JUST ANOTHER CHANGING CITY?
THE URBAN DEVELOPMENT OF ROME AD 400-900[1]

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1. Introduction

The history of Rome in the transition from Antiquity to the Middle Ages has traditionally been considered to have consisted of a period of rapid decline followed by a revival. According to this view, fourth-century Rome was still an important urban centre. However, from the fifth century onwards, the city[2] experienced a steep decline until the eight century, when it underwent a revival during the "Carolingian Renaissance."

The sixth and seventh centuries AD, therefore, are generally considered to have been a low point in Rome's history. The period is often characterised as one in which the city's population was very small and economic activity very low. This demographic and economic decline is seen as the primary cause of the physical decline in the city, which is observable in this period. This image is reflected in all popular monographs on Rome in the early Middle Ages[3]. To summarise, the theory rests on two main arguments that Rome experienced a demographic decline (visible in the shrinking surface area of the city) and that Rome experienced an economic decline (evidenced by the dilapidated buildings and simplification of the material culture).

One argument in favour of a rapid decline in the city's circumstances is the recorded amounts of distributed rations of grain, meat and other foodstuffs in the

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[1] This article is an adaptation of my Dutch master thesis *Stad in verandering: Rome op de grens van oudheid en middeleeuwen* (Leiden University, 2006). I owe a great deal to Frits Naerebout, Manon Foster-van der Loo, Thurstan Robinson and Paulien Retèl for their comments and corrections and to my family, Monique and Sigrid, for all their support.

[2] In this article I avoid the word "town" and prefer "city". This is because I think that, at this point, we know too little about early-mediaeval Italian towns to distinguish between well-defined entities called "town" and "city".

[3] A relatively recent work (Lançon 2000) is impregnated by the assumption that the population of Rome declined rapidly during the fifth century. For a very gloomy picture: Krautheimer 1980, 62-66. Also in an article by Richard Hodges from 1993 this image of decline is heavily stressed. According to Hodges, it is hard to explain how Rome came to enjoy economic prosperity in the ninth century. He calls this "the riddle of Saint Peter's Republic".

city. The quantities of these rations drop dramatically between AD 400 and 550, which has led to the conclusion that the loss of North Africa and the chaos of the Gothic invasions and subsequent wars disrupted the city's food supply and thus led to a rapid reduction in the city's population within a short timespan[4]. However, further evidence in support of this theory of rapid decline is scanty[5]. Often very specific evidence is used to support a theory of general decline, and the kind of decline is not always defined. In recent years, this image of rapid decline has been subject to strong criticism, for instance, by Robert Coates-Stephens[6]. A general study that takes such criticism into account is, however, not yet available. This article is intended to take some steps in redressing the balance.

The fact that major changes occur in all cities during the period under discussion is not contested. In recent years, much research[7] has been done into the process of decline or, as others prefer, *transition* or *transformation*[8]. The instability of the third century led to the reinforcement of the centralised bureaucracy. This reinforcement in turn led to social and economic changes inside cities. Eventually the disappearance of The Empire in the West undermined the complex society that depended on the Empire's infrastructure. These developments were reflected in physical changes in the urban environment, such as the disappearance of public buildings, encroachment of public space and subdivision of housing into smaller units. In all parts of the Mediterranean, similar developments can be seen to occur – albeit not all in the same pace or in the same order.

In this article, I raise two questions: (1) what kind of decline/transformation took place in Italian cities?[9] and (2) in what way, if any, can the decline of Rome be characterised as exceptional? For this comparison, I systematically survey a number of physical characteristics of a city in Late Antiquity: its walls, streets, aqueducts and sewers, public buildings, private housing, unbuilt areas like cemeteries and farmland, and the surface area of the city.

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[4] For instance Lançon 2000, 119. These figures, however, are difficult to interpret. For courageous attempts: Durliat 1990, 90-123 and Barnish 1987. For doubts about their reliability: Purcell 1992.

[5] Delogu 1988 tries to show decline by means of the differences in construction activity of the popes. Whitehouse 1988 tries to do the same by means of the location of cemeteries, *diaconiae* and aqueducts.

[6] For example: Coates-Stephens 1997. See also the *Festschrift* for Donald Bullough (Smith 2000), in which a shift in perspective is visible.

