poses a Campus twice as long as that of even his most expan
predecessors.[35] Since the Campus had begun as land seized by T
quin the Proud, and since Tarquin was a tyrant with unlimi
power, it had to be large – "un gran podere dei tiranni".[36] W
Tarquin fell and the grain harvested from his campus was thro
into the Tiber, there was enough of it to form the Tiber Island;
cannot believe that it was a small estate. Piranesi also needed ro
for the many buildings that he knew from texts had been th
And many of these would need vast and elaborate settings, on
scale of the great thermal complexes and indeed of Hadrian's V
The word *longitudinem* thus prepares us for a Campus Martiu
unparalleled extent.

Campus Martius: Scenographia

The most eloquent ancient description of the Campus Martiu
in Strabo's *Geography*. For all Piranesi's wide reading in the anc
sources, Strabo remains his master text.[37] Indeed, he took pain
reproduce Strabo's Greek in an elegant cursive font.[38] Strabo spe
of two plains, one grassy and reserved for sports, the other ful
magnificent buildings, so many that it seemed another city. Here
saw three theaters (which he does not name but which are alv

[35] Flavio Biondo (*Roma triumphans*, Book VI, p. 128) had extended the C
pus to the flat land under the Pincian, but Donati pulled it back to the regio
the Pantheon, while Nardini is more restrictive still. According to Angelo M
Bandini, in *De Obelisco Caesaris Augusti e Campi Martii Ruderibus nuper*
Commentarius: Dell'obelisco di Cesare Augusto scavato dalle rovine del Campo M
commentario, Rome, 1750, p. 40, n. 9, many authors had written on the exte
the Campus, especially one Giovanni Vignoli, in *De Columna Imperatoris An*
Pii dissertatio, Rome, 1705, chap. II.

[36] *Ichnographia*, p. 4.

[37] Strabo, *Geographia*, 5.3.7-8. The Strabo passage is cited by many antiq
ans, for example, Carlo Fontana, *Discorso sopra l'antico Monte Citatorio*, 2nd
Rome, 1708, p. 3; Strabo's two plains are discussed by Giuseppe Lugli, "Il Ca
Marzio nell'antichità", *Memorie della Accademia Nazionale dei Lincei*, ser. 8, I
I, pp. 91-196, especially pp. 127-32; T.P. Wiseman, "Strabo on the Campus
tius", *Liverpool Classical Monthly* 4.7, July 1979, pp. 129-34; republished in *Ro*
Studies Literary and Historical, Liverpool, 1987, pp. 161-66; Wiseman, "Car
Martius"; and Filippo Coarelli, *Il Campo Marzio, Vol. I: Dalle origini alla fine*
repubblica, Rome, 1997, pp. 11ff.

[38] *Le antichità romane*, I, p. viii.

read as those of Pompey, Marcellus, and Balbus), an amphitheater (assumed to be the Amphitheater of Statilius Taurus), close-packed temples, groves, honorary statues, the Saepta Iulia and other porticoes, the great Augustan sundial with the Gnomon Obelisk, the Aqua Virgo, the Mausoleum of Augustus, the Villa Publica, and various *curiae, fora, tabernae,* and triumphal arches. All this was laid out like a stage scene, says Strabo, a *skēnographikēn opsin,* between the river and "crowns of hills", *tōn lophōn stephanai.*

Strabo uses the plural for these hills and so does Piranesi. He reasoned that Strabo cannot have meant mere mounds like Monte Giordano and Monte Citorio, as some antiquarians had argued,[39] but must have meant the chain of hills beginning with the Pincian and extending over the hills of Parioli as far as the Tiber on the north. The common name for the Pincian was *collis Hortulorum* ("hill of gardens"), but Piranesi inevitably uses the plural *colles Hortulorum* ("hills of gardens"), echoing Strabo's "crowns of hills". Indeed, the *Scenographia* of the *Campus Martius* (Fig. 13) could almost serve as the frontispiece for an illustrated Strabo, bringing his "stage scene" to life.

Piranesi's *Scenographia* is a stage scene in another sense as well. It introduces in the foreground of the print the principal antiquities, like actors sitting on a stage before the curtain rises. All, from the obelisks to the drainpipes, were famous. The Column of Marcus Aurelius (caption number 1 on the *Scenographia*) stands tall on the right, as do four obelisks: the small obelisk now borne by Bernini's elephant in front of Santa Maria sopra Minerva (5), the small obelisk of San Macuto now on the fountain in front of the Pantheon (6), the large obelisk without hieroglyphs from St. Peter's (4), and the obelisk from the Garden of Sallust (7). This last obelisk now stands in front of the Trinità dei Monti, but in 1762, as Piranesi notes, it was lying on its side in the piazza in front of San Giovanni in Laterano, awaiting erection there.[40] Neither St. Peter's nor the Garden of Sallust were in the Campus Martius, but these

[39] Piranesi is here criticizing Famiano Nardini, *Roma antica*, ed. O. Falconieri, Rome, 1666.

[40] Bandini, *Dell'obelisco di Cesare Augusto*, p. xiv. The Salustian obelisk had been excavated in Villa Ludovisi and given by Ippolita Ludovisi Boncompagni to Clement XII, who transported it to the Lateran, though his project for erecting it there was cut short by his death; see Erik Iversen, *Obelisks in Exile, Vol. I: The Obelisks of Rome*, Copenhagen, 1968, pp. 128-32.

two obelisks and their respective circuses would find a place in Piranesi's expansive plan.

Dominating the bottom of the *Scenographia* are the shattered fragments of a fifth obelisk, the gnomon of the Sundial of Augustus (8). It is also shown in the distant view, like a tiny stick lying on its side (31). The original base appears upright in front of the obelisk, with its proud inscription, *Augustus ... Soli Donum Dedit* ["Augustus gave this as a gift to the sun"]. The obelisk was first discovered in the basement of a house to the north of Montecitorio during the reign of Julius II, along with gilt bronze lines of the sundial and mosaics depicting the winds. It is present on the Nolli plan of 1748 and was extracted in pieces in that year, but not erected in Piazza Montecitorio until 1792.

In addition to these obelisks, the *Scenographia* shows some smaller fragments: a porphyry column with an imperial bust (2), then in Palazzo Altemps but now in the Louvre; a lead drainpipe with a stamp identifying the temple of Hadrian's mother-in-law, Matidia (15); and an elaborate trophy capital in the Massimi collection (12). On the far right is the famous "Reges Brit...". inscription from the Arch of Claudius (3). It had been built into the arches of the Aqua Virgo to commemorate Claudius's triumph over Britain. Excavated for Cardinal Francesco Barberini in the Piazza Sciarra on the Corso in 1641, in Piranesi's day it was displayed at Palazzo Barberini; today it can be seen in the courtyard of the Palazzo dei Conservatori. On the far left are entablature fragments (14) that came originally from the Temple of Marcus Aurelius in the Piazza di Pietra (shown as number 27 in the distant view). These blocks bear the dedicatory inscription "D. Roberto Adam Arch", a playful pendant to the "Reges Brit" inscription on the right.

Campus Martius: Ichnographia

Even when we are prepared to accept the long Campus Martius, the first impact of the *Ichnographia* is overwhelming (Fig. 1). "It takes patience to walk through the Piranesian city", said an early Piranesi scholar.[41] The print itself is gigantic, etched on six large sheets that measure 1.35 by 1.17 meters when assembled. It

[41] Vincenzo Fasolo, "Il 'Campomarzio' di G.B. Piranesi", in *Quaderni dell'Istituto di Storia dell'Architettura Università di Roma* 15, 1956, p. 8.

includes far more terrain than the Campus Martius as normally conceived, even by the most expansive writers. The Campus occupies only the lower left quadrant of the plan, while the upper left quadrant is occupied by the Prati behind Castel Sant'Angelo, the upper right by the Via Flaminia north of Porta del Popolo, and the lower right by a vast villa quarter built up around the Horti Sallustiani and sprawling through the modern Ludovisi and Borghese villas. The bottom boundary of the print is the Servian Wall, separating the Campus from the Capitoline and Quirinal hills, which were inside the Republican city and not in the Campus Martius. The huge mass of fallen masonry at the back of the Pincio, known as the Muro Torto, is present, but not the Aurelian Wall into which it was later built. There is no city gate where the Porta Flaminia (Porta del Popolo) would later stand. Like a modern conurbation, a boundaryless city has filled up the whole floodplain of the Tiber.

The monuments within the Campus Martius as we know it, that is, in the area shown in the lower left quadrant of the print, seem diminutive. We naturally tend to search first for the largest and most famous of the surviving buildings. The Pantheon is not difficult to locate, but it is dwarfed by extensive porticoes and pools around it, representing the Stagnum Agrippae, the artificial basin built by Agrippa near his bath (Fig. 4). Piazza Navona appears, according to the common wisdom, as a circus, but in addition, Piranesi adds a huge circular precinct to the left. We now know, as Piranesi did not, that Piazza Navona was a stadium.[42] Piranesi knew from Suetonius that there was a stadium somewhere, and he had to find room for it. He eventually put it in the westernmost part of the Tiber bend, to the west of Piazza Navona and parallel to it.

The Augustan sundial looks like a two-headed ax in Piranesi's rendering, with the Gnomon Obelisk as a tiny point below its central axis (Fig. 5). Below this is an amphitheater that looks at first glance like the Colosseum but is actually the Amphitheater of Statilius Taurus, put by Piranesi on the site of the hill of Montecitorio. Just below this amphitheater is the Column of Marcus Aurelius, the

[42] Antonio Maria Colini, "Lo Stadio di Domiziano", *Capitolium* 16, 1941, pp. 209-23 (reprinted as a separate fascicule, Rome, 1941); *idem*, *Stadium Domitiani*, Rome, 1943, reprint 1998; Nash, *Pictorial Dictionary*, II, pp. 387-90. In *Lexicon Topographicum*, IV, see Paola Virgili, "Stadium Domitiani", pp. 341-33, and G. De Spirito, "Stadium Domitiani (in fonti agiografiche)", pp. 343f.

center of a complex forum. The Mausoleum of Augustus was one of the largest surviving monuments and is easily recognizable on the *Ichnographia*. Houses encroached upon it in Piranesi's day, but he clears all these away and makes it the center of an enormous complex that he calls the Bustum Caesaris, the place of cremation for the Julio-Claudian emperors (Fig. 6). Walls radiate out from the mausoleum and run over enormous distances, spanning the heights of the Pincian before coming to an end at the Muro Torto. The theaters of Pompey and Marcellus are also easy to find. To these Piranesi adds a third theater, that of Balbus (Fig. 8). He places it next to the upriver point of the Tiber Island, which, by being conjoined to a number of small islets, appears far larger on the map than it was in the artist's day.

Piranesi also found room on the *Ichnographia* for dozens of statues. This should not surprise us. In earlier vedute, he was fond of inserting famous statues like the Farnese *Hercules*, the *Dioscuri*, the Belvedere *Tiber*, the Capitoline *Roma*, and the bronze *Brutus*, as well as modern works like Michelangelo's *Bacchus*.[43] Given the great sweep of the *Ichnographia*, statues have to be shown as dots on tiny square bases, as in a satellite photograph. He carefully noted many of the Greek statues mentioned by Pliny, realizing that they had been uprooted from their Greek contexts and were on display as plunder in Rome. When Pliny gives the exact location of a statue Piranesi respects it, but otherwise he feels free to place them according to his fancy. They come thick and fast in the crowded area of the lower Campus Martius, just outside the walls of the Campidoglio. Some are freestanding statues, out in the open or in porticoes. Piranesi often provides identification. We find the bronze *Hercules* ("signum Herculis") in the Porticus Minucia Vetus, the statue that was said to have sweated in the days before the assassination of the emperor Commodus. Another is the Lysippus statue of an athlete scraping himself (labeled "destingentem se", "statua se abstergentis") – the famous *Apoxyomenos*, which Piranesi puts in the Baths of Agrippa. Pliny tells how Tiberius so coveted this statue that he took it for himself, but the crowd shouting "Apoxyomenos" in the theater forced him to give it back. Piranesi locates a statue of Julius Caesar inside the Pantheon, with

[43] Nicholas Penny, "Antique Sculpture in the Work of Piranesi", in *Piranesi tra Venezia e l'Europa*, pp. 43-50.

