question. The main questions that remain are why the need to build up an artificial elevated platform in that particular area, and why do so in such a strange trapezoidal shape? On the steep slopes of the Palatine (Magna Mater/Victory complex) or on the Capitoline ('Tabularium'), such a substructure makes sense, but less so for the relatively flat area of the Argiletum where the building would have been comfortably placed between the Curia and the Macellum. Similarly, why the strange shape? The *Clivus Argentarius* may have confined the structure to its west, speculatively some sort of private land to the north, but the south and east are less easily filled, and the trapezoidal shape of the building remains unexplained.

Bibliography: Amici 1995-96; Castagnoli 1946; Coarelli in *LTUR* I "Atrium Libertatis" 133-35; Dumser in *MAR* "Atrium Libertatis" 59-60; Meneghini 2009: 19, 43-48; Purcell 1993; Rodriguez Almeida 1981: 109-10; Ulrich 1993, esp. 57-58.

82. 194 – REPAIR AND ENLARGEMENT OF THE *VILLA PUBLICA*

Sources: Liv. 34.44.5.

Sex. Aelius Paetus and C. Cornelius Cethegus, censors of 194, restored and amplified the Villa Publica along with the Atrium Libertatis. It is unclear what if any construction work this actually entailed, as it is normally thought that the Republican *v.p.* was designated open space, a sort of park amenable to the leisurely conversations of the participants of Varro's *Res Rusticae*, which is set there (Richardson; Gallia). A denarius of Fonteius Capito minted in 55 (RRC 429) shows on the reverse a two-storeyed structure labeled *VILLA PUBLICA*. Richardson argues that it was a pavilion within the larger park where triumphant generals spent the night prior to their triumph (162). Such a pavilion is not noted explicitly at Liv. 34.44.5, although Richardson cites that passage, but as generals staying in the *v.p.* had been previously mentioned by Livy (cf. 30.21.12, 33.24.5), it is doubtful that such a structure was included in the work of 194.

Procedural: Censorial *locatio*.

Bibliography: Richardson 1976a; Gallia in *MAR* "Villa Publica" 273.

83. 193 – *Porticus extra portam Trigeminam emporio ad Tiberim adiecto*

Sources: Liv. 35.10.12.

The patrician aediles of 193, M. Aemilius Lepidus and L. Aemilius Paulus, fined *pecuarii* and from the resulting monies built a portico on the strip of land between the foot of the Aventine and the river to the S of the Porta Trigemina (thus, S of the Forum Boarium). As two *porticus* are mentioned by Livy ([1] *porticum unam extra portam Trigeminam emporio ad Tiberim adiecto,* [2] *alteram ab porta Fontinali…*), the ablative phrase *emporio ad Tiberim adiecto* is associated with the construction of this portico: this is the first mention of the Emporium or wharf complex in this area. It will consequently receive porticoes and pavements on at least three more occasions over the next two decades (Rodriguez Almeida). The fact that more work will be done suggests that in this first instance, the *emporium* was an open designated area defined by the single *porticus*. It was for a long time thought that the long *opus quasi reticulatum* structure found in Monte Testaccio and depicted on the Severan *Foruma Urbis* with the label [. . .]*LIA* was the so-called *Porticus Aemilia* and belonged either to the aedileship of the Aemilii in this year or to the censorship of Lepidus in 179. However, Cozza and Tucci have recently demonstrated that the long building is better identified on the Severan plan as the [*NAVAL*]*IA*, and its form resembles that of shipsheds elsewhere in the Mediterranean.

     The excavations by Lyngby and Sartorio in 1965 at the base of the Clivo di Rocca Savella may relate in some way to this work (see discussion at **Nos. 99-101**), but the shape and date of the structure uncovered there is unclear.

Procedural: Aedilician construction *ex multaticia*.

Bibliography: Cozza and Tucci 2006; Harmansah in *MAR* "Emporium" 118-19; Rodriguez Almeida 1984: 24-33.

84. 193 – *Porticus ab porta Fontinali ad Martis aram*

Sources: Liv. 35.10.12.

Along with a portico in the Emporium area, the aediles M. Aemilius Lepidus and L. Aemilius Paulus built another *porticus* from the *Porta Fontinalis* to the altar of Mars giving access to the Campus Martius (*qua in Campum iter esset*). This passage is the only real text that gives any clue to the location of the *Porta Fontinalis*, which as a consequence is put at the base of the Via Flaminia by the Capitoline where it would be closest to the Campus Martius. Carafa's radical re-reading of the topography of the Quirinal that puts the *Porta Fontinalis* in Piazza Magnanapoli would envision the work of the Aemilii to be a gargantuan porticus stretching halfway across the city. He is right to point out that we do not know the exact location of the *Ara Martis*, but it was certainly W of the Via Flaminia and probably related to those other ideological structures in the Campus such as the Saepta or the Circus Flaminius (Coarelli 1997: 251-52). Nothing of this particular *porticus* survives (Gallia).

Procedural: Aedilician construction *ex multaticia*.

Bibliography: Carafa 1993; Coarelli 1997; Gallia in *MAR* "Porticus Aemilia (Campus Martius)" 201.

85. 192 – *Aedes, Veiovis inter duos lucos*

Sources: Liv. 31.21.12, 34.53.7, 35.41.8; Plin. *NH* 16.216; Gell. *NA* 5.12.8-10; Vitr. 4.8.4; Ov. *Fast.* 3.430.

The tradition concerning L. Furius Purpureo's dedication of two temples in 192 is badly confused. Livy probably conflated two triumphal temples vowed by the same man in different magistracies. In 192 he states, *aedes duae Iovis eo anno in Capitolio dedicatae sunt; voverat L. Furius Purpurio praetor Gallico bello unam, alteram consul; dedicavit Q. Marcius Ralla duumvir* (35.41.8). The consular vow in 196 is preserved at 31.21.12: *aedemque Diiovi vovit, si eo die hostes fudisset.* The problem arises with the attestation of an intervening dedication in 194: *et in insula Iovis aedem C. Servilius duumvir dedicavit; vota erat sex annis ante Gallico bello ab L. Furio Purpurione praetore, ab eodem postea consule locata* (34.53.7). Also in 194, Q. Marcius Ralla as *IIvir* dedicated the Temple of Fortuna Primigenia (**No. 79**). Livy's notice in 192, then, is problematic: Furius Purpureo

was responsible for three temples while serving two curule magistracies, and Marcius Ralla served as *IIvir* twice, in 194 and 192. The note in 194 appears authentic concerning the temple *in insula* (**No. 80**), and we are left to figure out what happened in 192.

The vow of 196 is itself garbled: the word *Diiovi* is otherwise unattested. Ogilvie thinks this was simply *Iovi* and that, at some point, the gloss *deo* corrupted the text (1966: 345). Ancient confusion over the attribution to Iove and to the anti-Iove "Vediovis" distinguished by the negative prefix "Ve-" (Gell.) may also have led to Livy's source for a double dedication to the anti-Iove in 192 with a Temple on the Capitol and another on the Insula. Also in 192, the Temple to Jupiter Optimus Maximus was decorated with shields, an act which is mentioned in the same paragraph as the dedications of Furius Purpureo (cf. Liv. 35.41.9-10). Confused over the distinction between *Iove* and *Vediovis* and seeing work around the Temple of Jupiter Optimus Maximus, Livy (or more probably his source) may have mistakenly attributed the dedication of two temples to a Iove-like deity, in the same year, both on the Capitol. Almost certainly, there was only *one* temple to Veiovis, not two, on the Capitol, but since Purpureo had also been responsible for a similar Iove/Veiovis dedication *in insula* two years prior, the mistake was easily made.

Further complicating matters, Pliny mentions a *simulacrum Veiovis in arce e cupresso…a condita urbe DLX anno dicatum*. The Varronian date is 193/2, the year falling in between the completion of the two temples to Veiovis, according to Livy's chronology. Radke suggests that the dedication of this cypress statue had become confused with the foundation of the temple itself, and that the two notices in Livy 35.41.8 are to be rejected. Briscoe rightly points out, however, that it is far from clear that Pliny's source was working with a Varronian date to begin with, and that it is also just as possible that Pliny's calendar here is simply not aligned with Livy's. It should also be pointed out that the statue was *in arce* whereas the temple was clearly below the Arx, so Pliny has either transmitted a mistake already or is referring to a coincidental piece of unrelated evidence.

As both this temple and that *in insula* exist in the *Fasti*, I am inclined to think that L. Furius Purpureo had a strong connection to this singular manifestation of Veiovis who had assisted him during his praetorship at Cremona continued during his consulship, and he rewarded this favor with two temples to the god in the city, as was his right as a twice successful general. Q. Marcius Ralla is to be rejected as a textual interpolation, but we might think that some *IIvir* was behind the dedication.

This particular temple was the later of the two; it was *inter* or *ante duos lucos* (Vitr.; Ov.); putting it at the foot of the Capitoline, and in its later iteration, it had a long transversal cella as Vitruvius tells us. Its exact location is established by archaeological investigation.

Procedural: Cos. vow; dedication by *IIvir*?

Archaeological: In the late 1930s, Colini excavated the remains of the Capitoline temple under the Palazzo Senatorio, tucked in a corner of the Tabularium. The identification seems secure both from its location (*inter duos lucos*) and from the plan with a long transverse cella fronted by a short staircase, as it was described by Vitr.

The earliest phase attributed to Furius Purpureo consisted of *tufo giallo della via Tiberina* ashlars still visible in parts in E side of the podium and at the SW corner of the front stairs. "Etrusco-campanian" (black gloss?) ceramics associated with these blocks would confirm their date (Colini 1943: 50); there was no evidence of any earlier phase. The temple seems to have been restructured in plan in the early first century, and it is unclear whether the long trasverse cella was also a feature of Furius Purpureo's temple. Against such a reconstruction are two parallel foundations running longitudinally under the later temple's podium, which could have supported the long walls of a more normally planned cella. Colini offers two solutions, one with a more normal plan of a *peripteros sine postico* with the cella supported on these two foundations, and the other with the more unusual elongated horizontal cella as found in the iterations of the later temple, but with an interior colonnade supported on the two foundations instead.

Bibliography: Briscoe 1973 *Comm. ad Liv.* 31.21.12; Colini 1943; Ogilvie 1966: 345; Radke 1963.

86. 192 – *Porticus inter lignarios*

Sources: Liv. 35.41.9-10

After a fire burned much of the Forum Boarium (cf. Liv. 35.40.8), Livy reports that the curule aediles of 192, M. Tuccius and P. Iunius Brutus, built a *porticus extram Portam Trigeminam inter lignarios* with monies raised from fines on usurers (*faenatores*). The portico was built in that area of the city at the foot of the Aventine, S of the Forum Boarium, where a year earlier a porticus had been built along with the *Emporium.* This wharf for heavy material would become strongly associated with woodworkers (*lignarii*) who probably had their workshops close to where timber shipments were unloaded from the Tiber (sources for woodworking in that area in Rodriguez Almeida 33). Palmer sees the designation *inter lignarios* as relating to a populous section of the city and thus places the monument not far from the gate where these lumberman could be near the Pons Sublicius and thus help with upkeep of the bridge.