[7] There is an enormous amount of literature on this subject. The study with the broadest scope, as well as an extensive bibliography, is: Liebeschuetz 2001a. For a more compact summary see the two articles in *The Cambridge Ancient History* on the subject: Liebeschuetz 2001b and Ward-Perkins 1998 and Wickham 2005.

[8] During pas decades relativist terminology has been fashionable. Recently the term "decline" has been regaining some popularity (especially Ward-Perkins 2005). I will not dwell on the question of the right name for this process. I only observe and that in the case of Rome this process is often described as "decline".

[9] I restrict my research material to Italy, to avoid more pollution of the data, than I already risk by considering a geographically heterogeneous area such as Italy as a unity.

2. City walls

2.1 City walls: Italy

Newly built walls were extremely rare in Italian cities of the early Middle Ages. In the Ostrogothic period, written sources do mention the building of new walls. However, this may only concern the rebuilding of an existing wall[10]. Instances of entirely new walls were very rare in the Byzantine and Lombard period also[11]. Walled cities, though, are frequently mentioned during the Byzantine period, for example Otranto, Naples and Ancona[12]. Walls were considered an essential characteristic of a city. Because it has no walls, Cassiodorus is unable to see Squillace as a real city (Cassiod., *Var.* XII.15). The walls of Perugia were probably in a good state (Zanini 1998, 40).

So, city walls were common, but, generally, these walls were of inferior quality compared to the walls of the Later Imperial Period. The building materials always consisted of spoils from other buildings. Construction materials used were, for example, random blocks of granite or limestone and paving stones (Zanini 1998, 180-181). Moreover, Byzantine fortifications in Italy were built more carelessly than those in the Eastern Mediterranean and North Africa (Brown 1978, 324). Given their construction quality, walls were supposedly lower than during the Later Empire. In most cases the wall follows the circuit of an older wall. But when an entirely new circuit was built, the new one was always shorter than the old one or (when there was no previous wall) enclosed only part of the surface area of the antique city. The Byzantine walls in some cases enclosed a much more limited area than the original walls from the Later Empire[13].

The walls were probably not kept in repair on a structural basis. In cases where repairs are mentioned, these frequently seem to be *ad hoc* repairs[14]. In an important city such as Ravenna, no mention is made of extensive maintenance during the entire Byzantine period. In a number of cities, however, structural maintenance is mentioned[15]. In Rimini, the walls were kept in good repair during the

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[10] Anonymus Valesianus, 12: "fecit alios muros novos". Archaeological research has yielded no signs of extensive rebuilding. Bullough 1966, 88; Ward-Perkins 1984, 192.
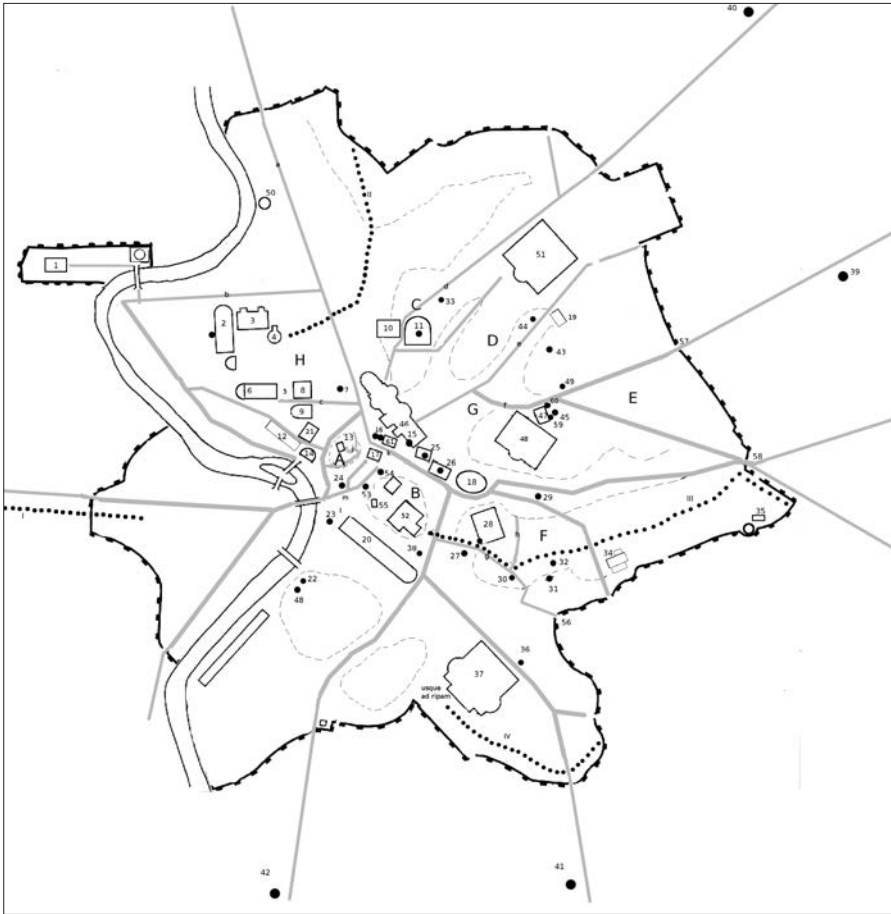
[11] A new wall was possibly built at Croton, which did not have a wall in 547, but was able to endure a siege in 552: Zanini 1998, 176-178. Cosa was equipped with walls at the beginning of the sixth century: Celuzza/Fentress 1994, 1.

