

A double urban life cycle: the case of Rome

Giancarlo Cataldi

*DIDA, Dipartimento di Architettura, Università di Firenze, via della Mattonaia 14,
50121 Firenze, Italy. E-mail: giancarlo.cataldi@gmail.com*

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Abstract. *Rome is distinguished from the large majority of cities by the double life cycle of its long history. In this paper attention is focused on the permanent substratum structures that ensured ‘continuity in change’ during this city’s transition from Antiquity to the Middle Ages: for the Muratorian school this is the basic principle of ‘cyclic law’ that regulates the life and history of the city. In Rome this phenomenon of rebirth is particularly clear: the basic buildings of the medieval city, attracted by the new religious centre of the Vatican, were located spontaneously in the planned fabric of the imperial special buildings in Campo Marzio. On an urban scale, this implemented the ‘medievalization process’ theorized by Gianfranco Caniggia, following Saverio Muratori’s studies of Rome’s urban history.*

Keywords: Rome, urban structures, city planning, historical transformation

The focus of attention in this paper is the ‘substratum permanent structures’ that influenced the transformation of Rome. Owing to its dual life cycle and unusual complexity, Rome is an exceptional city. The *New Rome topography* by Nolli (1748) (Figure 1) is the first measured urban map of the modern era. It documents the form of Rome in the middle of the eighteenth century when, after a period of building stagnation, the city entered a new phase of growth. The areas built within the Aurelian walls (which were still intact 1500 years after their construction) are located mainly in the area formed by the meander of the River Tiber facing the Vatican citadel. The remaining area within the ancient city walls in the eighteenth century was mostly pasture, having been employed for centuries as a source of building materials. Painters, academics and architects have left countless testimonies to this landscape, especially in figurative form.

Urban development and territory

The Ager Romanus (Figure 2), the rural area surrounding Rome, was traversed by the meanders of the River Tiber and consisted of an alluvial plain between the Tyrrhenian coast and the pre-Apennine ridge. In its last stretch the flow of the river was, and still is, influenced by the presence of three orographic systems: the Monti Volsini and the Alban Hills, of volcanic origin, and between them the north-eastern system of the Monti Sabini.

Rome is a prime example for those who believe that the origins of cities are closely linked to the characteristics of their territory. The union of three peoples, destined to come together in the future urban setting, seems to originate from the convergence in Rome of three ridge paths – Latin, Sabine and Etruscan (Caniggia and Maffei, 1979, pp. 206–10; Cataldi, 1970, pp. 3–29; Cataldi, 2004, pp. 80–1; Muratori, 1967, pp. 499–506)