Procedural: Aedilician *ex multatico*.

Bibliography: Rodriguez Almeida 1984: 29-33; Palmer 1976-77: 141, 151; Pisani Sartorio in *LTUR* IV "Porticus Inter Lignarios" 126-27.

87. 191 – *Aedes* and Precinct of Magna Mater including the *Clivus Victoriae*

Sources: On the temple phases: Liv. 29.37.2, 36.36.3-5. On the *ludi*: Cic. *Har.* 24.

The black rock statue of Cybele was transferred from Pessinos to Rome in 205, and it was provisionally housed in the Temple of Victory on the Palatine. In 204, the censors M. Livius Salinator and C. Claudius Nero let out for the construction of an *aedes Matris Magnae in Palatio*. Livy tells us that the censors did so *ex senatus consulto*. Thirteen years later, in 191, M. Iunius Brutus acting as *praetor urbanus* dedicated the temple and instituted the annual *ludi Megalensis*, the *Megalasia*, there. The games included dramatic performances *ante templum in ipso Matris Magnae conspectus* (Cic.).

 The considerable remains of a temple and precinct adjacent to the Temple of Victory on the SW edge of the Palatine hill were associated in the early 20th century with Magna Mater after the discovery there of an acephalous statue of Cybele; inscriptions related to the cult of Cybele found in the area further confirm the identification (*CIL* VI 496 and 3702 = 30967).

Procedural: Transferral of cult statue ordered by Delphic oracle; temple to house the statue contracted out by censors *ex S.C.* Thirteen years later, the temple was dedicated by the *pr. urbanus*.

Archaeology: The remains of the temple are extensive. The need to accommodate spectators at the *Megalasia* meant that not only a temple building but a significant open area in front of the temple was constructed.

 The temple burned down at the end of the 2nd C, and all that remains of the first phase are the impressions of blocks in the *opus caementicium* at the extreme SW end of the later temple's podium (Pensabene 1998 38). The use in the aggregate of the second phase (c. 111) of *tufo giallo della via Tiberina* and *lapis Albanus* suggests that those two materials may have been salvaged from the earlier *opus quadratum* temple. These block-impressions would appear to prove that the original temple was in *opus quadratum*, whereas Coarelli argued that the this first phase could have been in *opus incertum*. Considering the extensive use of ashlar vaulting in the platform below the temple where aggregate would have been easier, if such technology were available, we cannot assume that the temple's first phase was already in concrete. The fire that destroyed this first temple in 117 was devastating, and the fact that the entire ashlar temple had to be cleared and rebuilt from the ground up is plausible. Furthermore, with the downdating of the *opus incertum* building in Testaccio, now identified as the *Navalia*, the technology seems to have developed in the central decades of the 2nd C., rather than at the beginning.

 In front of the temple, the entire NW corner of the Palatine was built into a *platea* to support the performance of dramatic performances for the *Megalesia* that overlooked a road running parallel to the slope of the hill (the Clivus Victoriae, probably paved at the same point, see Dumser). The *platea* was paved

in thick pavers of *tufo lionato* from Monteverde that sat upon possibly reused thin blocks of *tufo del Palatino* and then on 'ribs' of *tufo giallo della via Tiberina*. (Block sizes are not published.) These 'ribs' consisted of a series of parallel long walls parallel to the orientation of the Temple and perpendicular to the slope of the hill that provided a terrace and supported the paving above. How these 'ribs' were roofed is not entirely clear—the entirety was restructured in a later period with the 'rib' walls supporting a series of barrel vaults, and at this point, the *platea* was carried over the road and onto a further projection of vaulted rooms. A vaulted roofing system is likely for the earliest period as well, as the area between the 'ribs' were left empty to provide access to a number of earlier structures in this area of the Palatine.

Bibliography: Coarelli 1977: 12; Dumser in *MAR* 163-64; Pensabene 1998: 34-50.

88. 191 – *Aedes, Iuventas*

Sources: Liv. 36.36.5-6; Plin. *NH* 29.57.

In the same year as the dedication of the Temple of Magna Mater and the institution of the *Megalesia*, an *a.I.* was dedicated by the *IIvir* C. Licinius Lucullus. Livy tells us that M. Livius Salinator had vowed the temple *quo die Hasdrubalem exercitumque eius cecidit*, thus at Metaurus in 207, and that Salinator had then let out the contract for its construction during his censorship in 204 (cf. *MRR* I 294, 306). The temple is *in Circo Maximo* (Liv.) and somewhere near the Temple of Summanus (**No. 34**): Coarelli speculates that it was on the slopes of the Aventine near the Circus.

Procedural: The temple was vowed by a consul and contracted for, rather than dedicated, by the same man as censor. Does this also mean that the temple was not begun for three years after Salinator's triumph? Dedicated by *IIvir aedi dedicandae*, as Salinator had probably died (cf. *RE* Livius [Salinator] 33). His son Gaius (*RE* Livius [Salinator] 29) was serving in his second praetorship in 191, but was engaged with the naval campaign against Antiochos.

Bibliography: Coarelli in *LTUR* III "Iuventas, Aedes" 163.

89. 190 – *Domus Antiochi*

Sources: Ascon. *in Pis.* 13.

We know from Asconius of a *domum publice aedificatam* for Antiochos IV Epiphanes, son of Antiochos III, when he was sent to Rome as a hostage following the Battle of Magnesia in 190 B.C. The location is unknown, but the

house passed into the ownership of the poet C. Lucilius. We hear nothing else about it (Marshall; Papi).

Procedural: Unknown.

Bibliography: Marshall 1985: 105-6; Papi in *LTUR* II "Domus: C. Lucilius" 133.

90. 189 – *Substructionem super Aequimelium in Capitolio*

Sources: Liv. 38.28.3.

Livy records that, along with the paving of the Via Appia outside of the Porta Capena, the censors of 189, T. Quinctius Flamininus and M. Claudius Marcellus, let contracts for the construction of a retaining structure on the slopes of the Capitoline above the Aequimelium, an open space near the Vicus Iugarius (cf. Liv. 24.47.15) that was associated with the house of Sp. Maelius (cf. Varr. *DLL* 5.157). *Substructio* is the term used also for what would appear to be a retaining wall built on the side of the *area Capitolina* in 388, and we may suppose that this project, too, was a wall defining the artificial platform of the Capitoline. A landslide in 192 mentioned elsewhere by Livy may have occasioned the work (35.21.6, as Coareli 1977: 4 n. 16).

Procedural: Censorial *locatio*.

Archaeological: The area of the *Aequimelium* was on the lower slope of the Capitoline by the Vicus Iugarius, that is the SE side near S. Maria in Consolazione. In that area in 1940, Colini excavated a structure that consisted of an interior wall of *opus incertum* retaining the rock of the hill, with a parallel wall in *opus quadratum* connected to the *opus incertum* wall by a series of perpendicular vaults, creating a cryptoporticus. The *opus quadratum* is of a reddish tufo lionato with vaulting in *opus incertum* of the same reddish tufo lionato along with *tufo giallo della via Tiberina*. The *opus incertum* facing of the interior wall comprises small, evenly-sized squarish pieces of stone nearing *cubiliae* in form set in grey mortar, what has been called in modern terms *opus quasi reticulatum*. A doorway has been made in the wall of this *opus quasi reticulatum* and the doorposts are defined with squared-off blocks (*tufelli*) of the same stone as the facing rubble.
      Coarelli identifies the wall as part of this construction project of 189 on grounds of its location and the absence of *tufo lionato* from Anio, which he sees as mostly post-144 B.C. (1977: 13-14). He calls the redder *tufo lionato* "Monteverde tufo." The stone type is problematic, as see Jackson and Marra 2006: 420, 427, and 433 on the difficulties in distinguishing between *tufo lionato* from Anio and Monteverde. The masonry, however, would point to a 2nd C date, and both the function of the structure (retaining wall) and its topography would

support a connection with this *substructio*, although we must be cautious as this area of Capitoline was greatly affected by landslides in the medieval period.

Bibliography: Coarelli 1977; Colini 1940: 227-28; Pisani Sartorio in *LTUR* I "Aequimelium" 20-21.

91. 184 – Water system overhaul

Sources: Liv. 39.44.4-5; Dion. Hal. 3.67.5.

The censors of 184 completed an overhaul of Rome's water system: they clamped down on private siphoning from the two extant aqueducts and demolished private structures abutting against them. They then turned their attention to the drainage channels and basins of the city: *opera deinde facienda ex decreta in eam rem pecunia, lacus sternendosque lapide, detergendasque, qua opus esset, cloacas, in Aventino et in aliis partibus, qua nondum erant, faciendas locaverunt.* Dionysius cites the historian Acilius in saying that this project cost 1000 talents; Acilius would have been alive to witness the project, even if this is a suspiciously round number. Since the *piscina publica* already existed by this point (**No. 62**), we do not know precisely what work on the Aventine this included, but the Aqua Appia ran in a channel through the Aventine (**No. 18**), so the censorial work may have been related to its course. Among those *lacus* that could date to this period, the earliest phase of the *lacus Iuturnae* is normally dated instead to 168 when Aemilius Paullus put statues of the Dioscuri there (the structure in this earliest phase also contained *opus incertum*). Instead, the earliest stone phase of the *lacus Curtius* is ascribed by Giuliani to this greater project.

Procedural: Censorial *locatio* from *pecunia decreta in eam rem*.

Archaeological: the evidence of the phase of the *lacus Curtius* dated by Giuliani to this period is a small foundation of slabs of *tufo del Palatino* topped with *lapis Albanus* with cuttings probably for *cippi* or for small altars, which are now lost.

Bibliography: Giuliani in *LTUR* III "Lacus Curtius" 166-67.

92. 184 – *Basilica Porcia*

Sources: Liv. 39.44.7; Plut. *Cat. Mai.* 19.3; Ascon. *Mil.* 2.34.

Livy records that Cato as censor in 184 *atria duo, Maenium et Titium, in Lautumiis et quattuor tabernas in publicum emit basilicamque ibi fecit quae Porcia appellata est*. The two *atria* that were purchased are otherwise unknown, although that of Maenius is likely related to the censorial projects of Maenius in the area 134 years prior in the NW of the Forum. Plutarch recalls that the Senate opposed his project to build the *basilica* at public cost and locates it below the

Curia on the Forum (*de vir. ill.* 47 states that Cato *Basilicam suo nomine primus fecit*, but this simply refers to the name not to the financing). Similarly, Asconius recounts the Clodian destruction of the Curia as also destroying the *basilica*: *item Porcia basilica, quae erat ei iuncta, ambusta est*. So the location is clear: the NW corner of the Forum near the *lautumia* (the *carcer*) and aside the Curia. Coarelli connects the structure with remains of two rooms, which he suggests were part of a longer basilica, excavated by Colini in the 1940s. Several fragments of an Ionic entablature all in travertine and including a fine column capital are associated by Coarelli with the structure. He dates the remains to the Sullan period, assuming a previously unknown rebuilding of the *Basilica Porcia* when Sulla also rebuilt the *comitium*. Nothing remains of any earlier phase, so nothing can be said of the earlier structure.