[12] Otranto, Acerenza, Conza, Cumae, Fano, Cesena, Fiesole en Spoleto were also provided with walls: Zanini 1998, 176.

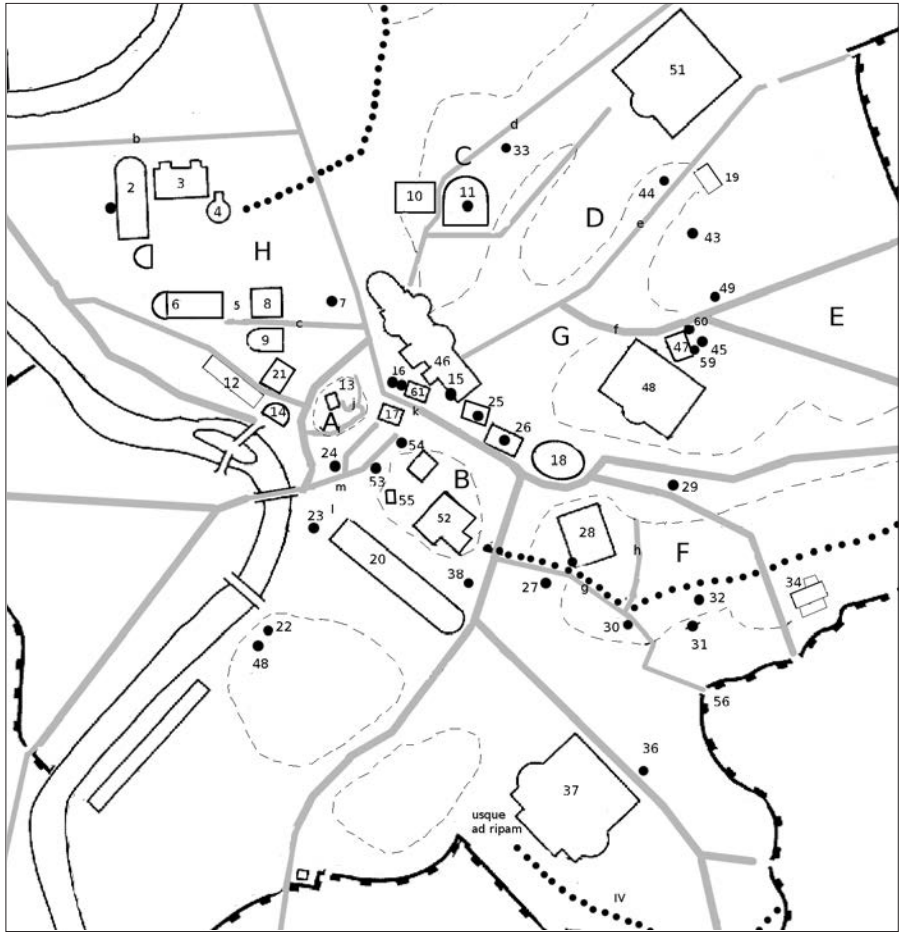[13] This does not mean that the area outside the walls was uninhabited.

[14] The building of walls is mentioned in a number of cities in Byzantine Italy: Taranto, Orvieto and Spoleto: Zanini 1998, 177.