Augustus and Agrippa in the porch; he adds a Hadrianic vestibule with statues of Hadrian and Trajan. Behind the Theater of Pompey he puts three statues in a row: *Janus*, probably the statue made under Numa, where the god is signaling 365 (or 355) days by the fingers of his hands; *Pompey*; and a "Colossum Iovis Pompejani". He does not understand the difference between the statues of the Fourteen Nations that Coponius made for Pompey's theater and the *Porticus ad Nationes* of Augustus, where he puts the "Statuae XIV Gentium". At the end of this long portico he puts *Hercules Punicus*, the statue of Hercules to which the Carthaginians used to offer an annual human sacrifice, and which Pliny said lay near this portico, dishonored and without a temple.

Piranesi makes the Basin of Agrippa behind the Pantheon into a waterborne museum, with two rostral columns of Augustus in tempietti on little islands, and statues of beasts and reptiles ("simulacra quadripedium et reptilium") on long, thin bases (Fig. 4). He puts the lion of Lysippus ("leo Lisippi opus") in the terrace ("Nemus Agrippae") that protrudes into the basin behind the Pantheon.

As all antiquarians knew, the Portico of Octavia was located in the extensive ruins between the ghetto and the church of Sant'Angelo in Pescheria. Piranesi also had a sizable fragment of the Marble Plan to aid him in his reconstruction. He fills the portico with statues. Aside from the large bases for statues of Octavia and Augustus, Piranesi positions eight statue bases in front of each temple and four more behind. He doubtless relished Pliny's story of a mix-up in delivery, made permanent by cultic awe, that led to the statues appropriate for Juno being put in the Temple of Jupiter and vice versa. Pliny records a number of temples "in circo Flaminio", and Piranesi tries to find a place for them in this crowded area. They include the temple ("delubrum") of Gnaeus Domitius, the temple founded by Brutus Callaicus with a statue of Mars inside, and the Temple of Bellona with the Columna Bellica in front. Interspersed with these named monuments are dozens or hundreds of tombs, temples, porticoes, aqueducts, fountains, canals, *naumachiae*, *natationes*, staircases, "sylvae et ambulationes", statues, triumphal arches, walls for monumental inscriptions, voting precincts, baths, gymnasia, and six bridges over the Tiber.

Yet there are practically no houses in Piranesi's *Campus Martius*. We know from the fragments of the Marble Plan that private buildings existed in all quarters of Rome, antedating the larger public

structures. There are also houses mentioned explicitly in the texts, such as the house of Pompey, near his theater.[44] But Piranesi shows an overwhelmingly monumental Campus, as though the legislation of 397, which banned private dwellings, had been observed retroactively throughout history.[45] Instead, there is no shortage of brothels, or *lupanaria*, lodged in tiny, ramshackle buildings here and there, but especially in the entertainment district near the great theaters.

3. Earlier Plans of Ancient Rome

It is time to step back from the *Campus Martius* and look at Piranesi's predecessors in the enterprise of mapping ancient Rome. The earliest of them left no drawings or prints that Piranesi might have known and so can be surveyed quickly. Vasari says that Brunelleschi, after profound study, became capable of seeing Rome in his mind's eye, just as it was before it was ruined.[46] However, even if Brunelleschi did spend time in Rome, no trace remains of his studies and at best we might say that he stands at the beginning of a process that would soon make his insights seem primitive. In the next generation, Flavio Biondo took a giant step forward in his work of 1444-46, *De Roma instaurata*. "I restored Rome myself in my writings" was his proud boast, though his was a philological exercise and no plans were provided.[47] Plans of sweeping imagina-

[44] Wiseman, "Campus Martius", p. 222.

[45] Cod. Theod. 14.14, cited by Wiseman, "Campus Martius", p. 224.

[46] Giorgio Vasari, *Le vite de' più eccellenti pittori, scultori e architettori*, ed. Rosanna Bettarini and Paola Barocchi, Florence, 1971, III, p. 150: "Fu tale questo studio che rimase il suo ingegno capacissimo di potere veder nella immaginazione Roma come ella stava quando non era rovinata".

[47] Passages from Biondo's *Roma instaurata* are excerpted in *Codice topografico della città di Roma*, ed. Roberto Valentini and Giuseppe Zucchetti, 4 vols., Rome, 1940-53, 4, pp. 247-323. See R. Fubini, "Biondo Flavio", *Dizionario Biografico degli Italiani*, 1968, X, pp. 536-59; Dorothy Robathan, "Flavio Biondo's *Roma Instaurata*", *Medievalia et Humanistica*, n.s. 1, 1970, pp. 203-16 (p. 204: "Biondo's painstaking method of piecing together the jigsaw puzzle from literary sources"); A.M. Brizzolara, "La Roma Instaurata di Flavio Biondo: Alle origini del metodo archeologico", *Memorie dell'Accademia delle Scienze dell'Istituto di Bologna, Classe di Scienze Morali* 76, 1979/80, pp. 29-74; Angelo Mazzocco, "Rome and the Humanists: The Case of Biondo Flavio", in P.A. Ramsey, ed., *Rome in the Renaissance: The City and the Myth*, Binghamton, N.Y., 1982, pp. 185-95; Cesare D'Onofrio, *Visitiamo Roma nel Quattrocento: La città degli umanisti*, Rome, 1989

tion, on the other hand, were the legacy of Francesco di Giorgio Martini. In his manuscript treatise the *Codex Saluzzianus*, now in Turin, he shows the ancient Capitol as an enormous complex designed in strict symmetry around two axes that meet at right angles, with a circular Temple of Jove in the center. We are left with a warning, however: "In great part I make my way by imagination, since in the mass of ruins very little can be understood" ("In maggior parte ito inmaginando che per le molte ruine pocho conprendar se ne po"). He tells us that the "Palazzo Maggiore" on the Palatine (the whole vast layout of which is governed by symmetry) is "in part copied and in part added according to fantasy, since one cannot understand it all because of the quantity of ruins" ("In più parte chopiato et parte agionto a fantasia che per le molte ruine in tucto conprendar non si può").[48]

(Biondo translated into Italian); Philip Jacks, *The Antiquarian and the Myth of Antiquity: The Origins of Rome in Renaissance Thought*, Cambridge, 1993, p. 113-18; Hubertus Günther, "The Renaissance of Architecture", in *The Renaissance from Brunelleschi to Michelangelo: The Representation of Architecture*, exh. cat., ed. Henry Millon and Vittorio Magnago Lampugnani, Milan, 1994, pp. 259-305; Hubertus Günther, "L'idea di Roma antica nella 'Roma Instaurata' di Flavio Biondo", in *Le due Rome del Quattrocento: Melozzo, Antoniazzo e la cultura artistica del '400 romano* (1996), ed. Sergio Rossi and Stefano Valeri, Rome, 1997, pp. 380-93; Maria Agata Pincelli, "La Roma triumphans e la nascita dell'antiquaria: Biondo Flavio e Andrea Mantegna", *Studiolo* 5, 2007, pp. 19-28. As John Shearman pointed out ("A Functional Interpretation of Villa Madama", *Römisches Jahrbuch für Kunstgeschichte* 20, 1983, p. 325, n. 49), another work by Flavio Biondo (*De Roma Triumphante libri decem, priscorum scriptorum lectoribus utilissimi, ad totiusque Romanae antiquitatis cognitionem pernecessarij*, Basel, 1531, especially Book IX, pp. 314ff.) is a rich source for the Renaissance understanding of the ancient villa.

[48] Francesco di Giorgio Martini, *Trattati di architettura ingegneria e arte militare*, ed. Corrado Maltese, transcribed by Livia Maltese, 2 vols., Milan, 1967, I, fols. 82r-v, p. 282, *tav.* 151-152; Christoffer Ericsson, *Roman Architecture Expressed in Sketches by Francesco di Giorgio Martini: Studies in Imperial Roman and Early Christian Architecture*, in *Commentationes Humanarum Litterarum* 66, Helsinki, 1980, pp. 105-107, on the artist's "Pianta misurata del Palazzo Maggiore", Uffizi A328r; Howard Burns, "'Restaurator delle ruyne antiche': Tradizione e studio dell'antico nell'attività di Francesco di Giorgio", in *Francesco di Giorgio architetto*, ed. Francesco Paolo Fiore and Manfredo Tafuri, Milan, 1994, enlarged edition of the exhibition catalogue with the same title of 1993, pp. 151-81; Richard Betts, "*Si come dice Vetruvio*: Images of Antiquity in Early Renaissance Theory of Architecture", in *Antiquity and Its Interpreters*, ed. Alina Payne, Ann Kuttner, and Rebekah Smick, Cambridge, England, 2000, pp. 244-57 (dating the Salluzzianus version of the Trattato to 1475-76, ten to fifteen years earlier than most authors), especially

Raphael 1514-20

Raphael, in his famous letter to Pope Leo X (r. 1513-21), describes an antiquarian project designed to outdo anything that came before.[49] The initiative, he says, came from the pope:

pp. 250f., fig. 64, for the plan of the Capitoline Palace: "... his reconstructions of ancient buildings ... are in fact his first exercises in design ...".

[49] I have relied principally on John Shearman, *Raphael in Early Modern Sources (1483-1602)* (Römische Forschungen der Bibliotheca Hertziana 30-31), 2 vols., New Haven and London, 2003, I, pp. 207-11, 247, 522-45, 572-74, 581-83, and II, pp. 1498-1500 (superseding Vincenzo Golzio, *Raffaello nei documenti nelle testimonianze dei contemporanei e nella letteratura del suo secolo*, Vatican City, 1936). The texts are also available in Francesco P. Di Teodoro, *Raffaello, Baldassar Castiglione e la Lettera a Leone X*, Bologna, 1994, 2nd enlarged ed., Bologna, 2003, with a presentation by Christof Thoenes, pp. vii-xi. Although a small part of the Raphael letter was translated by William Roscoe, *The Life and Pontificate of Leo the Tenth*, rev. by Thomas Roscoe, 2 vols., London, 1888-91, II, pp. 343-45, the first full English translation is by Carlo Pedretti, *A Chronology of Leonardo da Vinci's Architectural Studies after 1500*, Geneva, 1962, pp. 157-71. All studies of Raphael and the antique mention the letter: Rodolfo Lanciani, "La pianta di Roma antica e i disegni archeologici di Raffaello Sanzio", *Rendiconti della Reale Accademia dei Lincei, classe di scienze morali, storiche e filologiche*, ser. V, III, 1894, pp. 791-804 (summarized in Rodolfo Lanciani, *Storia degli scavi di Roma e notizie intorno le collezioni romane di antichità*, 4 vols., Rome, 1902, I, pp. 166f.); Christian Hülsen, "Die Halle in Raphaels 'Schule von Athen'", *Mitteilungen des kunsthistorischen Instituts in Florenz* 4, 1911, pp. 229-36, with Hülsen's unpublished ideas discussed in Julius Schlosser Magnino, *La letteratura artistica: Manuale delle fonti della storia dell'arte moderna* (1935), 3rd ed. by Otto Kurz, Florence and Vienna, 1964, pp. 199-201; Roberto Weiss, *The Renaissance Discovery of Classical Antiquity*, Oxford, 1969, pp. 94-97; Ferdinando Castagnoli, "Raphael and Ancient Rome", *The Complete Works of Raphael*, New York, 1969, pp. 569-84; John Shearman, "Raphael, Rome, and the Codex Escurialensis", *Master Drawings* 15, 1977, pp. 107-146; Gabriele Morolli, *"Le belle forme degli edifici antichi": Raffaello e il progetto del primo trattato rinascimentale sulle antichità di Roma*, Florence, 1984; in *Raffaello architetto*, ed. C. Frommel, S. Ray, and M. Tafuri, Milan, 1984, see Howard Burns, "Raffaello e 'quell'antica architectura'", pp. 381-396, and Arnold Nesselrath, "Raffaello e lo studio dell'antico nel Rinascimento", pp. 397-399; Arnold Nesselrath, "Raphael's Archaeological Method", in *Raffaello a Roma* (1983), Rome, 1986, pp. 357-371; Hubertus Günther, *Das Studium der antiken Architektur in den Zeichnungen der Hochrenaissance* (Römische Forschungen der Bibliotheca Hertziana 24), Tübingen, 1988, pp. 60-63; Gabriele Morolli, "Raffaello e Vitruvio: Un'ultima amnesia della 'Fortuna'", *Quasar* 6-7, 1991-92, pp. 31-50; Arnold Nesselrath, *Das Fossombroner Skizzenbuch* (Studies of the Warburg Institute 41), London, 1993; Paul Crossley, "The Return to the Forest: Natural Architecture and the German