Procedural: Censorial, but *fecit* is seen most frequently.

Bibliography: Coarelli *FR* II 60-62; Steinby in *LTUR* I "Basilica Porcia" 187.

93. 181 – *Aedes, Venus Erycina extra portam collinam*

Sources: Liv. 40.34.4; App. *BC* 1.93.

Livy tells us in 181 that a Temple of Venus Erycina *dedicavit L. Porcius L.f. Licinus duumvir, vota erat a consule L. Porcio Ligustino bello*. The consul is L. Porcius L.f. M.n., who received Liguria as his province in 184 (*MRR* I 374). It is presumably his son who dedicated the temple three years later as *IIvir aedi dedicandae*; the other *IIvir* in that year is specifically noted by Livy as the son of the consul who had vowed the temple of Pietas. That Livy mentions (30.38.10) the temple as a topographical marker for a flood of 202, twenty years before the dedication, is best taken as an anachronistic use of a monument that existed in Livy's day, though not at the time of the events he was describing (as Coarelli, Dumser). This same passage of Livy does locate the temple *extra portam Collinam* to the NE of the city's wall, as is confirmed by Appian's description of the battle between Sulla's forces and the Marian loyalists as taking place alongside the Colline gate, by the Temple of Venus. A possible Severan-era brick podium has been connected to the temple, but no earlier phase of that monument are identifiable, and Dumser questions the fact that this site only shows remains of a date much later than the last secure reference to the temple (*contra* Coarelli). The form was that of the famous temple of Venus on Mt. Eryx (Strabo 6.2.6); for what it is worth, a tetrastyle temple on Mt. Eryx is depicted on a denarius of 57 (*RRC* 424).

Procedural: Vowed by a consul; dedicated by a *IIvir aedi dedicandae* three years later.

Bibliography: Coarelli in *LTUR* V, "Venus Erucina, aedes (ad Portam Collinam)" 114-16; Dumser in *MAR* "Venus Erycina, Aedes (extra Portam Collinam)" 255.

94. 181 – *Aedes, Pietas*

Source: Liv. 40.34.4-6; Val. Max. 2.5.1.

During his consulship of 191, M.' Acilius Glabrio vowed a temple to Pietas on the battle plain of Thermopylae before his ultimately successful confrontation with Antiochos III. He returned the following year to Rome to celebrate his triumph in 190: presumably this is when he *locaveratque ex senatus consulto*, as Livy specifies. His son dedicated the temple in 181 as *IIvir aedi dedicandae*, but it did little to launch his career as he only appeared as a suffect consul in 154 (*MRR* I 386, 449). Both Valerius Maximus and Livy note that the temple was the first in Italy to have a golden statue in it: the statue was of the older Glabrio himself.

The temple is specified by Livy as *in Foro Holitorio*, otherwise as *in Circo Flaminio* by Julius Obsequens (Obs. 54), meaning it must have been at the very N end of the Forum Holitorium where the Circus Flaminius began. However, Pliny refers to it as *ubi nunc Marcelli theatrum est* (Plin. *NH* 7.121), and it is likely to have been among those structured destroyed by Caesar in beginning work on a theater at the E end of the Circus Flaminius (cf. Cass. Dio 43.49.3).

Procedural: Vowed and *locaverat* during a consulship; dedicated by the same man's son as IIvir *aedi dedicandae*.

Archaeological: Deep excavations in the 1990s to the NE between S. Nicola in Carcere and the Theater of Marcellus revealed the edge of a Republican temple podium that has plausibly been identified in prelimary publications as the Temple of Pietas (Ciancio Rossetto 1994-95; more tentatively in *LTUR*). The location— between the *Forum Holitorium* and the *Circus Flaminius* and underneath the Theater of Marcellus—makes it a good fit. It is also in the same alignment as those temples under S. Nicola in Carcere.

The exposed remains consist of the NW corner of a podium wall in ashlar of *tufo giallo della via Tiberina* that has been "rivestito da blocchi di tufo lionato di Monteverde," an identical use of the two materials as found in those earlier phases of both the Temple of Spes and of Juno Sospita. Two blocks of the *tufo lionato* show a flat fascia underneath a simple torus moulding.

Bibliography: Ciancio Rossetto 1994-95; *eadem* in *LTUR* IV "Pietas, Aedes *in Foro Olitorio* / *in Circo Flaminio*" 86.

95. 179 – **Basilica Fulvia (later Aemilia)**

Sources: Liv. 40.51.5.

Livy attributes the construction in 179 of a *basilicam post argentarias novas* to the censor Fulvius Nobilior. In 55/54 B.C., L. Aemilius Paullus restored the building in grand form (Plut. *Caes.* 29), and it then became variously named the Basilica Paulli, the Basilica Aemilia et Fulvia (Varr. *DLL* 6.4), or the Basilica Aemilia (Plin. *NH* 35.13). This is the building that Statius fixes on the N side of the Forum, opposite the Basilica Iulia cf. (*Silv.* 1.130). It is thus associated with what is mostly called in modern scholarship the Basilica Aemilia, and which Pliny numbered among the most beautiful structure in his world.

Livy's notice is complicated by the fact that two lines in the plays of Plautus refer to a *basilica* on the Forum. One is a reference in the *Captivi* to noxious smells of fishmongers driving off all those *subbasilicanos* (815); the other is the famous speech of the choragus in the *Curculio* that describes the various characters to be found around the Roman Forum (462-86) where the action moves from the Comitium to the Cloacina to a "*basilica*" (472) then to the Forum Piscarium. The proximity to the fishmongers of the Forum Piscarium or Macellum in the *Captivi*, and especially the topographic sequence in the *Curculio* (the remains of the Cloacina are located in front and almost tangent to the Basilica Aemilia) suggest that Plautus knew of a building, which he referred to as "*basilica*" in the area of the Basilica Fulvia prior to 179.

The Plautine evidence must be reconciled with three facts: 1) Plautus himself died in 184; 2) in that same year, Livy notes that Cato built the Basilica Porcia *primus in suo nomine*; 3) during his description of the fire of 210, Livy notes that at the time *neque enim tum basilicae erant* (cf. 26.27). This has led some scholars either to decry the two Plautine passages as later interpolation, or to dismiss Fulvius' work in 179 as mere restoration (Bauer). Neither solution fits: in the first place, Plautus' topographical description is consonant in every other way with what we know about the Forum in the late 3rd/early 2nd C (Gaggiotti). In the second place, the Basilica clearly preserved Fulvius' name (cf. Plut. *loc. cit.*), and a connection with someone other than this Fulvius is speculative at best, as there are no good candidates from either the Fulvi Flacci or the Fulvi Nobiliores otherwise known to have held the aedileship or the censorship between 210 and 179.

Instead, Gaggiotti offers a solution that accords well with the physical evidence: Plautus' use of the term *basilica*, the first instance in Latin literature, is a calque on the "regium" of the Atrium Regium, a structure that is only mentioned once in all extant sources when Livy states that it burned in and was rebuilt following the fire of 210 (cf. **No. 69**). Plautus, Gaggiotti argues, uses the popular term for the official "Atrium Regium," which represented the sort of slippage from Greek to Latin that would have been familiar to the playwright. Calling the Atrium Regium a *basilica* makes sense on several levels: first, again following Gaggiotti, there are parallel examples of atrium houses opening immediately onto Republican fora from excavations at Cosa, as well as from literary evidence, with Cato's acquisition of *atria duo, Maenium et Titium* to build his own basilica on

the Forum in 184. Second, this fits Livy's specification that Cato built the first basilica "in his own name," as the Atrium Regium/Basilica was known only generically.

Therefore, there is every reason to believe that Fulvius was responsible for the first major phase of the *Basilica post argentarias novas* on the N side of the Forum. The suggestion that it may have incorporated or replaced some of the structures of the older Atrium Regium has now gained currency (Freyberger: 494), and some of the burned material reportedly found by Carettoni in lower levels around the foundations of the Basilica Fulvia may relate to the destruction by fire of the pre-extant structures in 210 (Carettoni 113; Freyberger: 494-95).

Procedural: Censorial *locatio*.

Archaeological: Boni found a column base to the W side of the Aula of the Basilica Aemilia, and it was there that Carettoni carried out a series of excavations in the mid-twentieth century. Following him, campaigns by Bauer and then Freyberger have helped clarify several phases that must be organized around the data of the literary evidence. In relative sequence, the phases within the *aula* are:

i.   An area paved in tuff blocks (Freyberger: 494-95). Also, cut by all later phases towards the middle of the aula was an Archaic cistern in *tufo del Palatino* (Carettoni 117).

ii. A number of walls in what Carettoni calls *tufo granulare rossiccio, simile al commune cappellaccio* (114) to the NW of the Aula. These are oriented in a different manner than the Basilica Aemilia and its *tabernae*. If the stone is quarried from the nearby *lautumiae*, which is plausible, then these structures may antedate the formation of the *carcer*, at which point the nearby *lautumiae* went out of use. If not, they probably still derive from *tufo del Palatino* quarries on the Capitoline. A small drain of *tufo del Palatino* also pertains to this phase (Carettoni 113-14).

iii. Cutting structures in phase ii is a N-S wall with three column bases all of *tufo giallo della via Tiberina*. The foundation is three courses high of regularly sized *tufo giallo* blocks 0.90-1.20 m L and avg. .55 m to a side. The bases are founded on pylons that offset .30 m from the wall itself. They have a diameter of 1.05 m and a N-S intercolumniation of 5.85 m. The whole thing is set on a foundation of tuff rubble (112-13). Almost all of the stretcher blocks had masons' marks, which are illustrated by Carettoni (126).

Running E-W to the E of the N-S wall were two walls of *tufo giallo*. The N one had the remains of circular carved column bases cut into the slabs of the blocks, as well as a tuff paving stone (Carettoni does not specify the material) that extended from the base of the column beyond the foundations (i.e. the columns were supported with stone foundations while the pavement extended beyond those

foundations onto the floor). These columns were of a similar width (1.10 m) and their E-W intercolumniation was 4.93-.95 m.

The column bases of the N-S wall are formed by two slabs carved with a simple moulded *cyma recta*.

Perpendicular to the N-S wall and S of and parallel to the two E-W walls (on the same orientation) was a drain in *ufo del Palatino* with additions in *tufo lionato* from Anio (Carettoni 113); its channel measured 0.62 x 0.90 m.

To the N, parts of the defining wall of the original *aula* were located, all in *tufo giallo della via Tiberina*. The E wall had five entrances; the W wall was not excavated. On these grounds, Freyberger suggests that the building was originally a closed rectangular space (496; *contra* Bauer 186).

iv. The N most of the three column bases was abutted by a travertine paving slab found also elsewhere in the *aula* and carved back to match the base (Carettoni 112), but presumably this paving covered the *cyma recta* of the bases.