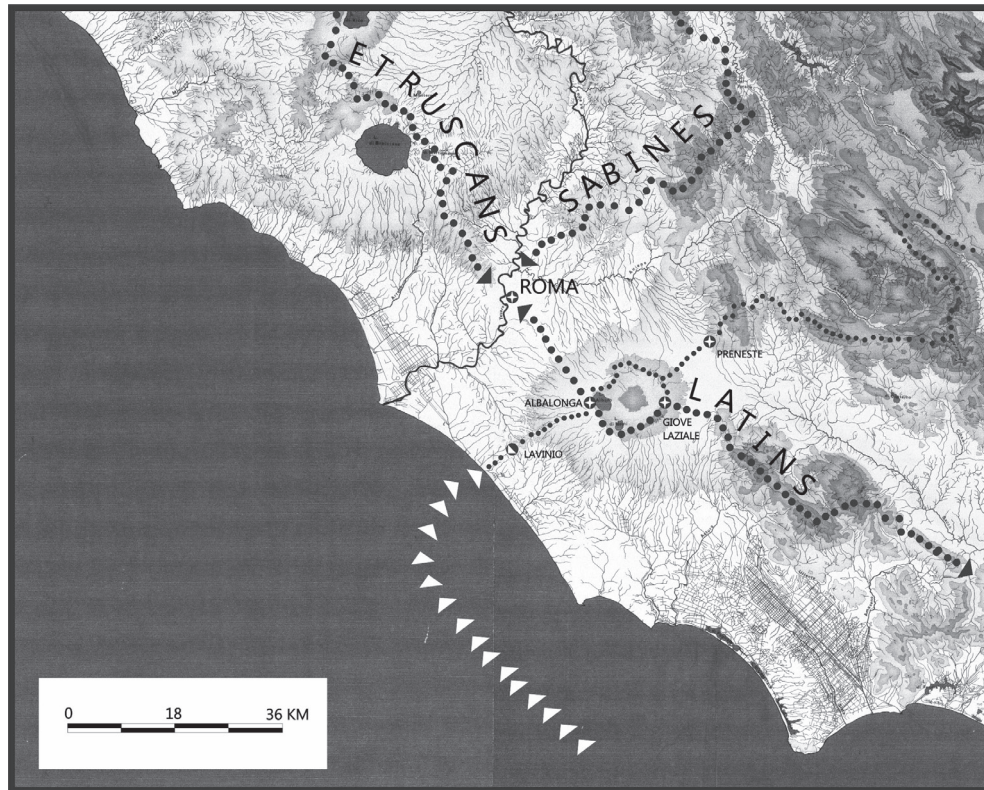


Figure 2. The convergence on Rome of three ridgeways, Latin, Sabine and Etruscan. Reproduced from Cataldi (2004), p. 80.

(Figure 2). One can postulate that these lines of communication were to be lastingly connected at fords located where it was easier to cross the river. Only the south-eastern ridge reaches directly the area of the Forum, consistent with the pre-eminence of the Latin component. Such a notion gains credibility from the myths of Aeneas, and Romulus and Remus concerning the foundation of Rome, the literary sources for which, though having long been deemed fantasy, have been validated by numerous archaeological and topographical findings (Carandini, 2006; Carandini and Cappelli, 2000).

The overview of the city's territory is completed by the Via Salaria (Figure 3), an old caravan route employed for the salt trade, which from the saltworks of Ostia runs along the valley floor, passing through the Roman Forum, which became the most important market area of central Italy.

After crossing the Tiber at Tiber Island, the Via Salaria followed the Campidoglio ridge,

bypassing the river meanders to reach the promontory of Antenne, before descending to the Salario bridge, where it continued its path on the valley floor. The territory in which the city developed is an area surrounded by rivers, the Tiber, the Aniene and their two tributaries, the Almone and the Caffarella. The springs of the last two in particular are very close and form a square enclave, accessible through the ridge by the narrowing of the 'Roma Vecchia'. The strategic importance of this territory, working as an exchange area, may well have led the Sabines to cross the Aniene to reach and occupy the Campidoglio promontory via the Nomentana ridge. Such a transverse path may have marked the border between the 'lower' area of the Sabine *pagi collini* and the 'higher' area of the Latin *pagi montani*. The naming of the railway station as 'Termini' is probably recognition of the intersection of the two ridges.

The formation of settlements on ridges is thus the central feature of the proto-urban

phase of Rome (Figure 3), notably on the two opposing ridges of the Quirinale-Campidoglio and the Oppio-Palatino. Each of these comprised a number of villages of huts on the main rises (*septem pagi*), and linked by paths converging towards the valley of the Forum like beads in a necklace (Cataldi, 2006, pp. 118–9).

In the vicinity of Romulus's *Roma quadrata* (Cataldi, 2006, pp. 118–9), important archaeological evidence has been found in the last few years. This reinforced the view that the term *quadrato* (square) should be taken literally, as a first manifestation of a planning strategy that in time has become recognized as the most important, substantial and lasting structural characteristic of the whole Roman civilization (Carandini, 2000, pp. 95–150; Carandini and Cappelli, 2000).