> As I was bade by your Holiness to put ancient Rome into drawing, as far as one could know it from what one can see, with the buildings whose remains can be seen and plotted with certainty, making those members that are completely ruined or vanished from sight correspond with those still extant.
>
> [Essendomi adonque comandato da Vostra Santitate ch'io pongha in dissegno Roma anticha, per quanto conosere si pò da quello che hoggi dì si vede, con gli edificii che di sé dimostrano tal reliquie, che per vero argumento si possono infallibilmente ridurre nel termine proprio come stavano, facendo quelli membri che sono in tutto ruinati, né si veggono punto, correspondenti a quelli che restano in piedi].[50]

The project, John Shearman thinks, would have begun at the outset of Leo X's pontificate, around 1514-15. The first of the three surviving drafts of the letter, written in the hand of Castiglione, would date to before June 1516; two other drafts would date to 1519. As Raphael himself tells us, aside from the cumulative body of ancient texts on Roman topography, he had the advantage of a new source, the catalogue of the regions of Rome attributed to Publius Victor.[51] In it the city is laid out in fourteen regions, as in

Past in the Age of Dürer", *Künstlerischer Austauch, Akten des XXVII. Internationalen Kongresses für Kunstgeschichte, Berlin* (1992), Berlin, 1993, II, pp. 71-80; Jacks, *The Antiquarian*, pp. 183-91; Ingrid Rowland, "Raphael, Angelo Colocci, and the Genesis of the Architectural Orders", *Art Bulletin* 76, 1994, pp. 81-104, and *The Culture of the High Renaissance: Ancients and Moderns in Sixteenth-Century Rome*, Cambridge, England, 1998, pp. 226-34; Jessica Maier, "*Imago Romae*: Renaissance Visions of the Eternal City", Ph.D. diss., Columbia University, 2006, pp. 109-74; and Ian Campbell and Arnold Nesselrath, "The Codex Stosch: Surveys of Ancient Buildings by Giovanni Battista da Sangallo", *Pegasus–Berliner Beiträge zum Nachleben der Antike* 8, 2006, pp. 9-90. The letter is discussed with brevity but insight in some of the general monographs on Raphael: Eugène Müntz, *Raphaël: Sa vie, son oeuvre et son temps*, Paris, 1881, translated into English as *Raphael: His Life, Works, and Times*, trans. Walter Armstrong, London, 1882, pp. 581-94; Roger Jones and Nicholas Penny, *Raphael*, New Haven and London, 1983, pp. 199-205; and Bette Talvacchia, *Raphael*, London and New York, 2007, pp. 147-50.

[50] Shearman, *Raphael in Early Modern Sources*, p. 503.

[51] The regionary catalogue composed between the time of Diocletian and the mid–fourth century has come down in two versions, known for short as the *Notitia* and the *Curiosum*. Flavio Biondo knew the text in manuscripts and attributed it to an otherwise unknown Sextus Rufus. However, around 1476-88, Pomponio Leto assembled a personalized version larded with erudite references from other texts to monuments that he thought should be in each region. This "interpolated"

the time of Augustus, with the names of the most prominent landmarks given for each region.

To marry this text to the actual ruins, Raphael proudly used a modern instrument, a circular surveyor's plate marked in angular degrees and equipped with a magnetic compass ("la bussola de la calamita"). Raphael remarks that, like artillery or the printing press, the instrument was unknown to the ancient world, though in modern times he was not the first to use it. Leon Battista Alberti employed a similar instrument to draw a plan, or as we might say, a circular graph, of modern Rome, probably around 1432-34;[52] Leonardo used something like it for his plan of Imola in 1502;[53] and Antonio da Sangallo used a plane-table to survey fortifications.[54] But no one before Raphael had used a transit equipped with a compass to plot ancient ruins. The cartographer Leonardo Bufalini gives us a picture of such an instrument on his map of 1551, while a more accurate illustration is included in Vincenzo Scamozzi's treatise of 1615.[55]

regionary catalogue was published by Aulo Giano Parrasio, who had been a member of the Accademia Pomponiana from 1497 to 1499; circa 1503-04 he published *De Regionibus urbis Romae libellus aureus*, which he attributed to a fictitious personality, Publius Victor. Editions followed in 1505, 1509, 1510, 1518, 1519, 1520, 1521, 1523, and 1538, but the fictitious Sextus Rufus and Publius Victor were only exposed in the nineteenth century. See Valentini and Zucchetti, *Codice topografico*, I, pp. 62-102 for the regionary catalogues, and pp. 193-258 for the "Descrizione interpolata"; for their origins in urban regulation under Augustus, see Andrew Wallace-Hadrill, *Rome's Cultural Revolution*, Cambridge, 2008, pp. 290-301.

52 Leon Battista Alberti, "Descriptio Urbis Romae", in Valentini and Zucchetti, *Codice topografico*, IV, pp. 209-222; Frutaz, *Le piante di Roma*, I, pp. 127f., cat. LXXIX, and II, p. 151 (after the 1884 reconstruction of the map by A. Capannari); John Pinto, "Origins and Development of the Ichnographic City Plan", *Journal of the Society of Architectural Historians* 35, No. 1, 1976, pp. 35-50; Leon Battista Alberti, *Descriptio urbis Romae: Édition critique, traduction et commentaire* (Cahiers d'Humanisme et Renaissance 56), ed. Martine Furno and Mario Carpo, Geneva, 2000; *Leon Battista Alberti's Delineation of the City of Rome (Descriptio vrbis Romae)*, ed. Mario Carpo et al., Tempe, Arizona, 2007.

53 Pedretti, *A Chronology*, p. 157-162; Pinto, "Ichnographic City Plan".

54 *The Architectural Drawings of Antonio da Sangallo the Younger and His Circle*, ed. Christoph Frommel and Nicholas Adams, New York and Cambridge, Mass., I, 1994, pp. 128-30 (Uffizi A771-A774) and 256 (A1515).

55 Pedretti, *A Chronology*, p. 159, fig. 86, from Vincenzo Scamozzi, *L'idea dell'architettura universale*, Venice, 1615, ed. Werner Oechslin, with preface by Franco Barbieri, Verona, 1997, I.ii.xiv, p. 143; Pinto, "Ichnographic City Plan", p. 44, fig. 6.;

Raphael's premature death in 1520 was a blow to painting, but also, many felt, to the project of resurrecting ancient Rome. In a diary entry of 7 April 1520, when he first heard of the artist's death, the well-informed Venetian Marcantonio Michiel, then living in Rome, hints that Raphael had obtained the famous papal brief of 27 August 1515, which made him "prefect" of all ancient marble and masonry in the city, not only to obtain supplies for St. Peter's but also to help him in the enterprise of drawing ancient Rome. Then in a letter four days later (11 April 1520), Michiel elaborates:

> Just as Ptolemy mapped the world, [Raphael] drew up the ancient buildings of Rome in a book, showing the proportions, forms and ornaments with such clarity that whoever saw it could be excused from seeing ancient Rome. He finished the first region. He not only showed the plans and site of the buildings, mapped with great effort from the ruins, but also their outer aspect, and when the ruins had not kept their ornament he filled it in on the basis of Vitruvius, the rules of architecture, and the ancient sources.
>
> [e stendeva in un libro, sicome Ptholomeo ha isteso il mondo, gli edificii antiqui di Roma, mostrando sì chiaramente le proportioni, forme et ornamenti loro, che averlo veduto harìa iscusato ad ogniuno haver veduta Roma antiqua; e già havea fornita la prima regione. Né mostrava solamente le piante delli edifficii et il sito, il che con grandissima faticha et industria de le ruine saria raccolto, ma ancora le facia, cum li ornamenti quanto da Vitruvio e dalla ragione de la architectura e da le istorie antiche, ove le ruine non le rintenevano, havea appreso, expresissimamente designava].[56]

Michiel says that Raphael showed both plan and site for the ancient buildings, which would seem to imply locating them in terms of their surroundings, perhaps even in a measured way. Another witness to Raphael's project is Girolamo Aleandro, who addressed a Latin poem to Leo X and Raphael sometime between 1516 and the artist's death in 1520. Aleandro mentions arches, circuses, fora, pools, baths, storehouses, *nymphaea*, figures, tombs, cisterns, encampments, houses, hills, temples, theaters, and streets, as well as the materials and dimensions of the structures and their ori-

Mario Bevilacqua, *Roma nel secolo dei lumi: Architettura erudizione scienza nella Pianta di G. B. Nolli "celebre geometra"*, Naples, 1998, p. 8; with a full survey of such instruments in Daniela Stroffolini, *La città misurata: Tecniche e strumenti di rilevamento nei trattati a stampa del Cinquecento*, Rome, 1999.

[56] Shearman, *Raphael in Early Modern Sources*, I, p. 581.

entation. The humanist Celio Calcagnini, in a letter of 1519 or 1520, also stresses Raphael's ambition to resurrect the city, not merely individual buildings: "the City itself restored to its ancient appearance, greatness, and symmetry" ("ipsam plane Urbem in antiquam faciem et amplitudinem ac symmetriam instauratam magna parte ostendit").[57]

Seven years after Raphael's death, just before the emperor Charles V's sack of Rome in 1527, other voices begin to be heard from the team of which he had been "principal investigator". Andrea Fulvio of Palestrina, a disciple of Pomponio Leto, published his *Antiquitates Urbis* in 1527, as a prose expansion of his earlier Latin poem *Antiquaria Urbis* of 1513 on the ruins of Rome. In the *Antiquitates*, he tells us about expeditions with the painter among the ruins during which he would identify the monuments while Raphael drew them.[58]

> Then exploring the city region by region I observed the ancient sites that Raphael of Urbino (whom I mention to give him credit and me honor), a few days before he departed this life, drew with brush as I pointed them out.
>
> [Priscaque loca tum per regiones explorans observavi, quas Raphael Urbinas (quem honoris causa nomino) paucis ante diebus quam e vita decederet (me indicante) penicillo finxerat].[59]

Another member of the team was Marco Fabio Calvo (Marco Fabi or Favio of Ravenna, who adopted the humanist surname Calvus). After a life devoted to medicine and the translation of the Greek medical corpus, Calvo entered Raphael's circle with a trans-

[57] Ibid., pp. 257-59 and 546-50.

[58] Andrea Fulvio, *Antiquaria Urbis*, Rome, Jacopo Mazzochi, 1513, in two books; *idem*, *Antiquitates Urbis*, Rome, 1527, in five books, dedicated by the publisher, Iacopo Sadoleto, to Clement VII. Fulvio was translated into Italian in 1543: *Opera di Andrea Fulvio delle antichità della città di Roma, e delli edificij memorabili di quella*, Venice, 1543, and updated to reflect the Rome of Sixtus V: *L'antichità di Roma*, ed. Girolamo Ferruci, Rome, 1588. See Roberto Weiss, "Andrea Fulvio antiquario romano, c. 1470-1527", *Annali della Scuola Normale Superiore di Pisa, Lettere, storia e filosofia*, ser. 2, 28.1-4, 1959, pp. 1-44; Jacks, *The Antiquarian*, pp. 180-90; Shearman, *Raphael in Early Modern Sources*, I, pp. 819-20, and II, p. 1498, F35 for a forged letter of Raphael to Calvo bearing the date 15 August 1514.