Phase iii and iv in the *aula* correspond to phases in the *tabernae* out front, the N wall of which abuts but does not bond to the S wall of the *aula*. Freyberger suggests on these grounds that the *tabernae* and the basilica could be of different original dates (495). With phase iii, the floor level of the *tabernae* appears to be raised, and with phase iv we see the use of *tufo lionato* from Anio in the *tabernae*.

Carettoni wanted phase iii to be that of Fulvius and phase iv to be the Late Republican work of M. Aemilius Lepidus, which is commemorated on the reverse of a *denarius* of 65 B.C. (Lepidus' repairs are dated by most to the consulship of the moneyer's father in 78: Freyberger: 499-500). But for Fuchs (16) and Coarelli (205-7), the use of *tufo giallo* so late in the first century would have been improbable. As Coarelli notes, the cos. of 78 was otherwise famous for being the first to use *giallo antico* in his house. A column base in travertine can reasonably be associated with the 1st C phase (205-7; base: Freyberger: 501). Even though Cicero remarked that, in 55/54, Paulus was reusing *isdem antiquis columnis* from the last phase (*ad Att.* 4.17.7), it is probable that phase iv, with its heavy use of *tufo giallo* and *tufo lionato*, belongs before 78, and instead in the later 2nd C. Bauer wanted to see phase iii as being from 209 and phase iv as being that of Fulvius, but as we have seen, the evidence of Plautus on which his argument rests does not indicate so much.

Instead, the most plausible explanation is given by Freyberger, who assigns phase iii to Fulvius, and then phase iv to 159 when we know that P. Cornelius Scipio Nasica installed a water clock in one of the *tabernae* (497-99; cf. Plin. *NH* 7.215, Varro *DLL* 6.4, Cens. *de die nat.* 23.7). This makes sense, and we note how the Basilica in its construction from 179-59 closely resembled the Basilica Sempronia (**No. 113**), built in 168 directly across the Forum. Both made use of use of *tufo giallo*, a possible paving in travertine, and an underlying water drain running crosswise across the structure's foundations.

As for this first phase, the wide intercolumniation meant that the superstructure would have been in wood. Freyberger suggests that the columns, capitals, and beams may have been stuccoed (496).

Bibliography: Bauer in *LTUR* I "Basilica Fulvia" 173-75 and "Basilica Paul(l)i" 183-87; Carettoni 1948; Coarelli *FR* II 135-38, 203-7; Fuchs 1956; Freyberger 2007; Gaggiotti 1985.

96. 179 – *Tabernae in the Forum Piscatorium / Macellum*

Sources: Liv. 40.51.5.

There are two ways of reading Livy's report of censorial work in the area of the *macellum* in 179. The complete clause is *basilicam post argentarias novas et forum piscatorium circumdatis tabernis quas vendidit in privatum*. In the absence of a verb, the accusatives are governed by the previous sentence: M. Fulvius *plura et maioris locavit usus*. The *basilicam* at the beginning of the clause is obviously the basilica Fulvia, on which see **No. 95**. *Post argentarias novas* is the address of the basilica Fulvia, but does *et forum piscatorium* belong with *post*, or do the words following *et* represent a separate project? And therefore, do the *tabernae* sold into private use belong with the *basilica* or with the *forum piscatorium*? From the name of the *basilica Fulvia* attested elsewhere, it seems that Fulvius built the structure, rather than simply bestowing it with *tabernae*. We would still very much like to have here the gerundive (*faciendam*?) that elsewhere accompanies censorial *locatio*, which would clarify what sort of work was being contracted for in these locales. From a topographical standpoint, there were *tabernae* to the S and perhaps to the east of the *Basilica Fulvia*, but there is no evidence for stalls to the north, and *circumdatis* is thus not entirely accurate if it were to refer to *tabernae* around the *basilica*. Better sense is made by relating the *tabernae* to the fish market: the *forum piscatorium* here may be an alternate name for the *macellum* (Morselli and Pisani Sartorio, citing the fact that in 210 the *Forum Piscatorium* burns, whereas in 209, Livy attests the restoration only of the *macellum*), which in this period appears to have been a square complex with an open courtyard in the center, and thus ideal for *tabernae circumdatae* (cf. **No. 71**).
This would appear to be an attestation of work by the censor M. Fulvius to construct stalls around the marketplace in the Argiletum, known either as the *Forum Piscatorium* or the *Macellum*, and then to lease those stalls out to private vendors. In light of the general restructuring of this area of the N side of the Forum at this moment, such a project makes perfect sense. Varro's identification of a *Forum Piscarium secundum Tiberim ad Portunium* may relate to another fish market in the area of the Forum Boarium (cf. *DLL* 5.146): I see no reason to assume that Republican Rome had a single fish market, and the slight variation from *Piscatorium* to *Piscarium* is evidence enough.

Procedural: Censorial *locatio*.

Bibliography: Morselli and Pisani Sartorio in *LTUR* II "Forum Piscarium/Piscatorium" 312-13.

97. 179 – Work in the *Portus Tiberinus*

Sources: Varr. *DLL* 6.19; Liv. 40.51.4.

Varro gives the etymology of Portunalia from the god Portunus whose temple was aside the *Portus Tiberinus*. This places the port complex of the Republic along the river beside S. Maria Egiziaca, formerly the Temple of Portunus, to the N of the Pons Aemilius. From here, freight arriving by way of the Tiber could easily be sold at the various market spaces in the Forum Holitorium and Forum Boarium, or hauled without much difficulty through the Velabrum and into the Forum.

The port area was monumentalized at some point and given a major retaining wall in ashlar masonry (see below), and this is sensibly connected by Colini and Coarelli to the mention of a *portum et pilas pontis in Tiberum* described by Livy as part of the censorial work of Fulvius Nobilior and Aemilius Lepidus in 179. The fact that bad flooding is reported by Livy in 202 (30.38.10-12), 193 (35.9.2-3), and 192 (35.21.5) makes this censorial attention to the port area understandable.

Procedural: Censorial *locatio*.

Archaeological: A 200 m long wall in ashlar blocks (*tufo lionato* from Anio: Buzzetti) was noted in various 19th century excavations at the foot of the Tiber by the area of the *Portus*, much of it incorporated into later, Trajanic construction. At least part of this wall, as drawn by Lanciani (Haselberger: fig. 17), was entirely of ashlar construction, but the fact that some of the wall had a cement core suggests that it may preserve many phases, starting from the early second century when ceramic evidence suggests that the length of the city wall in this area, located further back from the shore, went out of use (Coarelli 1988: 36). Coarelli gives the original height of this 200 m long wall as 9.15 m.

Bibliography: Buzzetti in *LTUR* IV "Portus Tiberinus;" Coarelli 1988: 38-39; Colini 1980; Colini and Buzzetti 1986; Haselberger *MAR* "Tiberis: Grand Embankment" 246.

98. c. 179 – *Aedes, Hercules et Musarum*

Sources: Plin. 35.66; Cic. *Arch*. 27; Ov. *Fast.* 6.797-812; Eumenius *Paneg.* 9.7.3 [Bährens]; Serv. *ad Aen.* 1.8; Macr. *Sat.* 1.12.16.

The dedication of a temple to Hercules Musarum by M. Fulvius Nobilior following his triumph over the Aetolians has been assumed by many scholars but remains difficult to determine. Starting with what we do know, a temple to Hercules Musarum stood in a portico along the N side of the Circus Flaminius. One major phase of the temple was of Augustan date, built by L. Marcius Philippus (Ov.; cf. Suet. *Aug.* 29); the complex is named on the Severan marble plan; and corresponding remains of both the porticus and the podium of a central round temple were excavated in the area in the 19th century, and again in the 1980s (Gianfrotta). Where we encounter difficulty is in the pre-Augustan phase of the temple.

Neither Ovid nor Suetonius, our two best sources for the construction project of Philippus, mention an earlier structure. The temple, however, has two *dies natales* in the *Fasti* (cf. Viscogliosi for citations), and this raises the possibility that Philippus rededicated the temple, rather than built it *ex novo*. A mid-Republican inscription on a piece of *lapis Albanus* was excavated in 1867 in the area of S. Ambrogio, precisely where Philippus' temple was located, bearing the inscription *M. Folvios M.f. / Ser.n. Nobilior / Cos. Ambracia / Cepit* (*CIL* VI 1307). The inscription lacks the dedicatory accusative, although perhaps it was a statue base (for a statue of a muse?) related to some structure. Arguing for an explicit link between this Nobilior and a cult structure to Hercules Musarum is Servius, commenting on the opening of the Aeneid and statues of the *camenae* at Rome:

> *his Numa aediculam aeneam brevem fecerat, quam postea de caelo tactam et in aede Honoris et Virtutis conlocatam Fulvius Nobilior in aedem Herculis transtulit, unde aedes Herculis et Musarum appellatur.*

Cicero makes a parallel claim that has an important difference: *iam vero ille, qui cum Aetolis Ennio comite bellavit, Fulvius non dubitavit Martis manubias Musis consecrare*.

Cicero mentions a dedication to the muses, not to Hercules, whereas Servius notes a building that became dedicated to Hercules *and* the Muses. A third voice is that of Eumenius, the third century rhetor from Autun, who records the following:

> *Aedem Herculis Musarum in circo Flaminio Fulvius ille Nobilior ex pecunia censoria fecit, non id modo secutus, quod ipse litteris et summi poetae amicitia duceretur, sed quod in Graecia cum esset imperator acceperat Heraclem Musagetem esse, id est comitem ducemque Musarum, idemque primus novem signa Camerum ex Ambraciensi oppido translata sub tutela fortissimi numinis consecravit, ut res est, quia mutuis opibus et premiis iuvari ornarique deberent: Musarum quies defensione Herculis et virtus Herculis voce Musarum.*

While Martina has argued that this passage shows an understanding of the political ambitions of Fulvius Nobilior in transferring the Greek cult of Heracles Musagetes from Greece to Rome, the deity in his aspect Hercules Musarum is not known at Rome before he appears on coinage of Q. Pomponius Musa (*RRC* 410/1) in 56, where he appears along with depictions of other muses on a series of *denarii*. It is not clear, then, if the transfer of Hercules as leader of the muses (Herakles Musagetas) belongs to Fulvius Nobilior, or to a later moment. Ovid explicitly assigns the deity to the dedication of Philippus. Furthermore,

Eumenius' assertion that Fulvius Nobilior's temple was built *ex censoria pecunia* is suspect considering how fully the censorial works of Fulvius are detailed by Livy at 41.50. Coarelli's attempt to reconcile this with a different reading of Livy's text goes against the topographical movement intended by the author (from the *emporium* area to the E *Circus Flaminius*). Also problematic is the fact that no dedication of Fulvius Nobilior is mentioned by Livy, although that author's narrative completely covers Fulvius consulship in 187 and censorship in 179.