[15] Ravenna: Zanini 1998, 129; Squillace, Bologna Reggio di Calabria: Gelichi 2002, 177. In seventh-century Pavia a city gate was rebuilt, but unfortunately it is unclear what this rebuilding involved. In Salerno and probably Benevento the town walls were extended during the Lombard period: Ward-Perkins 1984, 197. A modernisation of the walls of Benevento dates from the Lombard period: Gelichi 2002, 176-177.

Buildings

1 S. Peter's basilica and palace.
2 Stadium of Domitian (Piazza Navona)
3 Baths of Nero
4 Pantheon / S. Maria ad Martyres
5 Largo Argentina
6 Theatre of Pompey
7 S. Marco
8 Porticus Minucia
9 Theatre of Balbus
10 Temple of Serapis
11 Baths of Constantine
12 Circus Flaminius
13 Aracoeli insula
14 Theatre of Marcellus

15 Templum Pacis / SS. Cosma e Damiano
16 S. Adriano and S. Martino al Foro
17 Basilica Julia
18 Colosseum
19 S. Maria Maggiore
20 Circus Maximus
21 Porticus Octaviae / S. Angelo in Pescheria
22 S. Sabina
23 S. Maria in Cosmedin
24 S. Giorgio in Velabro
25 Basilica of Constantine and Maxentius / SS. Pietro et Paolo in Via Sacra
26 S. Maria Novella

27 Family house of Gregory the Great
28 Temple of Divus Claudius
29 S. Clemente
30 S. Maria in Domnica
31 S. Stefano Rotondo
32 S. Erasmo al Celio
33 S. Agatha de Caballis
34 Lataran basilica and palace
35 S. Croce in Gerusalemme
36 SS. Nereo ed Achille
37 Baths of Carracalla
38 S. Lucia in septem vias
39 S. Lorenzo fuori le mura
40 S. Agnese furi le mura
41 S. Sebastiano

42 S. Paolo fuori le mura
43 S. Prassede
44 S. Pudenziana
45 S. Martino ai Monti
46 Forum of Nerva
47 Porticus Liviae
48 Baths of Trajan
49 S. Silvestre e Martino
50 Mausoleum of Augustus
51 Baths of Diocletian
52 Imperial palace
53 S. Teodoro
54 S. Maria Antiqua
55 Temple of Magna Mater
56 Porta Metrovia
57 Porta Tiburtina
58 Porta Maggiore

59 S. Vito
60 S. Lucia in Selci
61 Basilica Aemilia

Aqueducts
I   Aqua Trajana
II   Aqua Virgo
III Aqua Claudia
IV   Aqua Jovia

Streets and squares
a   Via Lata
b   Via Recta
c   Vicus Pallacinae
d   Alta Semita
e   Vicus Patricius
f   Clivus Suburranus

g   Clivus Scauri
h   Vicus Capitis Africae
i   Vicus Jugarus
j   Clivus Capitolinus
k   Forum Romanum
l   Forum Boarium
m   Velabrum

Hills and neighbourhoods
A   Capitol
B   Palatine
C   Quirinal
D   Viminal
E   Esquiline
F   Caelius
G   Suburra
H   Campus Martius

entire Byzantine period (Zanini 1998, 137). A very important city like Naples (after Ravenna the most important city of Byzantine Italy) represents an exception. After the walls had been devastated by Totila halfway the sixth century, a complete rebuilding programme was undertaken, during which the port was enclosed within the walls. The surrounding countryside was also equipped with a large number of forts (Arthur 2002, 35). A number of sources demonstrate that the local government was responsible for maintenance activities[16].

The walls were probably sufficient to keep hostile armies out, as the following quotation from Gregory of Tours shows: "Per tres fere menses Italiam pervagantes, cum nil proficerent neque se de inimicis ulcisci possint, eo quod se in locis communissint firmissimis..."[17].

2.2 City walls: Rome

Rome in Late Antiquity was equipped with huge fortifications[18]. Its walls have been well preserved compared to other Italian cities. During the reign of Theoderic, repairs to the walls were undertaken, but the exact nature of these remains unknown[19]. During the Gothic wars, several repairs were carried out, although the activities have an *ad hoc* character similar to many repairs mentioned in other cities[20]. Little is known about the years after the Gothic wars. The *Pragmatic Sanction* of 554[21] mentions only public buildings in general, not the walls in particular. However, in 578 and 593, Rome survived Lombard sieges, so apparently the walls were in a good enough state to enable the city to endure a

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[16] A letter by Gregory the Great (*Epistula* IX.76) shows that the local government was responsible for the town: in this letter Gregory summons the bishop of Naples to hand over the walls, which had come under responsibility of the church, to the local authorities. In Salerno it is clear that the Lombard government was responsible for the maintenance of the walls. In Lombard Verona the *vicarius* was charged with the maintenance of the walls: Ward-Perkins 1984, 196-197, La Rocca 1992, 172.