The 'Great Rome of the Tarquini'

The first proper city was the 'Great Rome of the Tarquini' (Cristofani, 1900) (Figure 4). The last dynasty of Etruscan kings in the course of the sixth century BC promoted the reclaiming of the valley floor between Campidoglio and Palatino, compacting the ground and providing the basis for the Forum and the construction of the first public buildings. The three hills of Campidoglio, Quirinale and Viminale and the four mountains of Palatino, Cispio, Oppio and Celio (Figure 3) were all encircled by the Servian walls in a unification project that gave physical form to the proto-urban synoecism (Cataldi, 2006, pp. 118–21).

The first project of Etruscan Rome appears to be the expansion of the *Roma quadrata* to the higher Termini ridge. The two orthogonal axes, which are the basis of the system, are the extension, from the intersection in the Forum, of two secondary valley floor paths of the Palatino, the *vicus Tuscus* and the *Sacra Via*. The origin of the geographical co-ordinate system is presumably the *Arx*, on the north-eastern rise of the Campidoglio, with the *auguraculum* being where the church of Santa Maria in Aracoeli now stands. The modular grid of the co-ordinates remains the same, since the new *umbilicus* lies on the

same meridian, one *centuria* away from the *Ara Maxima*. The dominant position of the Campidoglio seems to justify such a shift: the *Arx* had in fact to appear as the ending *caput* of a fortified line, which followed halfway up the *Alta Semita*, the important ridge path of Via del Quirinale. The walls towards the ridge turn at a right angle to become parallel with the Termini ridge and rejoin at the previous augural centre of the *Ara Maxima*. The Aventino – the mythical 'antagonist' hill – was included only later within the walls in order to protect the valley floor of the Via Appia (Cataldi, 2006, p. 120).

It is not clear how the Republican city was divided into four regions. The original cores of the Latins and the Sabines were located in the regions of Palatino and Collina, and Esquilino and Suburra can be identified through the etymology of their names: the first means an 'external' area (the *esquilini* inhabitants of the outskirts compared to the *inquilini* of the centre), and the second (*sub-urbia*) means the 'low city' on the valley floor (Cataldi, 2006, p. 120).

The planned expansion of Campo Marzio

After the Punic Wars a vast programme of territorial planning was started in the provinces of the Empire. This included a development plan for the capital that would make it outshine every other city in the world. The north-western plain between the hills and the river was the only area large enough to contain a plan for the city that reflected its hegemonic role. A previous plan can be considered its technical derivative, but the new plan for Campo Marzio had a more rigorous design (Figure 5).

The new axis of expansion was Via Flaminia. In the other direction, *Via Recta* ('straight road') is aligned on an east-west axis until it reaches the second Tridente of Sant'Angelo bridge, connecting it with Campo Vaticano across the river. From here the middle axis of the Tridente (Via dei Banchi Vecchi) flanked the drainage canal of the *Euripus*, aligned south-east towards Tiber Island, and rejoining Via Appia. This canal linked the two meanders



Figure 3. The proto-urban phase of Rome, showing the ridges of the Quirinale-Campidoglio and the Oppio-Palatino. The Sabine villages are Campidoglio (1), Quirinale (3), and Viminale (4). The Latin villages are Palatino (2), Cispio (5), Oppio (6) and Celio (7). Based on Cataldi (2006), p. 118.



Figure 4. The 'Great Rome of the Tarquini', showing the expansion of the Roma quadrata to the higher Termini ridge. The Servian walls surrounded the city, which was divided into four regions (Palatino, Collina, Esquilino and Suburra), the region of Aventino having been added later. Based on Cataldi (2006) p. 118.



Figure 6. The layout of the marble *Forma Urbis Romae* of Septimius Severus (AD 146-211). The geometrical centre of the map corresponds to the hypothetical centre of the geographical system. Reproduced from Cataldi (2006), p. 123.