Richardson has argued, on the grounds of the literary evidence presented here, against the presence of a temple to Hercules Musarum prior to Philippus, whom he sees as connected to the same circle as Q. Pomponius Musa. To do this, he has to dismiss Servius. But perhaps Cicero and Servius can be reconciled. First of all, the evidence of the inscription to my mind appears irrefutable: Fulvius Nobilior made some dedication in the Circus Flaminius, probably to the muses, as Pliny notes that he brought statues of the muses home with him from Ambracia. This does not conflict with Cicero's statement that he dedicated his spoils of war to the muses: the *manubias Martis* to which he refers may be those very statues. If Servius is closely followed, we can see Fulvius dedicating statues of the muses along with transferring the *camenae* to a pre-extant temple of Hercules. The shift is not from Hercules to Hercules Musarum, nor is it what Eumenius claims: after all, there is a difference between the Greek god who leads the Muses (*Musagetas*), and the Roman god who is simply linked to the genetive plural *Musarum*. Rather, we must pay attention closely to what Servius states: the transition instead is from "*aedes Herculis et Musarum*" to *aedes Herculis Musarum* (the latter being what is found in Suetonius and what is inscribed on the Severan plan). Before Philippus, we are searching for a temple of Hercules (in whatever aspect) with statues of the muses; after Hercules Musarum became a viable deity in the later 1st century, the separation of Hercules and the muses ceased, and a single name sufficed without the conjuctive *et*. The fact that Macrobius mentions *Fasti* set by Fulvius in his *aedes Herculis Musarum* is unproblematic considering that by the time Macrobius was writing, the *et* had already fallen out of use.

In that case, we are looking for a temple of Hercules in the Circus Flaminius suitable for those dedications of Fulvius Nobilior. Castagnoli proposed the Temple of Hercules Custos, which Ovid suggests was restored by Sulla. Coarelli's objection that the temple of Hercules Custos continued to exist in the first century is not problematic if we accept that the addition of the muses did not change the temple of Hercules *per se*, and we are splitting hairs to suggest that Ovid's location of the Temple of Hercules Custos *altera pars circi* [*Flaminii*] from the Temple of Bellona *summus circus* excludes a position a short way down along the circus' north side. But it is difficult to understand why Ovid would mention both the Temple of Hercules Custos and the Temple of Hercules Musarum in the *Fasti* on different dates: the implication is that they were not the same building. Another temple to Hercules on the Circus Flaminius of a date anterior to Fulvius Nobilior's triumph must be sought—there would be no problem having two temples to Hercules in such a similar area, as there were no

problems when there were two temples in the Circus in the time of Ovid. Still, the temple of Hercules to which Fulvius attached his dedication of the muses is not otherwise known: perhaps it belongs to those years of the third century for which we lack Livy's text.

Procedural: a dedication *ex manubiis*, but probably not a temple foundation. For Fulvius' very wealthy triumph, see Liv. 39.5.

Archaeological: Along the N side of the modern via del Portico di Ottavia, a stepped podium with a colonnade (5 of seven columns extant) is depicted by Lanciani on his *Forma Urbis Romae*; he attributes this discovery to excavations of 1889: this pertains to the Augustan-period portico and helps to pinpoint the precise position of the temple and its surrounding architecture within the city. In what would be the central area of the portico underneath S. Ambrogio, excavations in the 1980s by the Comune uncovered the base of a round podium, corresponding to a round temple as depicted on the Severan plan, and identified by the excavators as part of the temple itself. The width would be 11 m, and the material was *tufo del Palatino* (Gianfrotta; otherwise his descriptions of material are vague and inexact). The use of marble revetment (claimed as "greco" marble) to pave the surrounding area, however, would suggest that much if not all of this belongs to a later phase, at least posterior to 146 when the first marble temple in Rome, that of Metellus Macedonicus to Jupiter Stator, was constructed a stone's throw away. However, the *tufo del Palatino* is either a very late use or represents reuse of either salvaged material or an *in situ* earlier podium foundation. More work on this structure would be beneficial, although difficult from a practical standpoint as the remains are spread out under the foundations of several early-modern building blocks.

Bibliography: Coarelli 1997: 452-84; Gianfrotta 1985; Martina 1981; Richardson 1977; Viscogliosi in *LTUR* III "Hercules Musarum, Aedes" 17-19.

99-101 179 – Porticoes in the Forum Boarium/Forum Holitorium Area

Sources: Liv. 40.51.6.

To the censor M. Fulvius Nobilior, Livy attributes a number of construction works in the city including a series of colonnades. The Latin is difficult and has been emended often, but I give the most recent edition of Briscoe's Teubner:

> *Et forum et porticum extra portam Trigeminam, et aliam post navalia et ad fanum Herculis, et post Spei ad Tiberim et ad aedem Apollinis medici.*

How many structures are we talking about and of what nature? Livy is giving us addresses with starting points (*post*) and concluding points (*ad*), and this is suggestive of a long colonnaded structure along a street, rather than a *Porticus* (like the *Porticus Metelli* or *Octaviae*) which was a self-contained four-sided

structure (properly a *quadriporticus*).   Although the frequent use of the conjunctive *et* makes for some confusion, the sense is generally clear and breaks down into threes: The first being obvious, the second starting at *et aliam* with the feminine *aliam* referring back to *porticus*, and a third picking up at *et post Spei* where logically the last *porticus*, having reached the *fanum Herculis*, cannot start again.

These three projects all concentrate on the port area of the city where the censors of 179 also restructured the *portus Tiberinus* and worked on the *Pons Aemilius*. Remains found in this area by Lyngby and Sartorio may pertain to some part of the activity of these censors; the excavators originally connected the location to the Porta Trigemina, but this seems too far to the S (Coarelli). Instead, the material used indicates a date in the first half of the second century (a mixture of *tufo giallo alla via Tiberina* and *lapis Albanus* with a possible pair of column bases in *tufo lionato*). Their findings, however, were limited to the uncovering of a small square podium or pylon, 2.70 x 2.60 m in dimensions and 2.80 m high, and the larger architectural context remains unclear.

Procedural: Censorial contract (*locatio*)

Bibliography: Coarelli 1988: 16 n. 12, 25; Lyngby and Sartorio 1968-69.

99. *Porticus* (and *Forum?*) *extra Portam Trigeminam*

Sources: Liv. 40.51.6

A 1519 edition of Livy printed *et forum et porticum extra Portam Trigeminam.* In the recent Teubner edition, the editor Briscoe prints *et forum* but notes in the apparatus that *et porticum* alone has been conjectured *fortasse recte*. Forum should probably be removed for three reasons. First, because it has no textual basis prior to the 1519 edition, and the confusion in the sixteenth century may relate to the proximity of the Porta Trigemina to the Forum Boarium. Second, because the next clause starts with *et aliam* and refers to a portico, not a forum: the plural variant *alia* is known also from Renaissance editions, but the entirety reads more easily if the first clause merely refers to a *porticum* and the second to another (*aliam*), rather than moving from two structures as an antecedent to a single structure referred to by *aliam*. Third, *porticum extra Portam Trigeminam* is clearly a street address, relating to the stretch of road that made the beginning of the *Clivus Publicius* as it made its way towards the Aventine. *Extra Portam Trigeminam* would simply suggest that the portico moved along that part of the road, and it probably constituted a colonnade. This is probably related to similar porticoes in this area in 193 and 192 and is in all likelihood part of the growing Emporium complex in this area (Rodriguez Almeida).

Bibliography: Rodriguez Almeida 1984: 29-33.

100. *Porticus post navalia et ad fanum Herculis*

There were various Hercules cult sites in Republican Rome, and the location of this portico depends on the identification of the Navalia. The recent proposal of Cozza and Tucci that the long *opus incertum* building in Testaccio be recognized as the Republican Navalia built by Hermodoros of Salamis is sound and represents the best identification based on the available evidence. Cozza and Tucci see this as replacing the previous *navalia* already mentioned in 338 (cf. Liv. 8.14.12) in the same place. If this is the case, then earlier attempts to connect this *porticus* with structures in the S Campus Martius where the *navalia* was previously placed (Coarelli; Haselberger) are wrong. The identity of the Republican-period structure on the Vicus Aesculeti, reputedly a monumental, double-sided portico, remains unknown; to my mind, the use of travertine and *opus incertum* puts that entire structure in the later 2nd C at the earliest, and a connection with this earlier *porticus post navalia* is out of the question (*contra* Haselberger).

      In this case, the *porticus* extended from the Navalia S of the Aventine to a *fanum Herculis*. Which *fanum*? We can rule out the Temples of Hercules Musarum or Hercules Custos *in circo*, (*contra* Coarelli: 460, who presents an alternate reading of Livy), both improbably far away. Instead, some site of Hercules in the Forum Boarium area is preferable. Torelli's recent argument that only the *Ara Maxima Herculis* would have been called a *fanum* and not an *aedes* at this date brings clarity to the situation, as the *Ara Maxima*, identified with those remains beneath S. Maria in Cosmedin, is the southernmost monument in the Forum Boarium, just outside the *Porta Trigemina*. In this case, this particular portico ran along the road that went through the *Porta Trigemina* from the Navalia on one side to the Ara Maxima on the other. This would have straddled both sides of the wall, so conceivably this line relates two connected *porticus*, one outside, one inside the wall, both extending on either direction of the gate.

Bibliography: Coarelli 1997: 345-62; Haselberger in *MAR* "Porticus: Vicus Aesc(u)lati" 208; Torelli 2006: 588.

101. *Porticus post Spei ad Tiberim et ad aedem Apollonis Medici*

The third *porticus* has two very well locatable points at either end: the Temple of Spes is the southernmost temple under S. Nicola and Carcere, and the Temple of Apollo is that restored by C. Sosianus under Augustus beside the Theater of Marcellus. A porticus running from these two points would have traversed the area of the later Theater of Marcellus, and presumably it would have been destroyed along with other monuments there including the Temple of Pietas (**No. 94**) in 44 when Caesar initiated construction. Livy is thus referring to a monument that, in his day, no longer existed.

102. **179 or earlier –** *Pons Aemilius*

Sources: Liv. 40.51.4; Plut. *Num.* 9.6.

Livy specifically ascribes the construction of a stone bridge across the Tiber to M. Fulvius, censor in 179: *M. Fulvius plura et maioris locavit usus: portum et pilas pontis in Tiberi, quibus pilis fornices post aliquot annos P. Scipio Africanus et L. Mummius censores locaverunt imponendos.* The only problem is that the first stone bridge across the Tiber was known as the *Pons Aemilius*, not the *Pons Fulvius*; there was never a Pons Fulvius at Rome. Moreover, Plutarch has the bridge built by the "quaestor Aemilius" (however, as Coarelli notes, *tamieuontos* can in Plutarch's text be emended to *timeteuontos*, and the problem is solved, although we are left with an association with Fulvius' colleague, not Fulvius himself). Picking up on these variants, Coarelli follows a complex line of argument: he suggests a stone bridge was built by some Aemilius as quaestor prior to 207, when we know that the Pons Mulvius was standing. The Mulvius, in turn, was connected to the via Flaminia, and thus an earlier stone bridge belongs even further back, to the period before C. Flaminius' censorship in 220. He suggests that the responsible party was M.' Aemilius Lepidus, who was *decemvir sacris faciundis* between 236-211, and who is named on the reverse of a denarii (*RRC* 291) with the image of an equestrian statue above a three-arched structure, which Coarelli suggests is in fact the *p.A.* In the course of events in 192, Livy reports flooding affecting *duos pontes* as well as several buildings near the *Porta Flumentana* (35.21.5); one bridge was the *Pons Sublicius* of course, but Coarelli identifies the other as the *p.A.* on the basis of its proximity to the *Porta Flumentana*, rather than a bridge to the Tiber Island or the *pons Mulvius*. It is the repair of the bridge after this flood that is reported in the censorship of 179. The original bridge was constructed between 236 and 220 (that is, in an unknown quaestorship of M.' Aemilius Lepidus, before the via Flaminia). It is an attractive argument, but one still wonders why Fulvius would see to the repair of the bridge, rather than his colleague, who came from the same *gens* as the original builder of the bridge. One way or another, the censor Fulvius of 179 appears to have undertaken the placement of a stone bridge across the Tiber.