[59] Fulvio, *Antiquitates Urbis*, 1527, fol. Bii r, quoted in Shearman, *Raphael in Early Modern Sources*, I, p. 819.

lation of Vitruvius finished for the painter in 1516.[60] In 1527 he published a book on ancient Rome, the *Antiquae Urbis Romae cum Regionibus Simulachrum.* Unfortunately, the stock was almost all lost in the sack of the city and only three copies survive; more common is the edition of 1532.[61]

At first sight, Calvo's *Simulachrum* seems like the strangest book, with beautiful type by one of the great calligraphers of the age, Ludovico degli Arrighi, but primitive images. The Roma Quadrata of Romulus and the Rome of the Servian Wall are simple diagrams filled with tiny hills topped by small schematic buildings. Augustan Rome is shown as a circular wall with sixteen gates, while the interior is divided like the slices of a pie radiating from a column, the "Umbilicus Urbis", planted in the center (Fig. 24).[62]

[60] Vincenzo Fontana and Paolo Morachiello, eds., *Vitruvio e Raffaello: Il "De Architettura" di Vitruvio nella traduzione inedita di Fabio Calvo ravennate*, Rome, 1975; Ingrid Rowland, "Raphael, Angelo Colocci, and the Genesis of the Architectural Orders", *Art Bulletin* 76, 1994, pp. 81-104.

[61] Marco Fabio Calvo, *Antiquae Urbis Romae cum Regionibus Simulachrum*, Rome, 1527 (with woodcuts by Tolomeo Egnazio di Fossombrone); 2nd ed. by Calvo's nephew Timoteo Fabio, Rome, 1532; 3rd ed., Basel, 1556. The three extant examples of the 1527 edition are in Rome, Biblioteca Nazionale; Biblioteca Apostolica Vaticana; and the Leiden University Library. The plates are partly reproduced in Frutaz, *Le piante di Roma*, I, pp. 51f, cat. VII-X; II, *tav.* 16-19. Partial bibliography: Müntz, *Raphael*, p. 593 ("The plates are barbarous in the extreme ..., however, the work is, without doubt, an offshoot from the project of Raphael"); André Jammes, "Un chef-d'oeuvre méconnu d'Arrighi Vicentino", *Studia Bibliographica in Honorem Herman de la Fontaine Verwey*, Amsterdam, 1967, pp. 297-316; Weiss, *Renaissance Discovery*, pp. 97f.; José Ruysschaert, "Les différents colophons de l'*Antiquae Urbis Romae cum regionibus simulachrum* de 1532", in *Contributi alla storia del libro italiano: Miscellanea in onore di Lamberto Donati*, Florence, 1969, pp. 287-90; Alfred Frazer, "A Numismatic Source for Michelangelo's First Design for the Tomb of Julius II", *Art Bulletin* 57, 1975, pp. 53-57; Pier Nicola Pagliara, "La Roma antica di Fabio Calvo: Note sulla cultura antiquaria e architettonica", *Psicon* 3, 1976, pp. 137-206; Philip Jacks, "The *Simulachrum* of Fabio Calvo: A View of Roman Architecture *all'antica* in 1527", *Art Bulletin* 72, 1990, pp. 453-481; Jacks, *The Antiquarian*, pp. 191-204; David Wright, *The Vatican Vergil: A Masterpiece of Late Antique Art*, Berkeley and Los Angeles, 1993, pp. 106-121; Shearman, *Raphael in Early Modern Sources*, I, pp. 397-404 and 821f. Weiss ("Andrea Fulvio", p. 15) mentions that Calvo certainly and Fulvio probably died in the sack of 1527.

[62] Calvo announces fourteen Augustan regions but shows sixteen, adding the Vatican and "Campus Martius Maior". In actuality, the Campus Martius was included in Regio VII (Via Lata) and Regio IX (Circus Flaminius).

The final image, showing the city's development at the time of Pliny the Elder, is as schematic as any medieval city view. It compresses into a narrow compass the vast terrain between Ostia and the Milvian Bridge, and crams the seven hills and a few other monuments into a circle of walls with thirty-four gates.

What makes the Calvo woodcuts interesting, however, is the way they reflect the fascination with coins and late-antique manuscript illustrations that was current in Raphael's circle. To take the most obvious example, Calvo's Colosseum, complete with the Meta Sudans on one side and the Nymphaeum Publicum on the other, is taken directly from a coin of Vespasian. Other buildings reflect the highly simplified building types or townscapes that could be found in late-antique manuscripts like the Vatican Virgil, and in the collections of the writings of Roman surveyors, or *agrimensores*.[63] Calvo's book is a florilegium of ancient sources quaintly rendered and explained in beautiful calligraphy. It gives us nothing like Raphael's final goal, a plan of Rome at the end of antiquity, but it does provide a glimpse of the raw material that Raphael was accumulating. One might entitle Calvo's book, fancifully, as "The Regionary Catalogues made Palatable" with iconic placeholders for monuments that a future topographer would someday place on a map.

However, Calvo's complete disregard for measured mapmaking is a reminder of the critical flaw in Raphael's own enterprise, namely, the lack of an accurate map of the modern city onto which the ancient city might be projected. In Raphael's letter to Leo X, after the initial description of the transit and compass, we hear no more about a larger urban plan. Instead, the artist writes at length about the three kinds of drawings useful for an architect: plan, elevation, and section. All refer to buildings in isolation from their urban context.[64] *Pianta* in the letter will henceforth mean the footprint of an

[63] Frazer, "A Numismatic Source", shows Calvo's use of the *consecratio* coin of Antoninus Pius (d. 161) for the "Meta Pij" in his "Regio XV Vaticana"; Nash, *Pictorial Dictionary*, I, p. 269, fig. 317, shows the coin of M. Antonius Gordianus III Pius with the Colossus and Colosseum; Jacks, "The *Simulachrum* of Fabio Calvo", p. 462, n. 69, gives examples of coin types used by Calvo, and on p. 459 cites the Codex Arcerianus in the collection of Angelo Colocci as the main source for ancient literature of surveying.

[64] Shearman, *Raphael in Early Modern Sources*, I, pp. 507-9. Raphael is not exactly following the Vitruvian triad (I.ii.2) of *ichnographia*, *orthographia*, and *scaenographia*, since, at least in the first two drafts of the letter, he mentions two dif-

individual building, not a map.[65] The missing ingredient in the Raphael project would have to wait until mid-century, when the military engineer Leonardo Bufalini would produce in 1551 the first surveyed map of the Urbs incorporating old and new buildings alike.

The Raphael letter to Leo X was published for the first time in 1733 in a collection of the Italian works of Baldassar Castiglione. Scipione Maffei of Verona had discovered the manuscript and showed it to Castiglione's editors, who, although their edition was already in press, had time to include it at the very end.[66] It was still considered by all of them to be a work of Castiglione; the debate that pushed the attribution into the Raphael camp did not gather momentum until 1799.[67] Long before this, however, there was a lively interest among antiquarians in the Raphael project. In 1754 and 1757, an account of the collections of Baron Philipp von Stosch (1691-1757), an antiquarian and spy residing in Florence, mentions autograph drawings after antique buildings done by Raphael for Leo X. In 1758, Johann Joachim Winckelmann came to Florence to catalogue Stosch's gem collection, and wrote that he had held in his hands Raphael's drawings after the antique. Stosch also owned a copy of the Calcagnini letter of 1519-20 mentioning the project to map all of ancient Rome, described above.[68]

ferent kinds of orthographia, elevation and section, but omits perspectival rendering, only to reintroduce it in the final draft.

[65] "E chiamasi questo dissegno pianta, quasi che come el spaçio che occupa la pianta del piede ch'è fondamento di tutto el corpo. Fatta così, questa pianta sia fondamento di tutto lo edificio" (from the first, or Mantuan, draft of the letter in Shearman, *Raphael in Early Modern Sources*, I, p. 508).

[66] Baldassare Castiglione, *Opere volgari, e latine del Conte Baldessar Castiglione, novellamente raccolte, ordinate, ricorrette, ed illustrate, come nella seguente lettera può vedersi*, ed. Giovanni Antonio Volpi and Gaetano Cristoforo Volpi, Padua, 1733, pp. 429-36: "Lettera non più stampata del Conte Baldessar Castiglione a Papa Leone X. Comunicataci dopo finito il Volume, dal Sig. Marchese Scipione Maffei, presso il quale si conservava".

[67] Raphael's authorship of the letter was first argued by Daniele Francesconi, *Congettura che una lettera creduta di Baldessar Castiglione sia di Raffaello d'Urbino*, Florence, 1799 (copy in the Biblioteca Berenson); the early bibliography of the letter is studied in Di Teodoro, *Raffaello*, pp. xx-xxvii.

[68] Campbell and Nesselrath, "The Codex Stosch", p. 15; Bevilacqua, *Roma nel secolo dei lumi*, p. 22. Stosch also copied out the letter of Calcagnini cited above, mentioning the Raphael plan. A group of drawings that was acquired in Rome during his grand tour by Thomas Coke (1691-1759), made Earl of Leicester

The Raphael project was thus well known in learned circles in Florence and Rome. Was Piranesi aware of it? He does not mention it expressly, but a copy of the letter to Leo X was easily available to him. Nicola Giobbe, the master mason of the Trevi Fountain, owned the 1733 edition of Castiglione, in which the letter appears.[69] Giobbe was an important presence in the life of the young Piranesi during his early years, and the artist made himself at home in the learned mason's formidable library. In gratitude he dedicated the *Prima parte di architetture e prospettive* to Giobbe in 1743.[70] Whether Piranesi came across the letter to Leo X in Giobbe's library and associated it with Raphael remains an open question, but if he did, the last line, added to Raphael's text by the editors in large type, would have sounded as a challenge: "The drawing and description of ancient Rome are lacking" ("Manca il Disegno, e la Descrizione di Roma antica").

The kind of sources that Raphael and Calvo appreciated would be collected in still greater numbers by Pirro Ligorio and used to

in 1744, was mentioned in 1754, and its fame kept alive by a note in Roscoe, *The Life and Pontificate of Leo the Tenth*, p. 501. Preserved in the library of Holkham Hall in Norfolk, these drawings have been downgraded in the recent literature; see the entry by Arnold Nesselrath in *La Roma di Leon Battista Alberti: Umanisti, architetti e artisti alla scoperta dell'antico nella città del Quattrocento*, exh. cat., ed. Francesco Paolo Fiore and Arnold Nesselrath, Rome, 2005, pp. 268f., cat. II.10.9.

[69] On Giobbe and his library, see Wilton-Ely, *Mind and Art*, p. 11; John Pinto, *The Trevi Fountain*, New Haven and London, 1986, pp. 174f. and 183; Mario Bevilacqua, "Roma di Piranesi: Vedute della città antica e moderna", in *La Roma di Piranesi: La Città del Settecento nelle Grandi Vedute*, pp. 40f.; and especially Brunel, "Pagliarini et Nicola Giobbe", pp. 77-146, particularly p. 125, item B973 on fol. 433r of Giobbe's inventory: "Castiglione, Opere volgari e latine". Another book in the library, Pomponio Leto's interpolated regionary catalogues, first published circa 1503-04 but represented by a later edition (Brunel, "Pagliarini et Nicola Giobbe", p. 105, inventory B108 on fol. 380r: "Pomponio Leto, L'antichità di Roma: Nomi antichi e moderni dell'antica città di Roma ... 1550"), exerted a powerful influence on Piranesi, who introduced as many toponyms as possible from Leto's Regiones VII (Via Lata) and IX (Circus Flaminius) into the *Ichnographia*.