Figure 5. The planned expansion of Campo Marzio. The roads follow a hypothetical geographical system orientated on the cardinal axes. Reproduced from Cataldi (2006) p. 125.

of the river, cutting diagonally the square plan of four *centuriae*. However, for this plan to be completed would have required a corresponding plan for the other side of the Tiber. The problem of achieving this might have prompted Caesar's idea of creating a 'bypass' canal from Milvio bridge to the foot of the Janiculum, thereby forming a spatial continuum from the Vatican to Trastevere. Such a project was not completed owing to inherent technical difficulties. It would have changed the shape and history of Rome, including resolving the problem of the Vatican's relative separateness.

The building activity in Campo Marzio went on for many centuries, from the end of the Punic Wars to the first barbarian threats at the borders of the Empire. These threats led to the building of a second and last wall, 650 years after the construction of the Servian wall. The vast area between the Forum and the Tridente of Sant'Angelo bridge was progressively occupied by a number of large monumental complexes with special purposes. Following the example of Caesar, the first to start the building of his own colonnaded square, each emperor, beginning with Augustus, contributed to the growth of the monumental heritage of Rome. Finally, Trajan, in order to have his Forum built, ordered the hill between Campidoglio and Quirinale to be levelled, completing the process of uniting Campo Marzio with the Republican city.

The fourteen administrative regions of Augustus and the marble map of the *Forma Urbis*

Two other noteworthy occurrences that predate the construction of the Aurelian walls need to be considered: the administrative regions in which Augustus organized the city and the marble *Forma Urbis Romae* of Septimius Severus (Figure 6).

The names and approximate borders of the fourteen regions are unknown (Cataldi, 2006, p. 122). Aventino and Trastevere have always been considered as to some extent 'external' to the city: Aventino being the 'antagonist'

location of the auspices of Remus, and the quintessential plebeian hill, and Trastevere being the urban area bordering the Etruscan world, which was never completely assimilated. Of the twelve remaining regions, six were within the Servian wall and six outside. The city had reached a population of 800 000 by the time of the census of Augustus. The old Servian wall still worked as an administrative border, as did the paths along the valley floors.

The marble map of the *Forma Urbis*, part of which is missing, dates back to the Severan period, and is testimony not only to the development of the city at the beginning of the third century AD, but also to the ability of Roman architects to trace precise 'aerial' representations (*icnographiae*) of very large, complex urban and territorial areas 'measured' directly on the ground. Its study has allowed precise relationships to modern maps to be ascertained. It has been possible to establish that its medial point corresponds to the centre of the co-ordinates of the Roman Arx, which lends credibility to the *Forma quadrata* theory (Cataldi, 2006, p. 123).

The Aurelian city

The design of the Aurelian walls (270–275 AD) (Figure 7) followed the same system of co-ordinates (Cataldi, 2006, p. 125–7). Their geometrical layout can be reconstructed without much difficulty (Cataldi, 2006, p. 126) (Figure 8). The total area, calculated in *centuriae*, was a little smaller than that of the *Forma Urbis* (25 *centuriae* compared with 27), a fact that might suggest a pause in urban growth. The orientation also changed. The number of gates was increased from twelve (in the Servian walls) to sixteen, three of which were in the external bulwark on the Appia. The name *porta Metronia* perhaps indicates the function of the gate as apex of the geodetic grid.

The geometry and shape of the Aurelian walls influenced, and still does influence, the life of the city (Cataldi, 2006, p. 126). The geometry underpinning the alignments of



Figure 7. The walled Aurelian city (AD 270–275). Reproduced from Cataldi (2006), p. 125.



Figure 8. The geometrical layout of the Aurelian walls: (A) Porta Flaminia; (B) Trinità dei Monti; (C) Outside Porta Salaria; (D) Porta Tiburtina; (E) Santa Croce in Gerusalemme; (F) Porta Metronia; (G) Porta Appia; (H) Porta Ostiense; (I) Testaccio; (L) Trastevere; (M) San Pietro in Montorio; (N) Tridente di Ponte. Based on Cataldi (2006), p. 127.

the walls (Figure 8) and hence the shape of the city is consistent with a drawing from the early 1960s by Muratori (Figure 9) (Bollati, 1984, p. 55).