Procedural: Censorial work (*locatio*).

Archaeological: the "Ponte Rotto" is a construction of Augustan date, although Blake suggests that the *tufo giallo della via Tiberina* in its core may be reused material. Some trace of the earlier bridge may remain, what Blake terms an 'abutment,' but its form is poorly known.

Bibliography: Blake *ARC* I 178; Coarelli *FB* 139-47.

103.   **179 – *Aedes, Diana***

Sources: Liv. 39.2.8; 40.52.

In 187, the cos. M. Aemilius Lepidus vowed an *a.D.* during the course of a battle with the Ligurians (Liv. 39.2.8; *MRR* I 367-68). It was during the same consulship that he vowed a Temple to Juno Regina, and he also built the Via Aemilia. During his censorship in 179, he asked the senate for monies to fund games for his dedication of both temples (*petiit ab senatu ut sibi dedicationibus templorum Reginae Iunonis et Dianae, quae bello Ligurio ante annis octo vovit, pecunia ad ludos decerernetur*). 20,000 *asses* were decreed, and he dedicated both temples *in Circo Flaminio* (Liv. 40.52). The location is not precisely known, but Coarelli speculates that the temple was originally near the Temple of Juno Regina in an area destroyed by Caesar for the Theatrum Marcelli: the temple is not mentioned in later accounts nor in the imperial calendars. He then suggests it was rebuilt by Augustus based on an *aureus* of c. 29-27 showing Diana on the obverse and a small prostyle Tuscan shrine with a naval trophy on the reverse (*RIC* I^2 273), and he locates it as a small structure on the Severan *FUR* 31s. Kondratieff questions the appearance of Diana in her naval aspect on the coin, whereas Aemilius Lepidus invoked her in battle against the mountain-dwelling Ligurians. Viscogliosi also argues against Coarelli's proposed reconstruction, suggesting that sculptural elements linked by Coarelli to his so-called Augustan phase are far too late in style to pertain to this supposed new structure, and he instead records an unpublished theory of La Rocca that identifies the structure on *FUR* 31s as statue bases of the colossal statues of *Divus Augustus* and *Diva Augusta* in the area. After the destruction of the temple, Diana instead allegedly shared her structure with the Temple of Apollo *in Circo* where her statue was seen with those of Apollo and Leto. Neither option—the changed attribute of Diana or her amalgamation into another cult structure—is particularly satisfying. However, since the temple was intimately connected with that of Juno Regina, a location to the east of Juno Regina is attractive, and the suggested destruction of the temple by the later building of the Theatrum Marcelli makes sense, especially when we know that the other censor of 179, Fulvius Nobilior, was active in the area east of the Circus Flaminius where a *porticus post Spei ad Tiberim ad Apollonis Medici* was built. Alternatively, it could have been immediately to the E of Juno Regina where the Temple of Jupiter Stator was built in 146, following a serious fire there in 157 (see discussion in **No. 104**). If we follow La Rocca's tentative (and still not published) suggestion, it is then worth noting that a statue of Diana by Cephisodotos was at some point displayed in the Temple of Juno Regina (Plin. *NH* 36.24), but this returns us to the difficult idea of the amalgamation of her cult into another structure after the destruction of the temple. In any case, an original location somewhere on the NE corner of the Circus Flaminius is probably correct, as it is likely that the original temple perished before the Augustan period.

Procedural: Vowed by consul; same man as censor requests funds from senate to finance the *ludi* associated with the dedication, and, with funds decreed, he then dedicated the temple followed by a two-day *ludi scenici.*

Bibliography: Coarelli 1968; Kondratieff in *MAR* "Diana, Aedes (Campus Flaminius)" 101; Viscogliosi in *LTUR* II "Diana, Aedes in Circo" 14.

104.   **179 – *Aedes, Iuno Regina (Circus Flaminius)***

Sources: Liv. 39.2.8, 40.52; Obs. 27.

At the end of his campaign against the Ligurians—he had already vowed a Temple to Diana in the same consulship—M. Aemilius Lepidus vowed a temple to Juno Regina. During his censorship in 179, he dedicated both temples (**No. 103** for details). Included in the temple must have been his Ligurian spoils: Julius Obsequens records that a *scutum Ligusticum* was struck by lightening in 134. The fact that the temple was recorded with the toponyms *in Campo* (*Inscr. It.* XIII.2, 25, 54) and *ad Circum Flaminium* (*Inscr. It.* XIII.2, 63, 512) originally led to the suggestion that there were in fact two such temples, with the second being built when Metellus Macedonicus enclosed Juno Regina and Jupiter Stator in the Porticus Metelli in 146. Now, we understand how a building on the N side of the Circus Flaminius could in fact have had both toponyms (Viscogliosi; e.g. Plin. *NH* 36.40 on the next-door *aedes Iovis Statoris, qua Campus petitur*). A fire in the area in 158 (Obs. 25: *in circo Flaminio porticus inter aedem Iunonis Reginae et Fortunae tacta, et circa aedificia pleraque dissipata*) probably damaged Lepidus' temple severely, and promoted the rebuilding effort of Metellus Macedonicus a decade later, which also included the neighboring temple to Jupiter Stator as well as the portico that then surrounded both temples. The temple is depicted on the Severan *FUR* 31bb and identified with an inscription: it was the W temple in the Porticus Metelli, but whether or not this reflects the previous position is difficult to tell as the height of the *porticus Metelli* was significantly raised from the pre-existing ground level of the Circus Flaminius, and Viscogliosi suggests tentatively that this reflects the fact that Metellus heavily reworked the entire area. For what it is worth, the *FUR* slab shows a tetrastyle prostyle temple.

Procedural: Vowed by consul; same man as censor requests funds from senate to finance the *ludi* associated with the dedication, and, with funds decreed, he then dedicated the temple followed by a three-day *ludi scenici*.

Bibliography: Viscogliosi in *LTUR* II "Iuno Regina, aedes in Campo, ad Circum Flaminium" 126-28.

105.   **179 – *Aedes, Lares Permarini***

Sources: Liv. 40.52.4-7; Macrob. *Sat.* 1.10.10.

Along with those temples to Diana and Juno Regina *in Circo*, the censor of 179 M. Aemilius Lepidus dedicated a third temple in the greater Campus Martius, this one to the *Lares Permarini*. Livy tells us that this was vowed not by Aemilius Lepidus, but by L. Aemilius Regillus, who as *pr.* in 190 defeated the fleet of Antiochos III at Myonnessos—hence the naval theme of the dedication. Despite telling us this fact in 179, Livy did not mention Aemilius Regillus' own vow during the narrative for his naval battle (sources in *MRR* I 356); Macrobius mentions the vow. Livy does, however, preserve for us the dedicatory inscription affixed *supra valva templi*:

> duello magno dirimendo, regibus subigendis…caput patrandae pacis haec
> pugna exeunti L. Aemilio M. Aemilii filio…auspicio imperio felicitate ductuque
> eius inter Ephesum Samumque Chiumque, inspectante eopse Antiocho, exercitu
> omni, equitatu elephantisque, classis regis Antiochi antehac inuicta fusa contusa
> fugataque est, ibique eo die naues longae cum omnibus sociis captae
> quadraginta duae. ea pugna pugnata rex Antiochus regnumque…. eius rei ergo
> aedem Laribus permarinis uouit.

The text is lacunose in some parts, but the tenor is still apparent, and we see here the change from *dedet aidis meretod* (of the deity) in the dedication of L. Cornelius Scipio in the 3rd C (**No. 43**) to an act fully revolving around the talents and merits of the triumphator himself.

The location of the temple remains debated. The *Fasti Praenestini* give the exact location as *in Porticu Minucia*. Coarelli, who holds to his identification of Largo Argentina as the *Porticus Minucia Vetus*, would have this temple be identified with Temple D in Largo Argentina (**No. 106**). While Temple D does have appropriate phases in the early 2nd C, the greater problem is the extreme difficulty in identifying the four temples in Largo Argentina as a cohesive "*porticus*:" the colonnade on the W side is a result of the *Porticus Pompeii*, and the other three sides are not unified. The only reason to interpret the four temples as a coherent whole is the fact that it was excavated under the same modern *insula* in the 1920s. Rather, the *[porticus] MINI[cia]* known from the Severan *FUR* frr. 35dd, 35ee, 35ff, and depicting the temple on the Via delle Botteghe Oscure is a better bet. However, recent Spanish excavations there failed to find any sign of a phase from the early 2nd C (Marquez and Gutierrez Deza): the earliest temple podium had a cement core, so either this was among our first public buildings to make use of *opus caementicium*, or the temple should be sought elsewhere.

Procedural: Pr. vow, dedicated by his son as cens.

Bibliography: Coarelli in *LTUR* III "Lares Permarini, Aedes" 174-75; Kondratieff in *MAR* "Lares Permarini, Aedes" 160; Marquez and Gutierrez Deza 2006.

106.   First ¼ 2nd century– Temple D in the *area sacra di Largo Argentina*

Sources: None.

Temple D has yet to be convincingly identified. Coarelli's association of the remains with the Temple of Lares Permarini depends on the identification of the

area sacra of Largo Argentina as the *Porticus Minucia Vetus* and is not convincing (**No. 105**). Richardson argued that the temple was hypaethral and thus probably that of Iuppiter Fulgur; Kondratieff disputes Richardson's notion that the temple lacked a roof suggesting that the cella in fact could have easily supported wooden roofbeams. Meanwhile, the Platner-Ashby's dating to the mid-third century seems far too early for the archaeological remains. Meanwhile, Manacorda gives the location of Iuppiter Fulgur as being S of Largo Argentina entirely; however, he follows Coarelli in associating Temple D with the Lares Permarini.

Procedural: Unknown.

Archaeological: Of the four temples in Largo Argentina, the S most temple is the least well-known as much of the temple remains unexcavated under Via Florida. As with Temples A and C, it was originally built directly onto the soil of the Campus Martius. Unlike the ashlar technique of the earliest phase of those two temples, its construction made use of *opus caementicium*, which appears at the nucleus of the front steps, and pertain to that first phase. This furnishes an important first date for the beginning of the use of cement as the temple's first phase can be no later than c. 150, that being the date of the altar of A. Postumius Albinus standing in front of Temple C, and the associated paving of the area in front of Temple C, forming a *terminus ante quem* for the construction of Temple D upon the virgin soil of the Campus. The temple is counted among the earliest use of cement in a public monument at Rome, probably from the 1st ¼ 2nd C.