[70] On the *Prima Parte*, see Robison, *Piranesi: Early Architectural Fantasies, A Catalogue Raisonné of the Etchings*, pp. 12-24; in the dedication to Giobbe reproduced on pp. 96-97, Piranesi mentions "la doviziosa, e scelta raccolta, che Voi avete di Pitture, di Disegni, di Libri, e di Carte intagliate, di cui non c'è forse in questa Dominante la più copiosa". The text is also reproduced, with an English translation, in *Giovanni Battista Piranesi: Drawings and Etchings at Columbia University*, exh. cat., New York, 1972, pp. 115-18.

flesh out his strange maps of ancient Rome. Piranesi admired Pirro Ligorio and Leonardo Bufalini, and realized that if the erudition of the one and the surveying skills of the other were to be combined, then a project like the one described in the 1733 Castiglione edition could be brought to fruition. We will review the cartography of both Ligorio and Bufalini before turning to the sources that Piranesi incorporated into his original synthesis, the fragmentary Marble Plan and the map of Giambattista Nolli.

Pirro Ligorio 1553 and 1561

The Neapolitan antiquarian and architect Pirro Ligorio published two plans of ancient Rome, issued in 1553 and 1561.[71] The first was small, the second large and ambitious. In the small 1553 plan, Ligorio illustrates only a few of the great monuments. Instead,

[71] Pirro Ligorio, *Vrbis Romae cvm plerisq. vetervm novorvmq. aedificiorvm et insigniorvm certe imaginibvs descriptionem* (...), Rome, 1553, and *idem*, *Anteiqvae Vrbis Imago accvratissime ex vetvsteis monvmenteis formata*, Rome, 1561. The Ligorio maps are discussed by Christian Hülsen, "Saggio di bibliografia ragionata delle piante icnografiche e prospettiche di Roma dal 1551 al 1748", *Archivio della R. Società Romana di Storia Patria* 38, 1915, pp. 43-45 (small plan), and pp. 52-55 (large plan). They are reproduced in Frutaz, *Le piante di Roma*, I, pp. 60f., cat. XVI, and II, *tav.* 25 (small plan of 1553); I, p. 63, cat. XVII a-b, II, *tav.* 26-32 and III, *tav.* 671-84 (large plan of 1561). See the splendid article by Howard Burns, "Pirro Ligorio's Reconstruction of Ancient Rome: the *Anteiqvae Vrbis Imago* of 1561", in Robert Gaston, ed., *Pirro Ligorio, Artist and Antiquarian*, Florence, 1988, pp. 19-92; and Jacks, *The Antiquarian*, pp. 214-33. For the editions, see Robert Karrow, *Mapmakers of the Sixteenth Century and Their Maps: Bio-bibliographies of the Cartographers of Abraham Ortelius, 1570*, Chicago, 1993, pp. 349-58. In the vast literature on Ligorio, the following might be cited for the benefit of English readers: Thomas Ashby, "The Bodleian MS of Pirro Ligorio", *Journal of Roman Studies* 9, 1919, pp. 170-201; Charles Mitchell and E. Mandowsky, *Pirro Ligorio's Roman Antiquities* (Studies of the Warburg Institute 28), London, 1963; Ian Campbell, "Pirro Ligorio and the Temples of Rome on Coins", in *Pirro Ligorio, Artist and Antiquarian*, pp. 93-120; Robert Gaston, "Merely Antiquarian: Pirro Ligorio and the Critical Tradition of Antiquarian Scholarship", in *The Italian Renaissance in the Twentieth Century* (1999), ed. Allen Grieco, Michael Rocke, and Fiorella Superbi, Florence, 2002, pp. 355-73; and David Coffin, *Pirro Ligorio: The Renaissance Artist, Architect, and Antiquarian*, University Park, Penn., 2004. The *Edizione Nazionale delle Opere di Pirro Ligorio* began in 2005 with the series of *Libri delle antichità: Torino*, ed. Maria Luisa Madonna, beginning with the volumes in Turin on the villas of Tivoli, herms, and earthquakes.

he gives the names of monuments as placeholders in their probable locations. The small map is thus a kind of notebook with the crowded captions presaging the wild crowding that will come in the larger map. It already gives clues to Ligorio's unconventional thinking. For example, he puts the ustrinum or cremation place of the caesars next to the Mausoleum of Augustus and gives it two obelisks.[72] He turns the great temple on top of the Quirinal into the Senaculum Mulierum.[73] He puts the Horti Sallustiani in the Valley of Flora. He interprets Piazza Navona as a circus unmentioned in any ancient source, the Circus Agonalis, which we now know is wrong, and he re-identifies the brick amphitheater at S. Croce as the Amphitheatrum Castrense, which we now know is right, correcting its misidentification as the Amphitheater of Statilius Taurus, held by all previous antiquarians.

Ligorio's large map of 1561, the *Anteiqvae Vrbis Imago,* is his final word on the topography of the ancient city (Fig. 27). It is one of the most fantastic of all antiquarian productions of the sixteenth century, gripping and imaginative, but not divorced from research. It is not an ichnographic or "footprint" survey, but rather a compromise between such a plan and a bird's-eye view. Ligorio names

72 Federico Rausa, *Pirro Ligorio: Tombe e mausolei dei Romani*, Rome, 1997 especially pp. 114-23 on the Mausoleum of Augustus.

73 The huge temple in the Colonna Garden on top of the Quirinal Hill wa identified by Lanciani as the Temple of the Sun of Aurelian, by Hülsen as the Tem ple of Serapis of Caracalla (accepted by Nash, *Pictorial Dictionary*, II, pp. 376-83 and recently as the Temple of Hercules and Dionysus of Septimius Severus (R. Sar tangeli Valenzani, "Hercules et Dionysus, Templum", in *Lexicon Topographicum* III, pp. 25-26). It was known in the sixteenth century as the Torre Mesa, Torre d Mecenate, or Frontispizio di Nerone. On the Renaissance identification as Senacu lum Mulierum, see Gustina Scaglia, "Il Frontespizio di Nerone, la Casa Colonna la scala di età romana antica in un disegno nel Metropolitan Museum of Art di Ne York", *Bollettino d'Arte* 72, 1972, pp. 35-62; Stefano Borsi, "La fortuna del 'Fro tespizio di Nerone' nel Rinascimento", in Silvia Danesi Squarzina, *Roma, cent ideale della cultura dell'antico nei secoli XV e XVI*, Milan, 1989, pp. 390-400; Cesa D'Onofrio, *Un popolo di statue racconta: storie fatti leggende della città di Ro antica medievale moderna*, Rome, 1990, pp. 110-30; and Cammy Brothers, "Reco struction as Design: Giuliano da Sangallo and the 'palazzo di Mecenate' on t Quirinal Hill", *Annali di Architettura* 14, 2002, pp. 55-72. The location of t Senaculum Mulierum on the Quirinal, mentioned in the life of Heliogabalus in t *Scriptores historiae augustae*, is now considered unknown (F. Coarelli, "Senaculu Mulierum", *Lexicon Topographicum*, IV, p. 265).

his sources: the ruins themselves, the testimony of ancient texts, and ancient images in bronze, lead, stone, and terracotta. We also know he read and used the regionary catalogues that went under the names of Sextus Rufus and Publius Victor, as had Raphael. Like Calvo and his pie-shaped Rome, Ligorio was a serious student of Roman coins. He had a collection of his own, and in his manuscripts in Turin and Naples he drew many more from Roman collections, especially those of the Farnese, Fulvio Orsini, Annibale Caro, Raphael, Giulio Romano, and Sansovino. He used coins on an unprecedented scale, and they influenced the way he saw the Colosseum, the Domus Aurea of Nero, the round Temple of Mars Ultor, the Temple of Jupiter on the Capitol, and the Villa Publica. Ligorio respected the ruins that he saw in front of him, but used the evidence of coins to add decorative details, and when buildings had disappeared, he let images on coins guide his imagination.

Howard Burns has suggested that Ligorio used other sources as well, now mostly lost to us. There is something oddly authentic about his rendering of ancient Rome: the mad crowding of buildings, the small schematic renderings that eschew Renaissance perspective in favor of much simpler conventions, and the constant repetition of loggias and exedras. Perhaps he knew ancient reliefs showing cities. A classic example, the Torlonia relief, was only discovered in the nineteenth century, but other such images may have been available to Ligorio. Although he knew the ruins better than any of his predecessors, his aim was to show the Urbs through ancient conventions of depiction, as though he, the artist, were an ancient Roman.[74]

Piranesi would be inspired by Ligorio in many ways. His *Campus Martius* shares with Ligorio a sense of the crowding of ancient Rome. For both, the city was a megalopolis of incalculable density and variety. Piranesi would also adopt many of Ligorio's unconventional placements of monuments. If Pomponio Leto had larded the regionary catalogue of "Publius Victor" with erudite interpolations of monuments he knew from other texts, Ligorio's Rome, and later Piranesi's, might be described as maxi-interpolated texts, showing

[74] Burns, "Anteiqvae Vrbis Imago", pp. 36-39 and figs. 80-85. A similar ancient city view in fresco has recently been found: see Eugenio La Rocca, "The Newly Discovered City Fresco from Trajan's Baths, Rome", *Imago Mundi* 53, 2001, pp. 121-24.

the tight space of the Urbs filled with placeholder buildings, most known only by name. The difference is that Piranesi chose to depict ancient Rome not as a bird's-eye view but as a precisely measured map. In this he had two modern predecessor images, the Bufalini map of 1551 and the Nolli map of 1748. He also had the benefit of the one ancient plan that survived, at least in a fragmentary way: the Marble Plan of Septimius Severus, which was discovered in 1562. Bufalini, the Marble Plan, and Nolli – these were the fairies who bent over the crib of Piranesi's *Ichnographia* and gave it something special. Let us look at each in turn.

Leonardo Bufalini 1551

Leonardo Bufalini of Udine published a map of Rome in 1551 that differs from all known city views up to that time (Fig. 26).[75] Instead of offering another bird's-eye view or a symbolic reconstruction based on coin types, Bufalini actually surveyed the city, measuring the footprint of every modern block and the plan of every major building to survive from antiquity. His is an austere map, but one of unprecedented accuracy. It offers no architectural pictures, just measurements, outlines, plans, and streets, along with hundreds of identifying inscriptions.

Bufalini himself looks out at us from a self-portrait at the bottom of the woodcut, surrounded by the tools of his trade: compasses, a mason's level, rulers, and especially a transit equipped with a magnetic compass. He is anxious to let us know that he used not only the usual surveying tools but the mariner's compass.

[75] Franz Ehrle, S.J., *Roma al tempo di Giulio III: La pianta di Roma di Leonardo Bufalini del 1551*, Rome, 1911; Hülsen, "Piante icnografiche e prospettiche di Roma", pp. 6-17 and 38f., cat. I; Camillo Scaccia Scarafoni, *Le piante di Roma possedute dalla Biblioteca dell'Istituto e dalle altre biblioteche governative della città*, Rome, 1939; p. 78, cat. 134; Frutaz, *Le piante di Roma*, I, pp. 127f., cat. CIX, and II, *tav.* 189-209; Italo Insolera, *Roma* (Le città nella storia d'Italia), Bari, 1980, pp. 112-22; Pinto, "Ichnographic City Plan"; David Friedman with Paul Schlapobersky, "Leonardo Bufalini's Orthogonal *Roma* (1551)", in *Thresholds* 28, 2005 (*Essays in Honor of Henry Millon*), pp. 10-16; and the fine thesis by Jessica Maier, "*Imago Romae*: Renaissance Visions of the Eternal City", Ph.D. diss., Columbia University, New York, 2006, summarized in brief in Jessica Maier, "Mapping Past and Present: Leonardo Bufalini's Plan of Rome (1551)", *Imago Mundi* 59, no. 1, 2007, pp. 1-23.