The territorial distribution of the first Christian basilicas

During the first half of the fourth century Christianity became the official cult of the Empire. The first great basilicas of the emperor

Constantine were constructed over the places of martyrdom and burial of the forefathers of the new religion. For the pilgrims who started flocking in from the many provinces of the Empire, temporary settlements were erected in a radial pattern outside the walls, along the consular roads. These proved to be short-lived due to invasions and the subsequent fall of the Roman Empire. What is left is archaeological evidence of their existence, with the main church oddly reminiscent of the stadium typology (Krautheimer, 1965) (Figure 10).

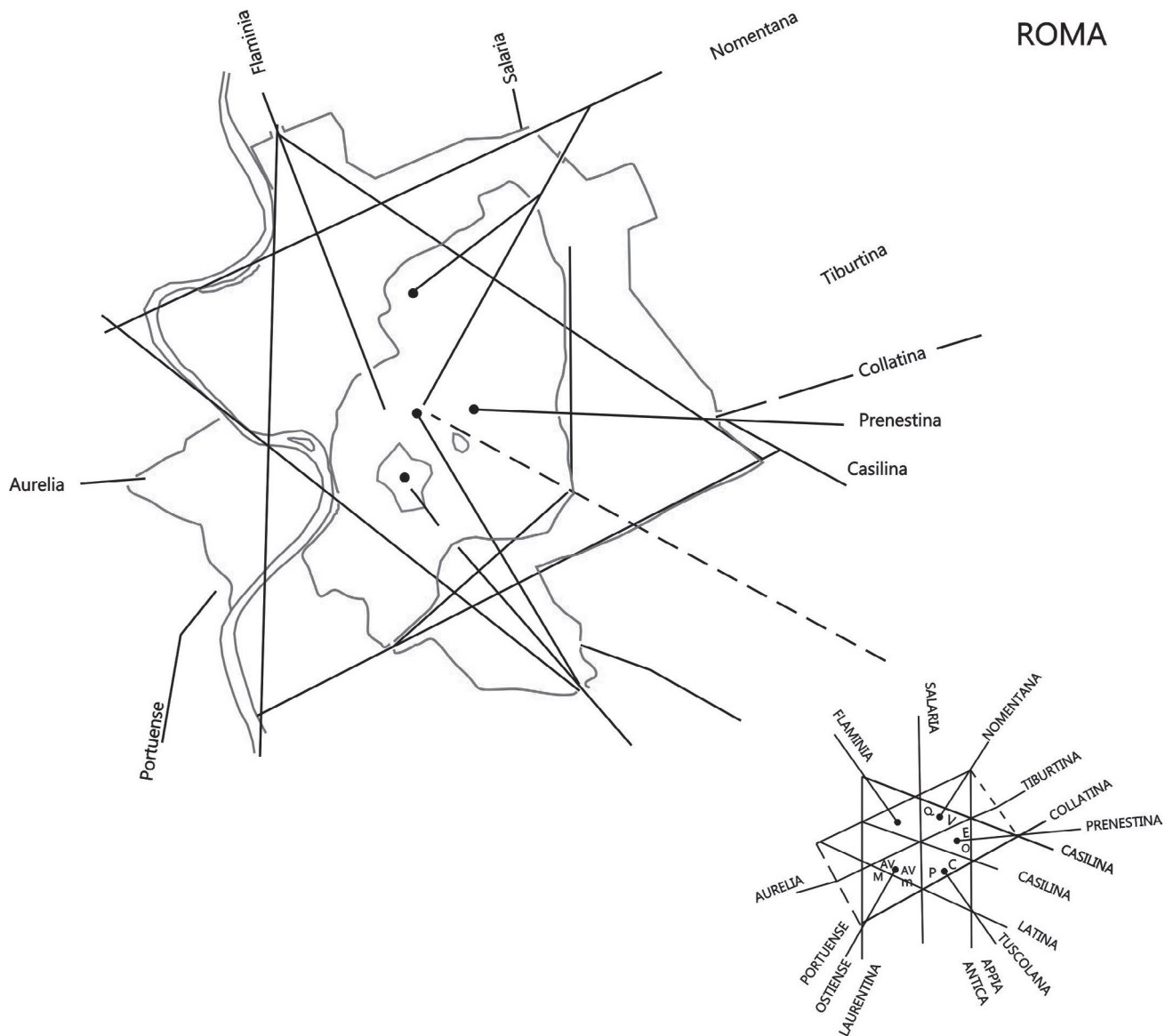


Figure 9. The geometry of Rome in a drawing from the early 1960s by Saverio Muratori. Redrawn from Bollati (1984), p. 55.



Figure 10. The distribution of basilicas in the late-fourth century AD (the last period of the Empire; the first period of Christianity). 1 - S. Pietro; 2 - name unknown; 3 - S. Agnese; 4 - S. Lorenzo fuori le mura; 5 - name unknown; 6 - Ss. Marcellino e Pietro; 7 - S. Stefano; 8 - S. Sebastiano; 9 - S. Paolo fuori le mura; 10 - S. Pancrazio; 11 - S. Giovanni in Laterano.

The reconstruction of Rome in the Middle Ages

Rome was almost entirely depopulated following the barbarian invasions. Figure 11 shows the nineteenth-century papal cadaster. The map is a product of maps of Campo Marzio in the imperial and medieval periods. The dense urban fabric reflects the attraction that the new Vatican exerted for many centuries. Major public and

private buildings (for example, churches, convents and houses) took up sites previously occupied by the ruins of major Roman complexes that had been designed to contain special functions (notably religious, political, athletic and theatrical). Such site succession is a widespread feature of medieval cities that have inherited a Roman colonial pattern.

Gianfranco Caniggia's *Como: lettura di una città (Como: the reading of a city)*, with