Bibliography: Coarelli 1981 18-19; Kondratieff in *MAR* "'Area Sacra' (Largo Argentina): Temple D" 56; Manacorda in *LTUR* III "Iuppiter Fulgur, Aedificium" 136-38; Platner Ashby: 294; Richardson 219.

107.   FIRST ¼ 2ND C – REPAIR TO *AEDES, APOLLO MEDICUS*

Sources: *CIL* I² 2675c = *ILRRP* 45.

An inscribed mosaic floor found under the Augustan era Temple of Apollo *in circo* attests to restoration work. The inscription is published in truncated form in *CIL* as *ai]diles curules moltaticod* [- - -]. In *ILRRP* Degrassi publishes the longer form after excavation had revealed more of the text: [- - -] *aidiles curules moltaticod dedere, esdem probaverunt*. The terminal *–d* on the ablative *moltaticod* is an archaic form that appears on the *S.C. de Bacchanalibus* (186 B.C.) and then not again, so we are at the latest somewhere in the first decades of the 2nd C , which is when Degrassi also dates the text (cf. his note in *ILRRP*).

Viscogliosi and Ciancio Rossetto both accord this repair to M. Fulvius Nobilior during his censorship of 179 when he built a portico connecting to the temple (**No. 101**). Viscogliosi does not quote the inscription in full, only showing a photograph (1996: 3); Ciancio Rossetto misquotes the inscription and then cites

Livy 40.51.3-6, the passage describing Nobilior's censorial works, without further comment (1998: 181, 192). There is, however, no doubt that the work undertaken here is aedilician and not censorial: on this the inscription is unequivocal.

We do not know of a repair of the temple by an aedile in the first quarter of the 2nd C. Because of the language of the inscription, we should not put the repair after 167 when Livy's text ends, although this might be tempting. Instead, the repair is the project of an unrecorded curule aedile of the first quarter of the 2nd C.

Procedural: Aedilician repair *ex multatico*

Archaeologically: The repair is attested on a white and black floor mosaic in the cella of the temple and probably pertains to the remaking of the floor. The mosaic, however, ran to the *tufo del Palatino* walls of the cella that are dated to the temple's earlier phase, and Viscogliosi suggests that the repair in this period conserved the form and perhaps the fabric of the earlier temple (1996: 26). The inscription itself occupied the center of the rear central room of the tripartite cella and ran up the central axis of the room rather than cross-wise, where it would have been easier to read.

Bibliography: Ciancio Rosetto 1997-98; Viscogliosi 1996.

108.   174 – Paving of urban streets (and curbs?)

Sources: Liv. 41.27.5.

The censors of 174, Q. Fulvius Flaccus and A. Postumius Albinus took on several notable street repairs both in and outside of Rome. Of those inside Rome, Livy tells us that *censores vias sternandas silice urbe, glarea extra urbem substruendas marginandasque primi omnium locaverunt, pontesque multis locis faciendos*. They were not the first to use *silex* on streets in general as is sometimes erroneously assumed: we have record of paving projects *in silice* earlier. The project, however, must have entailed more consistent use of basalt pavers in Rome's intramural road network than had been seen before, and if *marginandasque* refers to the construction of curbs, then we are speaking of a very significant project here. (*Marginare*, however, is a very rare Latin word, and this is the only known occurrence with *viae*, so the exact meaning is unclear).

Procedural: Censorial *locatio*.

109.   174 – *Scaena Aedilibus Praetoribusque*

Sources: Liv. 41.27.5.

Among the work of the censors of 174 was a *scaena aedilibus praetoribusque*. Temporary *scaenae* for *ludi* were a common feature of the period, and five years earlier we hear of the censors building a *theatrum et proscenium ad Apollonis*, which must have been a temporary structure to support the *Ludi Apollinares*. In this case, however, the *scaena* seems unrelated to the dramatic performances that accompanied festivals, and it appears instead connected to the functions of the two curule offices. In particular, we might think that this was a structure from which the aediles and praetors could try court cases. This was likely a precursor to the *tribunal praetoris* of the mid-second century. Like the *tribunal*, the structure built in 174 was no doubt of wood and temporary: Giuliani and Verduchi's exhaustive study of the Forum's central piazza only attempts to identify the tribunal of the Augustan period.

Procedural: Censorial work.

Bibliography: Giuliani and Verduchi 1987: 95-103.

110. 174 – *Clivus Capitolinus* paved

Sources: Liv. 41.27.7.

The censors Q. Fulvius Flaccus and A. Postumius Albinus paved the Clivus Capitolinus in *silex*; the road carried up the Capitoline around its SW side from the *carcer* to the top of the hill. The paving work was related to the construction of a *porticus ab aede Saturni in Capitolium* (Wiseman).

Procedural: Censorial, *sternendum curaverunt*.

Archaeological: Some silex paving stones remain between the Temple of Saturn and the Flavian Porticus of the Dei Consentes, but the conflagration in 69 CE and the consequent rebuilding of much of that area of the Capitoline leaves us to question if anything of this original paving project remains.

Bibliography: Wiseman in *LTUR* I "Clivus Capitolinus" 280-81.

111. 174 – *Porticus ab aede Saturni in Capitolium*

Sources: Liv. 41.27.7.

The work of Q. Fulvius Flaccus and A. Postumius Albinus, censors, is reported by Livy, but in a somewhat difficult manner: *et porticum ab aede Saturni in Capitolium et ad senaculum ac super id curiam.* First of all, we are missing a verb: the verb governing the previous phrase is *curaverunt* (*sternendum*), and a gerundive for this clause (presumably *faciendum*) is not supplied. The clause following also concerns roadwork and is governed by *straverunt*. Immediately,

we then note that Livy's text here must be damaged in some way, although a simple *faciendum* would improve the reading immediately—once again, the censorial building lists of the second century contain compact and often garbled Latin.

Next, there are the connected questions of how many porticoes and where. As with previous notices of portico construction (**Nos. 99-101**), Livy appears to give a start and finish: a portico *ab aede Saturni* running *in Capitolium*. The Loeb translation takes "*in Capitolium et ad senaculum*" as a single spot, but that would require the ablative *in Capitolio* rather than the accusative. Better is Wiseman's reading (cf. *LTUR* I "Clivus Capitolinus" 280) that sees this as a portico from the Temple of Saturn up the Capitoline along the route of the Clivus Capitolinus, which the same censors paved. That leaves *ad senaculum ac super id curiam*. The *senaculum* is not identical with *curia*, nor was it on top of the Capitoline, as the Loeb translator mistakenly assumes. Festus provides the key (470 L): *senacula tria fuisse Romae, in quibus senatus haberi solitus sit…unum ubi nunc est aedis Concordiae inter Capitolium et Forum, in quo solebant magistratus dumtaxat cum senioribus deliberare* (the other two locations are at the Porta Capena and at the Temple of Bellona; both can be ruled out for their distance away from the Curia). That is, the *senaculum* was an area by the Temple of Concord at the foot of the Capitoline where the senate and the magistrates met before or after presiding in the Curia. The *senaculum* was, in that case, immediately adjacent to the Temple of Saturn, and continuing the same line was the Curia, as Livy says, *super id*, just above the *senaculum*. It appears then that this was a single project, conceived in different parts perhaps because a stretch ran along the newly paved Clivus Capitolinus, but also because it made its way alongside several important monuments. The area is now completely changed both by the Tabularium as well as by the Temple to the Divine Vespasian and Titus. But we can imagine the censors here building a colonnade that ran down the SW side of the Capitoline, behind the Temple of Saturn, to the Temple of Concord, and then back up to the Curia, running the full length of the Capitoline's S face.

Procedural: Censorial, but the exact verb is lacking.

112. 174 – Work in the *Emporium*

Sources: Liv. 41.27.7-9.

The censors of 174, Q. Fulvius Flaccus and A. Postumius Albinus took on extensive work in the area of the Emporium: *extra Portam Trigeminam emporium lapide straverunt stipitibusque saepserunt, et porticum Aemiliam reficiendam curarunt, gradibusque ascensum ab Tiberi in emporium fecerunt*. The entire project appears to be an overhaul of the area of the Emporium: the censors paved the open area of the emporium in stone (*lapide* probably denotes tuff slabs, as opposed to *silice*); they defined the borders of the Emporium and fenced them off

with wooden stakes (*stipes*); they restored or rebuilt the porticus that had been constructed in the area, adjacent to the Emporium, by the Aemilii in their aedileships in 193 (**No. 83**); and they constructed a stepped accessway from the river into the adjacent Emporium area (cf. Liv. 35.10: *emporio ad Tiberim adiecto*). On the one hand, this work continued and repaired what was started by the aediles of 193; the *porticus* of 192 and 179 also contributed to the general buildup in this period of the area at the foot of the Aventine where modern Via Marmorata reaches the Lungotevere (Rodriguez Almeida 29-33). On the other hand, the fire of 192 that burned *aedificia in Tiberim versa* (cf. Liv. 35.40.8) probably meant that much of the work of Fulvius Flaccus and Postumius Albinus was new.

The restoration of the *Porticus Aemilia* mentioned here is no longer to be identified with the long *opus incertum* in Testaccio: this is better identified as the Republican shipsheds, the *Navalia*, built by Hermodoros of Salamis in the later 2nd C (Cozza and Tucci). Reasonable doubts as to the fact that the structure resembled a 2nd C porticus were already expressed by Richardson (57-58).

Procedural: Censorial work; no mention of *locatio*, however.

Archaeological: There seems to be physical evidence of the *ascenscum ab Tiberi in gradibus* discovered immediately to the N of the Ponte Sublicio on the E bank of the Tiber. There a series of constructed rooms and walls stretching into the Tiber in *opus quadratum* were excavated in 1919 as part of a project to shore up the river embankment, first published by Gatti (see reference again in Mocchegiani Carpano: 146 and Harmansah). Among the finds was a stepped area leading directly into the Tiber made of *lapis Albanus*. The stairs had treads .45 deep and .20 m tall (Gatti: 78). These stairs were not directly perpendicular to the river, but rather a projecting platform that had stairs leading parallel to the bank ran down on on both sides. In the middle of the platform was a block for mooring a ship: made of travertine, the block was carved in the shape of a boar's head with a circular hole made through the cheeks to affix either a rope or an iron ring (Gatti: 80, fig. 5). The use of travertine suggests that this may be a later addition, but superimposed structures appear to be Trajanic, and in the absence of any known work in the interim, Gatti connects the structure to the censorial operation of Fulvius Flaccus and Postumius Albinus.

Bibliography: Cozza and Tucci 2006; Gatti 1934; Harmansah in *MAR* "Emporium" 118-19; Mocchegiani Carpano 1985; Richardson 1976b; Rodriguez Almeida 1984.

113.   **174 – *Porticus* and roadwork inside the *Porta Trigemina***

Sources: Liv. 41.27.9.