Addressing us in the language of gravestones ("Siste viator", "Halt, traveler"), he tells us that he is giving the world twin Romes – both the new city, which we see as we walk through the streets, and ancient Rome, the former master of the world – all as a result of his immense effort, great expense, and daily rigors, so that the city might rise as from the tomb. Indeed, there is a mild schizophrenia to Bufalini's enterprise, a double standard by which the green spaces and the crowded urban fabric or, to use Richard Krautheimer's terms, the *disabitato* and the *abitato*, are rendered differently. Bufalini treats the disabitato as a space for antiquarian reconstruction, for showing *Roma vetus*, while in the abitato he gives us *Roma moderna* with almost no antiquities.

In the disabitato, Bufalini situates the most important ruins in reconstructed form. Five imperial bath complexes (Titus and Vespasian, Diocletian, Caracalla, Constantine, and the "Baths of the Decii" on the Aventine) dominate the empty land, growing in size and complexity and acquiring wings and exedras that the more careful antiquarians, like Giuliano da Sangallo, Sebastiano Serlio, or Andrea Palladio, do not record. The garden pavilion commonly called the Temple of Minerva Medica is reconstructed as the Basilica of Gaius and Lucius, a building known only from texts, with its concrete rotunda given a double curved facade and placed at the end of a long courtyard, almost a prophecy of Borromini's Sant'Ivo alla Sapienza. The early Christian basilicas in the outlying districts are shown relatively accurately in plan; the Lateran in particular is rendered in great detail, complete with Baptistery, Patriarchate, and Scala Sancta. The Temple of Diana on the Aventine, for which no ancient remains were ever found and which is known exclusively from literary sources, is reconstructed as a large basilica with forecourt, like an early Christian church.

Among the largest buildings of the disabitato are the Colosseum, with the Meta Sudans alongside it, and the ruinous brick Amphitheatrum Castrense, which Bufalini reconstructs in plan and labels as the Amphitheater of Statilius Taurus, following the consensus of antiquarians. The largest ruin of all is the Circus Maximus, which Bufalini stretches to enormous length and makes more imposing still by its being closely linked with the house of Augustus on the Palatine, shown as a huge palace with twin courtyards. Bufalini does not show a *spina* in the circus, although the obelisks that had stood on it and later sunk into the mud had been known

since Alberti's time. He improperly gives the circus two curved ends, squeezing the starting gates, or *carceres*, into the left end in an unthinking way. Just a few years later, Ligorio revolutionized the way antiquarians thought about the Circus Maximus in a famous print that includes a spina, obelisks, *metae*, lap counters, and a number of statues known from literary sources.

In contrast to his treatment of the disabitato, Bufalini surveys the crowded warren of streets in the Campus Martius and in Trastevere with a modicum of accuracy for the first time. Here he minimizes antiquarian reconstruction and turns mapmaker. The map shows the straight streets most clearly, especially the Via Giulia and Via della Lungara. The trident of streets radiating from Porta del Popolo had only been laid out a decade or two earlier and the blocks had still not been built up. The Via Frattina, Via Borgogna, and some smaller streets do not appear because they were not yet laid out, and the monastery of San Silvestro in Capite, through whose lands they would cut, is shown isolated amid fields. The Vatican Borgo is depicted with considerable accuracy, including the newest street, the Via Alessandrina, laid out in 1500 by Alexander VI and pointing at the portal of the Vatican Palace.

In the older parts of the Campus Martius, Bufalini shows the curving streets that radiate from Ponte Sant'Angelo with relative accuracy. He leaves most blocks in outline and provides crude plans for only the largest buildings, such as Palazzo Altoviti at Ponte Sant'Angelo, Palazzo Sforza Cesarini, Palazzo Farnese, the Cancelleria, Palazzo Medici-Madama, Palazzo De Cupis in Piazza Navona, d'Estouteville's palace at Sant'Apollinare, and the unfinished Tribunali on Via Giulia. Opportunities that would tempt later topographers into a reconstruction are passed up: The Tiber Island is not shown as a ship, nor is there any indication of ancient structures under Piazza Navona or the Theater of Pompey. In the abitato, Bufalini shows only the most obvious ancient monuments, such as the Pantheon with the Baths of Agrippa behind it, the Mausoleum of Augustus, and the Theater of Marcellus.[76] The Porticus Octaviae is shown only as a portico ("Arcus L. Sep[tim]ii Severi"), with no attempt to indicate the temples within it.

[76] Piranesi noted the vestibule of the Pantheon as shown by Bufalini in *Campus Martius*, p. 23, note g.

In his double standard of rendering Roma moderna and Roma vetus, the mapmaker reveals his double persona, both the experienced military engineer and the amateur antiquarian. All the known facts about Bufalini can be found summarized by Cardinal Ehrle in the 1911 edition of the plan. From the testament drafted when he was already ill, on 18 July 1552, the year after the publication of the map, we know that Bufalini came from Udine, was a woodworker *(faber lignarius)*, and lived in or near Palazzo Branconio dell'Aquila in the Vatican Borgo. Other documents show that he had worked for the printmaker Antonio Blado, possibly cutting woodblocks as well as designing them; Blado would be the printer of the first edition of his map.

Bufalini was also a military engineer of some standing. This emerges from the writings of Francesco De Marchi, himself a celebrated military engineer, active in the fortification projects of Paul III (1534-1549). The two men were friends. In 1535, Bufalini helped De Marchi descend in a diving bell to recover the Roman ships sunk at the bottom of the Lago di Nemi.[77] De Marchi lists Bufalini among the experts who debated the merits of the Sangallo bastions around the Vatican in front of Paul III. As might be expected from such a professional, the new fortifications around the Vatican are shown on the map with great accuracy. When the engineer Count Mario Savorgnan visited the fortifications of Rome in 1548, he was critical of what he saw and of Roman professional standards in general, and to reinforce his opinion he cites Bufalini.[78]

Bufalini took pains to measure the Aurelian Walls accurately. Previously the standard had been to measure the distance from one city gate to another,[79] but for Bufalini this was not enough. He gives the width of every tower and the distances between them, all calibrated in a scale of their own. (Strangely, he omits the dimensions of the walls of Trastevere and the Vatican Borgo). After Bufalini's death, Onofrio Panvinio claimed, though he did not know Bufalini

[77] Francesco De Marchi, *Dell'architettura militare libri tre*, Brescia, 1599; Ehrle, *Bufalini*, p. 19. See the vivid chapter in Anthony Grafton, *Leon Battista Alberti: Master Builder of the Italian Renaissance*, New York, 2000, pp. 225-27.

[78] Ehrle, *Bufalini*, p. 19.

[79] As in the lost Francesco Rosselli view of Rome of circa 1482, which is reflected in the Mantua map and six or seven other sixteenth-century views; see Hülsen in Ehrle, *Bufalini*, pp. 60f.; and Frutaz, *Le piante di Roma*, I, pp. 151-55, cat. no. XCVII, and II, *tav.* 167-169.

personally, that the mapmaker spent twenty years of incredible, persistent labor measuring. Antonio Trevisi, the editor of the second edition of the plan, says he took seven years. The lion's share of the measurements must have been those to determine the relative position of the landmarks in the crowded center of Rome and the course of the streets. Even if Alberti had already conceived of a way of rendering the position of city gates and the tallest monuments on a circular graph, he had never published it. Bufalini had to lay the foundations of a measured city on his own.

Unlike most military engineers, however, Bufalini had a humanist and antiquarian dimension. He absorbed information from antiquarian writers, especially Bartolomeo Marliani, whose digest of the texts on the monuments of ancient Rome was published in two editions, in 1534 and 1544.[80] Marliani appended to the latter book three woodcut plans of ancient Rome: Roma quadrata, as in the time of Romulus; the Rome of the kings, bounded by the Servian Wall; and imperial Rome, bound by the Aurelian Wall. This last map, Marliani's largest, is rightly called by Ehrle the embryo of Bufalini's map (Fig. 25). The orientation is the same, with north to the left. Marliani cleverly uses hatching to show the topography of the hills, which are rendered as long, gnarled fingers with valleys in between, looking like thin fjords. Onto this primeval terrain Marliani draws the plans of only a few large buildings: the Colosseum, three imperial baths, and Castel Sant'Angelo, all crudely rendered. He shows the Pantheon as a large dot. In his learned text, though, Marliani discusses many ancient buildings for which he had no plans. Bufalini's map is four or five times larger than Marliani's and has room for many more inscriptions, some in Latin and some in Italian. More than half of these denote ancient monuments for which Bufalini gives no plan. The Capitoline Hill, for example, is replete with inscriptions indicating temples that Bufalini, following Marliani, thought should be there: Iove Feretrius, Iove Tonans, Iove Optimus Maximus, Iove Custodius, Fides, Concordia, Fama, Sa-

[80] Giovanni Bartolomeo Marliani, *Topographia antiquae Romae*, Lyon, 1534; published simultaneously in Rome in the shop of Antonio Blado in Campo de' Fiori as *Antiquae Romae topographia libri septem*, Rome, 1534; 2nd ed., *Urbis Romae topographia*, Rome, 1544 (with maps on pp. 3, 7, 12f.); *L'antichità di Roma*, Terni, 1548; and *Urbis Romae topografia ...*, Basel, 1550 and Venice, 1588. One of the maps of the 1544 edition is reproduced in Frutaz, *Le piante di Roma*, I, pp. 56f., cat. XII, and II, *tav.* 21; see Jacks, *The Antiquarian*, pp. 206-14.

turn, and Ops, plus the "Carcer Divi Petri". Similarly it is with inscriptions, not plans, that Bufalini records the Fora of Trajan, Julius Caesar, and Nerva, even though there were considerable remains standing. In the built-up areas of the Campus Martius there seem at first glance to be almost no ancient remains, but on closer inspection we find many inscriptions alluding to their presence. In the end there are eight hundred inscriptions on the map, about a third for the modern monuments and the rest for the ancient.

Bufalini seems to have been too poor to print a full edition of his map. No copy survives of the original of 1551, even though the paper had been paid for. The three surviving copies reflect a reedition of 1560.[81] Bufalini's heritage is to be found less in Rome than in the central and northern Italian city maps made by military engineers who worked out new techniques of triangulation and trigonometry. Exact maps were made of Parma in 1589-1592,[82] and of Milan in 1577-79.[83] They are part of the tradition of accurate surveying that would eventually produce Giambattista Nolli and the famous map of Rome of 1748, as we shall see below. During the seventeenth century, however, Bufalini's severity was rejected by the mapmakers of the Roman baroque, who turned their attention to Roma moderna and preferred the bird's-eye view, such as in the plan of 1618 by Mattheus Greuter[84] or its specious descendant, the plan of 1676 by Giovanni Battista Falda.[85]

[81] On Antonio Trevisi, the hydraulic specialist who edited the 1560 edition of the Bufalini map, see now Pamela Long, "Hydraulic Engineering and the Study of Antiquity: Rome, 1557-70", *Renaissance Quarterly* 61, 2008, pp. 1098-1138, especially pp. 1110-16.

[82] *L'Icnografia della città di Parma* was initially drawn by the ducal engineer and cartographer Smeraldo Smeraldi in 1589-1592, in conjunction with the planning of the new citadel ordered by Duke Alessandro Farnese; as the name implies, it was an ichnographic plan, showing the city as on a modern map. It was finally published in 1601 and dedicated to Duke Ranuccio Farnese, but the single surviving copy was destroyed in the Second World War and is known only from a photograph. See Bruno Adorni, *L'architettura a Parma sotto i primi Farnese 1545-1630*, 2nd ed., Reggio Emilia, 2008, pp. 388-9 (information kindly provided by Carlo Mambrani).

[83] Drawn probably by Giovanni Battista Clarici and now preserved in the Accademia di San Luca in Rome; see Gisberto Martelli, *La prima pianta geometrica di Milano*, ed. Silvio Leydi, Milan, 1994.

[84] J.A.F. Orbaan, *Documenti sul barocco in Roma*, Rome, 1920, atlas volume; Frutaz, *Le piante di Roma*, I, p. 205, cat. CXLV, and II, *tav.* 285-93.