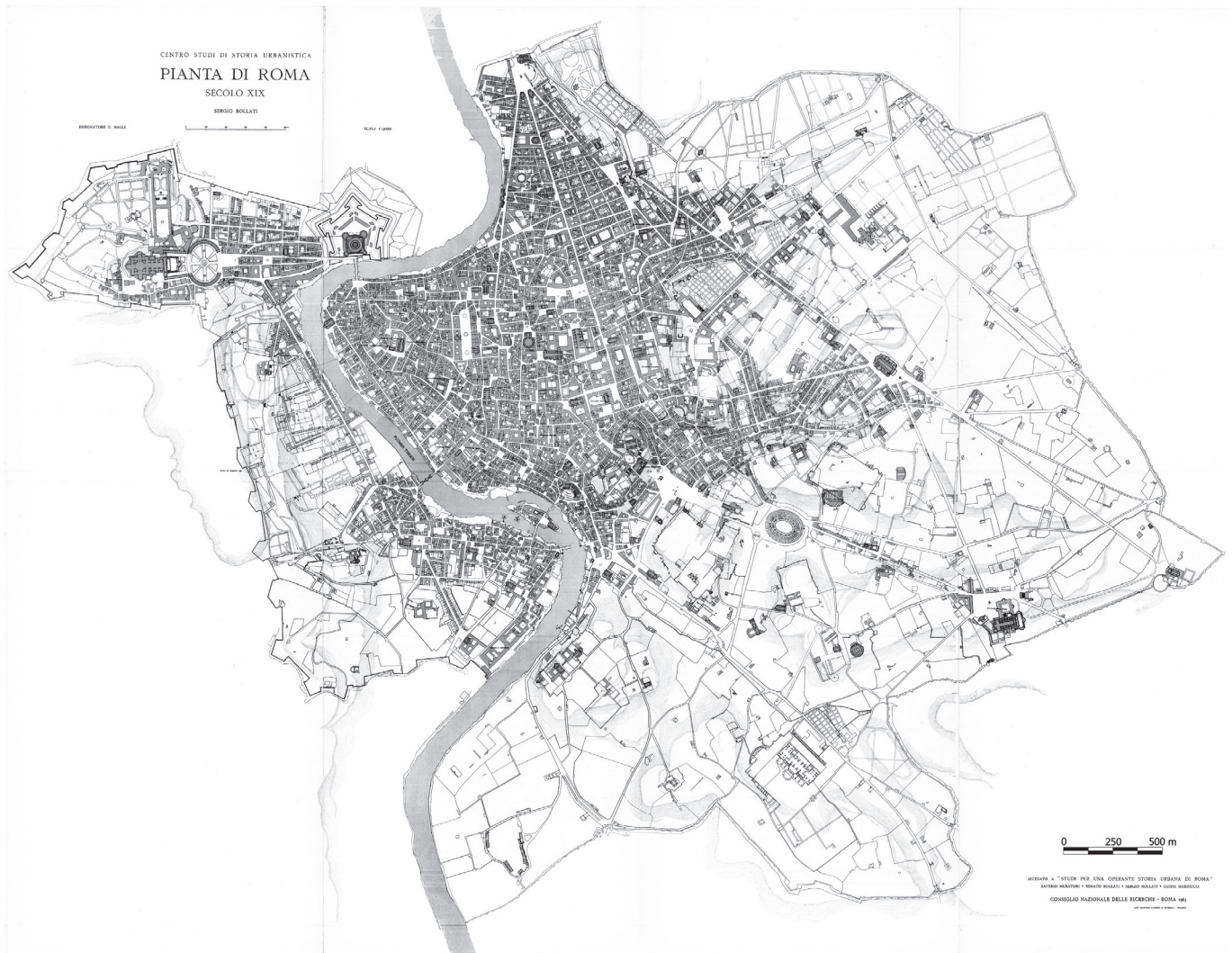


Figure 11. Rome after the nineteenth-century papal cadaster. Reproduced from Muratori *et al.* (1963).

an introduction by Muratori (Caniggia, 1963), is the first book openly dealing with the phenomenon of ‘medievalization’. It was highlighted by Muratori and his collaborators during their reconstruction of the development process of Rome’s historical centre.

Analysis of the medieval city clearly exceeds the scope of this paper. However, a brief mention of Caniggia’s theory of ‘medievalization’ highlights Rome’s double urban life cycle. Caniggia’s theory develops the theme of the duality of public and private construction, focusing on the spontaneous intervention of private citizens who, in the absence of regulatory action on the part of city authorities,

tend to reuse for their own building purposes planned structures of public interest. This has had a number of major consequences for the dynamics of urban transformation (Caniggia, 1976) (Figure 12).

1. Basic buildings tend to replace special buildings.
2. The fabric of the Roman *domus* is either converted to palaces or, commonly, is parcelled into the smaller fabric of row houses.
3. The planned straight paths tend to turn into organic curvilinear paths, owing to the buildings facing them progressively occupying the public ground.