Besides their concerted effort in the emporium, the censors Q. Fulvius Flaccus and A. Postumius Albinus undertook further work towards the N side of the Aventine. Livy's description, unfortunately, is corrupt and was probably difficult to interpret to begin with. Sage and Schlesinger in the Loeb text print *et intra eandem portam in Aventinum porticum silice straverunt, et … ab aede Veneris fecerunt.* *Eandem portam* must be a reference to the Porta Trigemina, outside of which were those projects in the Emporium just described. This being the case, this work was probably to the southeast of the gate, along the other side of the wall from the Emporium complex and on the slopes of the Aventine just S of the *carceres* of the Circus Maximus. That helps us with the lacuna: *eo publico* appears in some early manuscripts, and the *Clivus Publicius* to the Temple of Venus on the Aventine was in this precise area. The censors, however, did not make the road (*fecerunt*), and this is more likely a repair or paving work: perhaps the gravel road of the early third century was now also paved in *silex*? The *porticus* mentioned here *in Aventinum* could be a portico moving along the side of the Clivus Publicius. But how does one pave a *porticus* in *silex*? Perhaps the entire passage has been confused, and the original reading was *et intra eandem portam in Aventinum clivum Publicium ab aede Veneris silice straverunt, et porticum fecerunt.* This would make sense: the censors paved in *silex* a part of the Clivus leading from the Temple of Venus and built a *porticus* along the road. However, this requires radically shifting the word order of the passage as found in manuscripts. A conservative and safe approach only notes general roadwork and architectural activity in the area; the actual solution remains elusive.

Procedural: Censorial work, no *locatio* mentioned.

114.   174 – REPAIR AND CONSTRUCTION IN THE *CIRCUS MAXIMUS*

Source: Liv. 41.27.6.

The censors Q. Fulvius Flaccus and A. Postumius Albinus of 174 devoted attention to several features of the Circus Maximus. The passage in Livy describing their exact work is badly damaged: *et carceres in circo, et ova ad notas curriculis numerandis …dam, et metas trans … et caveas ferrea… intromitterentur…* We know that some work was done to refurbish the starting gates (*carceres*), although as Humphrey points out, they probably remained all or partly of wood, as they were still built in tuff and wood in the time of Claudius (133; cf. Suet. *Claud.* 21.3). The *metae* and *ova* are first mentioned here. Humphrey suggests that the *metae* must have existed in some form prior and that this was either a repair or restoration; the *ova* instead were a new innovation (255). Ciancio Rossetto thinks that the entirety was either repair or restoration work. The *caveas ferrea*[*s*] were presumably for holding wild beasts for *venationes*, almost exclusively held in the circus through the late Republic (Humphrey 71). Archaeologically, nothing of this earliest phase remains.

Procedural: Censorial contract (*locatio*).

Bibliography: Ciancio Rossetto in *LTUR* I "Circus Maximus" 272-77; Humphrey 1986.

115.   173 – *Aedes, Fortuna Equestris*

Sources: Liv. 40.40.10, 40.44.8-10, 42.3.1-11, 42.10.5; Vitr. 3.3.2.

Observing the flight of his Celtiberian foes in the face of his cavalry, the proconsul (see below) Q. Fulvius Flaccus vowed in gratitude an *aedem Fortunae Equestris* as well as *ludi* for Jupiter Optimus Maximus (Liv. 40.40.10). Immediately upon his return to Rome in 180 (*isdem* 40.44.8-10), Fulvius Flaccus was elected consul and refused to perform any public matters before the senate made preparations for his vows. He claimed that he had collected money from the Spaniards for this express purpose (*in eam rem sibi pecuniam conlatam esse ab Hispanis*), and the senate in turned decreed games and ordered the creation of *duumviri ad aedem locandam*. In his censorship beginning in 174 (*MRR* I 404), Fulvius Flaccus then lavished more personal attention on his temple: Livy tells us that he was determined that it be the most magnificent temple in Rome (Liv. 42.3.1-11). He went to Croton and stole half of the marble roof tiles from the Temple of Juno Licinia there, and using his censorial *auctoritas* to intimidate the local populace, he shipped them by fleet to Rome. The senate, however, stopped his impious actions, refusing to let him *ruinis templorum templa aedificantem*. The marble tiles were returned to Croton, but this prompts a strange notice by Livy that the *redemptores* (those who bought the contracts to ship the tiles back?) could find no *artifex* knowledgeable in replacing them in the roof, so they were left instead lying on the ground within the sanctuary. After the *lustrum* the following year (173: Liv. 42.10.5), Fulvius Flaccus finally dedicated his temple.

The temple was in the vicinity of the later Theater of Pompey (Vitr. 3.3.2: *Fortunae Equestris ad theatrum lapideum*, see Kondratieff; Coarelli p. 31 n. 7) in the Campus Martius, but its location is not at all secure. In 22 CE, the Equestrian Order asked Tiberius for a Temple to the same deity (Tac. *Ann.* 3.71.1), suggesting that Fulvius Flaccus' foundation no longer existed: this has given rise to the tentative suggestion that the temple stood N of the Theater of Pompey where the adjacent area was radically altered for the construction of the *Stagnum Agrippae* (Coarelli 1981). However, this theory fails to account for a passage from Julius Obsequens in which he refers to a *porticus inter aedem Iunonis Reginae et Fortunae* struck by lightning (16). If this is Fortuna Equestris, then it could have been somewhere south of Pompey's Theater, perhaps at the northwest end of the Circus Flaminius where Kondratieff locates it. This would make some sense: the fire described by Obsequens is said to have destroyed *circa aedificia pleraque* (*loc. cit.*), and this allowed for the subsequent construction of the *Porticus Metelli* in roughly this same place.

Procedural: Vowed by a proconsul. Liv. 40.39.1 says that Fulvius Flaccus, following his year as praetor, instead functioned as *proconsul* as his successor was late in arriving in the province, although both consuls that year seem to have been assigned Liguria, (cf. *MRR* I 389). At 42.3.1, Livy erroneously states that he made the vow as *praetor*. As consul, the same man ensured that the senate established *IIviri ad aedem locandam*; dedicated by the same man as censor.

Bibliography: Coarelli 1981: 31; Kondratieff in *MAR* "Fortuna Equestris, Aedes" 127.

116.   169 – *Basilica Sempronia*

Sources: Liv. 44.16.8-11.

Livy records that half the *vectigal* for the year 169 had been assigned from a *senatus consultum* by the quaestors to the censors for the construction of public works. One of the censors, Ti. Sempronius Gracchus (*MRR* I 424-24) *aedes P. Africani pone Veteres ad Vortumni signum lanienasque et tabernas coniunctas in publicum emit basilicamque faciendam curavit, quae postea Sempronia appellata est.* The most easily locatable item here is the *signum Vortumni*, which stood at the edge of the Forum and the Velabrum on the Vicus Tuscus (cf. Varr. *DLL* 5.46 on the Vicus Tuscus; Cic. *Verr.* 2.1.154, on the way into the Circus), putting these monuments (including the *b.S.*) on the S side of the Forum where the later Basilica Iulia would be placed. Excavations in 1960 below the central nave of the Basilica Iulia, on the extreme east end, found two parallel walls plausibly associated with an earlier basilica under the Basilica Iulia: the excavators identify this as part of the *b.S.*, and recently Iacopi has followed their interpretation in *LTUR*.

Procedural: Half of the annual *vectigal* (*Dimidium ex vectigalibus*) is *adtributum ex senatus consulto a quaestoribus ad opera publica facienda*. With his share of the *pecunia adtributa*, the censor purchased private land and consolidated it with shops then built (*faciendam curavit*) the structure.

Archaeological: Under the Basilica Iulia were found two parallel walls in blocks of *tufo giallo della via Tiberina*. The walls were 1.80 m thick and 7.25 m apart, axis-to-axis. Blocks were 1.30-1.40 m long, .54 m high, and .54-.58 m thick. The excavators noted "consueti" masons' marks on the headers, and they publish a picture but no drawings of the marks: it appears that one block has two marks. In between the two walls was a drain made of the same *tufo giallo* "in massima parte" with a vault *a cappuccina*. At the level above the walls and the drain were "scarsi residui" of travertine paving, and Carettoni suggests that they pertain to the same phase, but this would be a very early use of travertine paving if that were the case. Underneath the two walls was a small rectangular structure in *tufo del*

Palatino that was identified as an *impluvio,* perhaps a basin of some sort belonging to an even earlier structure.

Bibliography: Carettoni and Fabbrini 1961; Iacopi in *LTUR* I "Basilica Sempronia" 187-88.

ABBREVIATIONS

Journal abbreviations in the bibliography follow the conventions found in the *American Journal of Archaeology*. For ancient authors and corpora of ancient documents, I have followed the standards of the *Oxford Classical Dictionary*. Some works are cited with greater frequency and abbreviated as follows:

ERRM^2 = Shoe Merritt, Lucy. *Etruscan and Republican Roman Mouldings*. Rev. ed. with Ingrid Edlund-Berry. Philadelphia: University of Pennsylvania Museum Press, 2000.

ERC = Thomsen, Rudi. *Early Roman Coinage: A Study of the Chronology*. 3 vols. Copenhagen: National Museum, 1957-61.

FUR = Lanciani, Rudolfo. *Forma Urbis Romae*. Rome: Quasar, 1990 (Repr. 1893-1901).

HN Italy = Rutter, N. Keith. *Historia Nummorum Italy*. London: British Museum Press, 2001.

LTUR = Steinby, Eva Margarita, ed. *Lexicon Topographicum Urbis Romae*. Rome: Quasar, 1993-2006.

MAR = Haselberger, Lothar dir. with Romano, David G. *et al. Mapping Augustan Rome*. *JRA* Suppl. 50. Portsmouth, RI: *JRA*, 2002.

MRR = Broughton, Thomas Robert S. *The magistrates of the Roman Republic*. *Vol. I 509 – 100 B.C.* New York: APA, 1951.

Peter *HRR* = Peter, Hermann W.G. *Historicorum Romanorum Reliquae*. 2 vols. Leipzig: Teubner, 1883.

Platner Ashby = Platner, Samuel Ball and Ashby, Thomas. *A Topographical Dictionary of Ancient Rome*. Rome: Bretschneider, 1965.

Richardson *Dictionary* = Richardson Jr., Lawrence. *A New Topographical Dictionary of Ancient Rome*. Baltimore: JHU Press, 1992.

RRC = Crawford, Michael H. *Roman Republican Coinage*. 2 vols. Cambridge: Cambridge Press, 1976.

RRCH = Crawford, Michael H. *Roman Republican Coin Hoards*. London: Royal Numismatic Society, 1969.

RS = Crawford, Michael H., ed. *Roman Statutes*. 2 vols. London: Institute for Classical Studies, 1996.

RMR = Aa.vv. *Roma medio repubblicana. Aspetti culturali di Lazio nei secoli IV e III a.C.* Rome: L'Erma di Bretschneider, 1977.

StR = Mommsen, Theodor. *Römische Staatsrecht*. 3 vols. Leipzig: Herzel, 1871-88.

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