[85] Giovanni Battista Falda, *Nuova pianta et alzato della città di Roma ...*,

The Severan Marble Plan and Its Rediscovery 1562

Bufalini surveyed modern Rome more accurately than anyone had up to his time and also included plans of many ancient buildings. Ligorio collected information from coins, manuscripts, inscriptions, and reliefs to lend his *Anteiqvae Vrbis Imago* verisimilitude. However, as chance would have it, the discovery that would eventually change the course of Roman topography was made in 1562, a decade after Bufalini and a year after the Ligorio plan.[86] One Torquato Conte, excavating behind the church of Santi Cosma e Damiano, found fragments of an ancient plan engraved on stone slabs, "in centomila pezzi". Had it been preserved intact, this would have been the key to unlock instantly all the secrets of ancient topography.[87]

Rome, 1676; Francesco Ehrle, *Roma al tempo di Clemente X: La pianta di Roma di Giambattista Falda del 1676*, Rome, 1931; Frutaz, *Le piante di Roma*, I, pp. 221f., cat. no. CLVIII, and III, *tav.* 357-63; Joseph Connors, "Cruyl, Falda, e i De Rossi", in *Francesco Borromini: Opus Architectonicum*, ed. J. Connors, Milan, 1998, pp. lxii-lxvii.

86 Ligorio later saw the fragments but made little use of them; see Jacks, *The Antiquarian*, p. 220.

87 The classic edition is Gianfilippo Carettoni, Antonio M. Colini, Lucos Cozza, and Guglielmo Gatti, eds., *La pianta marmorea di Roma antica (Forma urbis Romae)*, 2 vols., Rome, 1960, with updates by Emilio Rodríguez-Almeida, *Forma urbis marmorea: Aggiornamento generale 1980*, 2 vols., Rome, 1981; *idem*, "De la *Forma urbis marmorea*, en torno al *Collis Capitolinus*", in Eius Virtutis Studiosi: *Classical and Postclassical Studies in Memory of Frank Edward Brown (1908-1988)*, ed. R.T. Scott and A.R. Scott (National Gallery of Art, Studies in the History of Art 43), Washington, D.C., 1993, pp. 31-43; F. Coarelli, "Pax, Templum", in *Lexicon Topographicum*, IV, pp. 67-70 (Coarelli gives the scale as 1:246, though most authors give it as 1.240); Liba Taub, "The Historical Function of the *Forma Urbis Romae*", *Imago Mundi* 45, 1993, pp. 9-19. There is a brilliant synthesis of the origins and purpose of the plan in Wallace-Hadrill, *Rome's Cultural Revolution*, pp. 301-12. The inscriptions are transcribed in Valentini and Zucchetti, *Codice topografico*, I, pp. 49-62. For the discovery and afterlife of the Marble Plan, see A.M. Colini, "Scoperta e vicende dei frammenti della pianta", in *La pianta marmorea*, p. 26, n. 15; Olivier Michel, "Les péripéties d'une donation: La *Forma Urbis* en 1741 et 1742", *Mélanges de l'École Française de Rome (Antiquité)* 95, 1983, pp. 997-1019; and John Pinto, "*Forma Urbis Romae*: Fragment and Fantasy", in *Architectural Studies in Memory of Richard Krautheimer*, ed. C.L. Striker, Mainz, 1996, pp. 143-47. A useful guide to the history and surviving fragments has been produced by the Stanford Digital *Forma Urbis Romae* Project and is available online (http://formaurbis.stanford.edu/index.html).

The plan was executed on 150 large marble slabs arranged in eleven rows and attached by iron clamps to the wall of a room in the Forum Pacis. Modern researchers tend to believe that the plan is a copy of cadastral, or property, plans on papyrus or bronze kept in this room, which was possibly the office of the *praefectus urbi*. It was a magnificent display, measuring about 60 by 43 Roman feet, showing all of Rome at a scale of 1:240. It dates from the reign of Septimius Severus and was done in 203-211. No ancient writer mentions it, and the name by which it is known in scholarship, the *Forma Urbis Romae*, is a modern invention. A small proportion of the whole survives. With each new archaeological sweep more fragments emerge, and at last count there were 1,186, but the recovered fragments still represent no more than 10-15 percent of the total, and very few of the joins match perfectly.

In the Dark Ages, the slabs were pried off the wall and robbed for building material or burned to make lime, or they fell into the rising swamp that engulfed the area. After their discovery, the remaining fragments were taken by Cardinal Alessandro Farnese to his palace, where they excited the interest of a generation of antiquarians. Giovanni Antonio Dosio studied them, and his drawings are now preserved in the Vatican Library (Vat. lat. 3439). The French printmaker Étienne Dupérac claimed to have studied the fragments as well. In the dedication to Charles IX of his larger plan of ancient Rome, the *Sciographia* of 1574, Dupérac vaunts his knowledge of the fragments, and indeed John Pinto's sharp eye has discerned the influence of the Ludus Magnus fragment on the Dupérac map.[88] It must be said, however, that aside from this one instance, Dupérac's was an empty boast. His map is nothing but a simplified copy of Ligorio's 1561 *Anteiqvae Vrbis Imago*. Fulvio Orsini, as resident librarian in the Farnese palace, took an interest in the fragments, too, but after Orsini's death in 1600, they were ignored by the various Farnese cardinals and were eventually built into the wall of the Farnese garden along the Tiber.

After a century of neglect, the fragments were rediscovered in the 1660s by an appealing if little-known architect named Andrea

[88] Francesco Ehrle, *Roma prima di Sisto V: La pianta di Roma Du Pérac-Lafréry del 1577 riprodotta dall'esemplare esistente nel Museo Britannico. Contributo alla storia del commercio delle stampe a Roma nel secolo 16º e 17º*, Rome, 1908, pp. 15-17.

Bufalini.[89] (He was not a relation of the Leonardo Bufalini of Udine who did the 1551 map discussed above). Andrea Bufalini realized that he could use the fragments to recreate the plan of ancient Rome. More serious than Dupérac, he knew that this would be a huge task, which would have to combine exploration under the ruins with careful analysis of the fragments. It was his great, never-finished project. To that end, he began systematic exploration of the ruins, beginning in 1658 with the cryptoporticus under Santa Maria in Via Lata, and the Mausoleum of Augustus.

Andrea Bufalini soon developed a friendship with the Croatian *letterato* Stefano Gradic, who was both custodian of the Vatican Library (1661-83) and ambassador of the Ragusan Republic to the Holy See. Gradic was instrumental in procuring help for Ragusa (now Dubrovnik) when the city was destroyed in an earthquake in 1667, which aid included sending architects and engineers for the reconstruction. It is not known if Andrea Bufalini ever went to Dalmatia in person, but through the good offices of Gradic he was chosen as the architect of the new cathedral of Ragusa, for which he prepared a design in 1672-73.[90]

Andrea Bufalini's close relationships with the Dalmatian community in Rome allowed him privileged access to the monastery of San Girolamo degli Illirici (or degli Schiavoni), and in particular to that part of the Mausoleum of Augustus that lay within its precincts. In fact, in 1673 he supplied Bellori with a plan of the Mausoleum, "every part measured with the greatest diligence" ["con somma diligenza misurato in ogni sua parte]".[91] When Bellori published his book on the fragments of the Marble Plan in 1673, he said that Andrea Bufalini was about to publish a plan (*ichno-*

[89] Colini, "Scoperta e vicende", in *La pianta marmorea*, p. 26, n. 15; Bruno Contardi and Giovanna Curcio, eds., *In Urbe Architectus: Modelli, disegni, misure: la professione dell'architetto, Roma 1680-1750*, exh. cat., Rome, 1991, p. 329.

[90] Jeanne Bignami Odier, with the collaboration of José Ruysschaert, *La Bibliothèque vaticane de Sixte IV à Pie XI: Recherches sur l'histoire des collections de manuscrits* (Studi e testi 272), Vatican City, 1973, pp. 143f.; Tomaso Montanari, "Stefano Gradi (Gradic)", *Dizionario Biografico degli Italiani*, 2002, 58, pp. 361-63.

[91] Pietro Santi Bartoli, *Gli antichi sepolcri ovvero mausolei romani et etruschi trovati in Roma et altri luoghi celebri*, Rome, 1697, p. 71; Andrea Bufalini's study of the monument is omitted from the otherwise complete list of post-antique investigators in H. von Hesberg, "Mausoleum Augusti: Das Monument", in *Lexicon Topographicum*, III, pp. 234-37.

graphiam) of all of Rome: "In addition to modern buildings he had measured all of the surviving ancient buildings and had thought at length about the marble fragments, sharing his insights with Bellori". It is possible that Andrea Bufalini had already conceived the idea of a map that placed the fragments in their correct position, and should thus be considered a direct forerunner of Piranesi's *Ichnographia*. Whatever his goals, his work never saw the light of day, and it is only Bellori's generous acknowledgment that preserves the memory of Andrea Bufalini's grand project from oblivion.[92]

Francesco Bianchini 1738

In 1738, when Piranesi was eighteen, a reconstruction of visionary grandeur was published showing the palace of the Roman emperors spreading over the Palatine and Esquiline Hills. We have seen Francesco di Giorgio fantasizing about giant buildings on the Capitol and the Palatine, though he of course admitted they had no foundation in fact. In this case, however, the reconstruction of the "Palazzo dei Cesari" came from one of the most prestigious scientists of the day, following a five-year campaign of excavation that had produced sensational finds. One can easily imagine the young Piranesi's excitement as he leafed through this grand tome and unfolded its plates, each larger and more amazing than the last.[93]

The author, Francesco Bianchini (1662-1729) of Verona, was sent, after a Jesuit education in Bologna, to study astronomy in

[92] Giovanni Pietro Bellori, *Fragmenta vestigii veteris Romae ex lapidibus Farnesianis...*, Rome, 1673, p. 2: "Nos quoad potuimus iis supplendis operam impendimus, in quo studio profuit nobis Andreae Bufalini Architecti diligentia: hic universam recentis Urbis ichnographiam omnibus numeris absolutam explevit, brevi in publicam lucem editurus. Aedificia tum recentiora, tum vetera, quae remanent, dimensus est et Farnesianos lapides meditatus, suas animadversiones nobis suppeditavit, quas propriis locis referimus"; p. 71: "Mausoleo di Augusto: Pianta; Pianta del Mausoleo di Augusto località sepolcri, Roma Campo Marzio nel Campo Marzio Fonti iconografiche, disegno di A. Bufalini disegnato da Pietro Andrea Bufalini, architetto da esso con somma diligenza misurato in ogni sua parte". As we shall see below, there was a second edition of Bellori published a century after the first: *Ichnographia veteris Romae XX tabulis comprehensa cum notis Io. Petri Bellorii accesserunt aliae VI tabulae ineditae cum notis*, ed. Giovanni Cristofano Amaduzzi, Rome, 1764.

[93] Francesco Bianchini, *Del Palazzo dei Cesari: Opera posthuma di Monsignor Francesco Bianchini veronese*, ed. Giuseppe Bianchini, Verona, 1738.