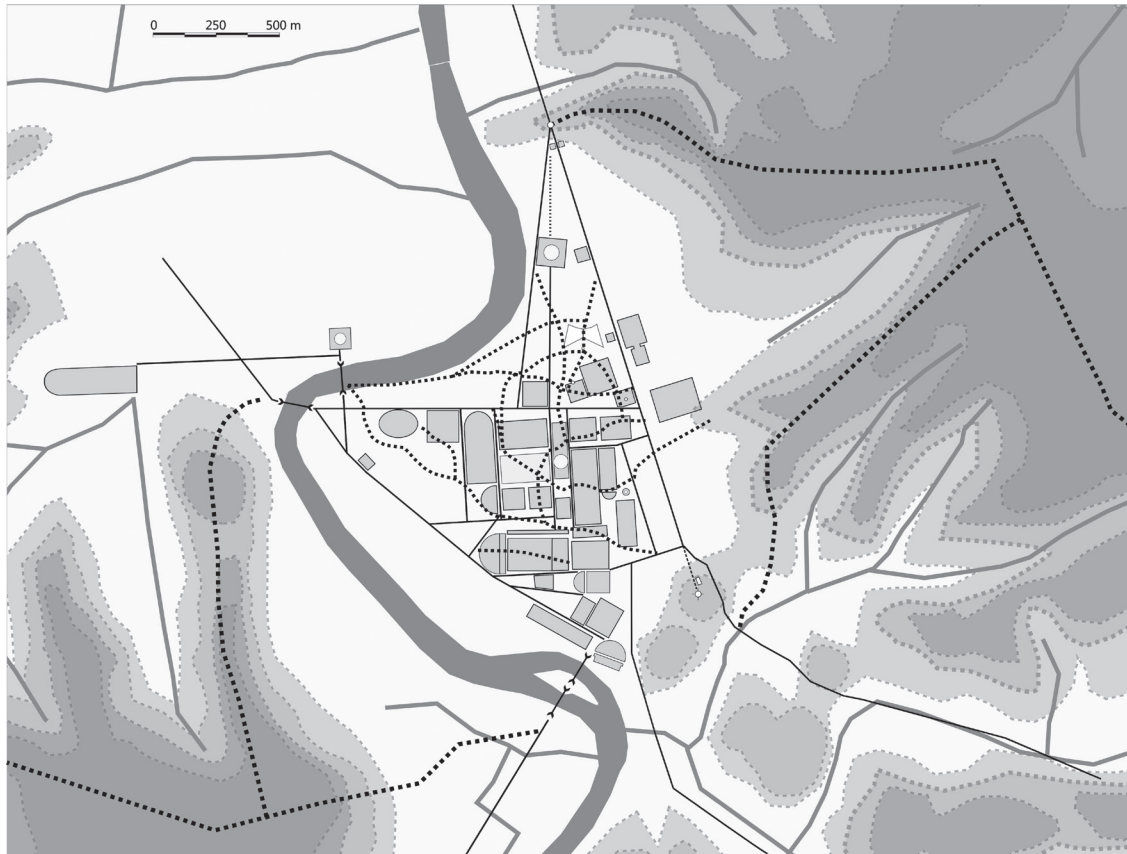


Figure 12. Examples of features incorporated in the ‘medievalization’ of Rome.

4. The city walls are followed on their outer margins by ring roads (such as Via del Muro Torto). In combination these act as fixation lines within the pattern of subsequent city growth and change, and give rise to fringe belts (Conzen, 1960, pp. 56–65).

Conclusion

In Rome, the influence of ‘substratum permanent structures’ on the historical development of urban form is especially evident. A particularly important factor is the close relationship between the natural geographical structure – notably the pattern of alternating ridges and valley floors – and the planned geometrical structure of the Campo Marzio. The main phases of an ancient development cycle have provided the basis for a process that has restarted in the very different historical

circumstances of the medieval and modern eras.

The total process can be divided into eight stages. (1) The founding of proto-urban Rome in the form of seven Latin and Sabine settlements on ridges. (2) The urban foundation of the *Roma quadrata* by Romulus on the Palatine. (3) The Etruscan Rome of the Servian walls, divided into four regions and with its focus on the first Forum. (4) The urban ‘doubling’ of Campo Marzio, in which there was a planned area assigned to special building uses. (5) The Imperial Rome in which the process of uniting Campo Marzio with the Republican city was completed. (6) The late Imperial Rome with its Aurelian walls. (7) The first Christian Rome, including the abortive attempt to create territorial basilicas outside the walls. (8) The medieval occupation of Campo Marzio, as a result of the attraction exerted by the new Vatican Citadel: this gave

rise to the reuse for residential purposes of ancient monuments, which have been gradually transformed within the urban fabric of the current historical centre of Rome.

This process constitutes an important framework for subsequent studies of the form of Rome, and offers a fundamental underpinning for planning proposals in the Caniggian genre.

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