Padua in 1680.[94] In 1684 he went to Rome, where he moved in the circle of Cardinal Ottoboni and the Accademia Fisico-matematica of Giovanni Giustino Ciampini. His observations resulted in a comet being named after him. While cataloguing the Ottobon library he developed an interest in chronology and history, wrote on the Julian calendar, and in 1697 published the first part of his monumental world history, *L'istoria universale provata con monumenti e figurata con simboli de gli antichi*. It covered four thousand years o ancient history, beginning at the Creation; the volumes that were to cover the last seventeen centuries of "modern" history were planned but never finished. Like Vico, who knew his work, Bianchini historicized myths and looked for their scientific core. He attempted to tie history to artifacts and to test the texts agains them. He flourished in the Rome of Clement XI Albani (r. 1700

[94] Salvatore Rotta, in *Dizionario Biografico degli Italiani*, 1968, 10, "Francesc Bianchini", pp. 187-94, and "Giuseppe Bianchini", pp. 200-5; Werner Oechslin "L'intérêt archéologique et l'expérience architecturale avant et après Piranèse" *Piranèse et les Français*, pp. 395-418, especially pp. 398-408; Mimmarosa Barres "Francesco Bianchini e *L'istoria universale provata con monumenti e figurata co simboli degli antichi* (1697)", *Quasar* 4-5, 1991, pp. 97-106. There are brief mer tions in Vincenzo Ferrone, *The Intellectual Roots of the Italian Enlightenmen Newtonian Science, Religion, and Politics in the Early Eighteenth Century* (1982 trans. Sue Brotherton, Amherst, N.Y., 1995, pp. 22-24; and Hanns Gross, *Rome i the Age of Enlightenment: The Post-Tridentine Syndrome and the Ancien Régim* Cambridge, England, 1990, pp. 254f., 264f., and 310. Susan Dixon has been prob ing the connection between archaeology and imagination in a number of stimula ing articles since her Ph.D. dissertation, "The Image and Historical Knowledge i Mid-Eighteenth-Century Italy: A Cultural Context for Piranesi's Archaeologic Publications", Cornell University, 1991; see, especially, "Piranesi and Francesc Bianchini: *Capricci* in the Service of Pre-Scientific Archaeology", *Art History* 2 No. 2, 1999, pp. 184-213. A key study in this context is Henry Millon, "Recon structions of the Palatine in the Eighteenth Century", in *Studies in Memory Frank Edward Brown*, pp. 478-93. Now there is a full study of Bianchini as mus ologist: Brigitte Sölch, *Francesco Bianchini (1662-1729) und die Anfänge öffentlich Museen in Rome*, Munich and Berlin, 2007, especially pp. 54-72. See also the co ference volume *Francesco Bianchini (1662-1729) und die europäische gelehrte We um 1700*, ed. Valentin Kockel and Brigitte Sölch, Berlin, 2005, especially Meinra van Engelberg, "Francesco Bianchini 'Del Palazzo de' Cesari'", pp. 135-64; an Christopher Johns, "Papa Albani and Francesco Bianchini: Intellectual and Visu Culture in Early Eighteenth-Century Rome", pp. 41-56, complementing the sectio in the same author's *Papal Art and Cultural Politics: Rome in the Age of Clement X* Cambridge, England, 1993, pp. 33-38.

1721) and Cardinal Alessandro Albani, with its emphasis on science and sacred erudition. In his capacity as secretary of the Congregation of the Calendar, Bianchini laid out the meridian of Santa Maria degli Angeli in 1701-2.[95] In 1707, he became the first continental scientist to verify Newton's experiments on the refraction of light, and he was granted three interviews by the great astronomer when he visited England in 1712-13.

Bianchini saw the need to study a society as a whole using an array of monuments. He was one of the antiquarians who inspected the newly discovered funeral chamber of the freedmen of Livia, wife of Augustus, on the Via Appia in 1726. With inscriptions and decoration intact this was a sensational find, one that showed the grandeur and orderliness of the household that staffed the imperial palace on the Palatine. Bianchini realized, however, that excavation was tantamount to destruction and that the find would be lost to science unless published. Faithful to his discoveries in excavations, Bianchini nevertheless believed that imagination had a role in the pursuit of historical knowledge. Piranesi, who reproduced the plates of Bianchini's book on the tombs of the freedmen in his own works, shared a belief in what we might call imagination grounded in the monuments.[96]

When Duke Francesco Maria Farnese undertook the Palatine excavation, if such a term can be used for what was basically a treasure hunt for statuary to fill the Farnese palace at Parma, Bianchini legitimized the operation with his presence from 1720 to

[95] J.L. Heilbron, *The Sun in the Church: Cathedrals as Solar Observatories*, Cambridge, Mass., and London, 1999, pp. 22, 148-66.

[96] Francesco Bianchini, *Camera ed iscrizioni sepulcrali de' liberti servi et ufficiali della casa di Augusto Scoperte nella Via Appia*, Rome, 1726; reproduced in Piranesi, *Prima parte di architetture e prospettive*, and in *Le antichità romane*, III, pls. XXII-XXXIX; see John Wilton-Ely, *Giovanni Battista Piranesi: The Complete Etchings*, 2 vols., San Francisco, 1994, I, pp. 39 and 493-507, and *Mind and Art*, pp. 45-47. The archaeological context and the other publication projects of Anton Francesco Gori and Pier Luigi Ghezzi are explored in Polignac, "La 'fortune' du columbarium"; Roberto Battaglia, "Da Francesco Bianchini a Giovan Battista Piranesi: L'illustrazione delle Camere Sepolcrali dei Liberti di Livia", *Dialoghi di storia dell'arte* 2, 1996, pp. 58-81; and Maria Raina Fehl, "Archaeologists at Work in 1726: The *Columbarium* of the Household of Livia Augusta", in Vltra Terminvm Vagari: *Scritti in onore di Carl Nylander*, ed. Börje Magnusson et al., Rome, 1997, pp. 45-50.

1725.[97] Three vast rooms were discovered during this time which, taken together, were larger than the nave of St. Peter's.[98] The vaulted basilica found in 1724 produced two colossal statues that were immediately sent to Parma: a *Youthful Hercules* and a *Bacchus*, each twenty palmi (four and a half meters) high. The statue niches and doors were flanked by sixteen fluted columns of pavonazzo marble twenty-eight palmi high. Bianchini dated the sculpture and ornament to the Flavian period and compared the grotesque ornament of the colossal tribune niche to the paintings done by Ludius for Augustus. He interpreted the semidome over the tribune as a symbol of the royal tent of the prince as supreme commander. As expert as he was on both style and iconography, Bianchini did not let us forget that the excavations were carried out under the watchful eye of an astronomer; he observed that the structures he was studying aligned with sunset on 25 July 1725, the date of writing.

When it came to putting the new rooms into a larger context, Bianchini saw that past reconstructions of the Palace of the Caesars were unreliable. Although Bufalini's 1551 map was large, his image of the Palatine was only one foot square and Bianchini found it useless. The plan in Panvinio's *De ludis circensibus* at first seemed better, but soon Bianchini grew skeptical. The master masons who gave Panvinio his information were uneducated and filled in the plan with buildings they never saw. They did see a building, like a circular Temple of Apollo, but Bianchini felt it was really a late-antique overlay on top of earlier imperial baths. Thus Panvinio's plan was to be redone completely.

Furthermore, Panvinio had no knowledge of the sumptuous rooms that Bianchini had discovered. These were so majestic, Bianchini reasoned, that they demanded a processional approach from the Forum, and this is exactly what he provided on the sweeping foldout print at the end of his book. Bianchini imagined that one would reach the rooms by going up a grand ramp flanked with exe-

[97] Bianchini, *Del Palazzo dei Cesari*, 1738. Although Bianchini was present from 1720 to 1725, excavations are documented from 1716 to 1739, by which time the hill had been entirely mined and stripped of antiques. See Olivier Michel, "Les fouilles Farnèse dans les jardins du Palatino", *Gli Orti Farnesiani sul Palatino*, ed. Giuseppe Morganti, Rome, 1990, pp. 187-223. Michel remarks that with Bianchini's death in 1729 the scientific character of the enterprise ended.

[98] They are shown on the Nolli plan, no. 930: "Ruine dell'antico Palazzo de Cesari".

dras, like the approach to St. Peter's, then through a vaulted vestibule and a magnificent courtyard until one reached the newly discovered hall. If, as all antiquarians acknowledged, there was a hippodrome inside the palace, with an exedra attached to its eastern (right-hand) side, then Bianchini thought there should be a second, matching hippodrome with an exedra attached to the western (left-hand) side. This long space would serve not only as a pendant to the extant hippodrome but as a magnificent forecourt for the new hall. The exedras attached to both hippodromes should, Bianchini thought, be covered with half-domes, like modern orchestra shells.

Each emperor who added to the palace, from Augustus to Tiberius and Caligula, built with "più esatta simmetria" and more magnificent ornament; then, after a fire, Domitian rebuilt the palace still more elaborately. This succession of events, carried out by architects who were willing to bind themselves to schemes established long before their time, explains the repetitions and symmetries in the overall design. Nero's Domus Aurea on the Esquiline was thus in no way a radical departure but rather a twin of the earlier Palatine complex, in which the architect renounced innovation in order to match the earlier palace in mirror symmetry. To create a hinge between these two vast complexes, Bianchini would duplicate the Temple of Venus and Rome and place a centralized half-tholos (a half-dome he labeled the "Macellum Augusti") between the two. He gives the Colossus of Nero a twin and the Arch of Titus pendants galore.

How did the scrupulous scholar come up with this fantastic image? Henry Millon is certainly right to see Bianchini evolving from skeptical archaeologist into grand planner in the last year or so of his life, as he hastened to prepare his book for publication under the shadow of approaching death. He passed away in 1729, but his nephew and editor claims that he had prepared all the visual material except the large foldout plate at the end. This "mega-veduta" was engraved in Verona under the nephew's care, on the basis of a drawing prepared in Rome by Francesco Nicoletti (1703/09-1776). This well-prepared young architect from Trapani had just won first prize in the Concorso Clementino of 1728 with a design for a palace and piazza overlooking a port city.[99] Nicoletti

[99] Paolo Marconi, Angela Cipriani, and Enrico Valeriani, *I disegni dell'archivio storico dell'Accademia di San Luca*, 2 vols., Rome, 1974, I, nos. 330-335. Nicoletti

was versed in Bernini's grandiloquent style, which explains the references in his reconstruction to Piazza San Pietro and to Bernini's designs for the Louvre. An extremely high podium, ramplike stairs, courtyards surrounded by pavilions arranged in symmetry around a central axis – such features are typical of the international palace style, represented in the realm of built architecture, for example, by Fischer von Erlach's Schönbrunn in Vienna.[100] The young Sicilian architect gave flesh to the vision of the elderly scholar. The foldout plate affirms the principles of baroque design as a way of accelerating discovery and seeing what one might find, if one could live many lifetimes and dig up all the hills of Rome.

Giambattista Nolli 1748

During Piranesi's first stay Rome in 1741-42, the Marble Plan and the Bufalini map were already being studied in learned circles. The once neglected fragments achieved celebrity when they were given by the king of Spain (owner by then of Palazzo Farnese) to the Popolo Romano and moved to the Capitoline. A learned Hieronymite abate, Diego Revillas, and the director of the Capitoline Museum, the Marchese Capponi, advised Benedict XIV to install them in the staircase of the Palazzo Nuovo. The pope entrusted the project to the famous mapmaker Giambattista Nolli. Piranesi's biographer Legrand, writing in 1799, names "le savant Nolli" as one of the formative influences on the artist. Indeed, it was Nolli who inspired the young Piranesi to dream of an accurate plan of ancient Rome and who laid the cartographical basis for it. It is time to examine their relationship more closely.

Giovanni Battista Nolli (1701-1756) of the Valle d'Intelvi in the diocese of Como, "geometra di Sua Maestà Cesarea", came to Ro-

shared first prize with Carlo Marchionni and Giovanni Maria Guagli; the subject was "una gran Piazza situata in elevazione a vista di un Porto di Mare, di figura, parte in semicircolo, e parte retta...".; Tommaso Manfredi, "Francesco Nicoletti", in *In Urbe Architectus*, pp. 409-10; Millon, "Reconstructions of the Palatine", especially pp. 487-90.

[100] Johann Bernhard Fischer von Erlach, *Entwurff einer historischen Architectur*, Vienna, 1721, pp. 103-104; for Piranesi's sketches after plates in the *Entwurff*, see Felice Stampfle, *Giovanni Battista Piranesi: Drawings in the Pierpont Morgan Library*, New York, 1978, figs. 17-18; Wilton-Ely, *Mind and Art*, p. 16, fig. 12. Puppi ("Educazione veneziana", p. 253) proposes the sculptor Corradini as the link between Fischer and Piranesi.