[17] "For about three months they wandered through Italy without accomplishing anything or being able to take vengeance on their enemies, since they were entrenched in fortified sites." Gregory of Tours, *Hist*., X.3.

[18] The Aurelian wall was nineteen kilometres long, eighteen metres high and 3.5 metres thick; It had eighteen gates and 381 towers: Macadam 2003, 315.

[19] Isid., *Hist. Goth*. 39. Cassiodorus (Cassiod. *Var.* I.25; II.34). and the Anonymus Valesianus (12) mention repairs to the *moenia*, which does not necessarily mean "town walls" proper but "public buildings" in general: Ward-Perkins 1984, 46.

[20] Belisarius rebuilt a damaged stretch of walls in twenty-five days using stones which happened to be present. Also, after a second siege by Totila the walls were repaired.
(*Goth*. I.14.15). How badly damaged the walls were, remains uncertain. In one passage (*Goth*. III.22) Procopius uses words that indicate complete destruction. Elsewhere (*Goth*. III.24) the damages appear to be superficial. In 536 Belisarius ameliorated the walls by adding a ditch and introducing a new kind of merlon. Nineteenth-century photographs show disordered piles of *opus quadratum* blocks. According to Coates-Stephens (Coates-Stephens 1998, 171) these could be remainders of the repairs by Belisarius, but this is merely a conjecture.

[21] *Pragmatic Sanction* 25.

siege. Pope Gregory the Great assisted the Byzantine authority in organising the defence, but in his letters no mention is made of construction works (Coates-Stephens 1998, 168, n.4). All in all, the walls in this period must have been subject to a certain neglect. Four gates fell into disuse and were closed permanently (Hubert 1990, 98). Also, parts of the walls collapsed[22].

Repairs to the walls are mentioned only at the beginning of the eighth century. Between 708 and 740, the popes Sisinnius, Gregory II and Gregory III undertook projects to modernise the walls. At the end of the eighth century, Hadrian I started two building projects to renew the walls. After the raid by the Saracens in 846, the walls were again reinforced by Leo IV. Two towers from the Early Middle Ages probably also date from the ninth century. Their brickwork resembles remaining fragments of the wall of Leo IV of 848 and ninth-century church construction, for example at the SS. Nereo ed Achille, S. Maria in Cosmedin and S. Martino ai Monti (Coates-Stephens 1995, 3; Coates-Stephens 1998, 169). However, the resemblance is not striking, so some doubt remains.

The material, where datable, does not indicate any repairs to the walls from the second half of the sixth century up to the seventh century. Nevertheless, significantly, the walled circuit was not shortened. On the contrary, in the early Middle Ages a new wall was built, the wall of Leo IV, to defend S. Peter's and the district surrounding it. This wall stands out by comparison with other Italian walls from the same period[23].

3. Streets

3.1 Streets: Italy

Literary evidence suggests that the Roman period pavements remained intact. The eighth-century *Versum de Mediolano civitate* and the *Versus de Verona* still described streets as firmly covered with stones (Ward-Perkins 1984, 185). Sometimes we have direct proof of the maintenance of streets. In sixth-century and seventh-century Classis, there is evidence of the restoration of the pavement of an important thoroughfare. The new street surface remained in use to the end of the eighth century. A street surface of gravel and brick which dates from the sixth century has also been found in Bologna. This surface remained in use until the eleventh century. In Pescara, a large-scale modernisation of the street surface

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[22] In the *Descriptio Murorum Urbis Romae*, a survey of all Roman defenses, different parts of the wall show varying numbers of towers, gates etc., which could be explained by decay (Richmond 1930, 49). Also the *Liber Pontificalis* mentions fifteen towers which have collapsed so that they had to be rebuilt from the ground up: *Liber Pontificalis* 97.52.

[23] Of this wall some fragments remain. The wall was three kilometres long, 2.5 meters thick and almost eight meters high. The outside was built of tufa and brick. The inside contained a mixture of rubble and wet mortar. The masonry was of inferior quality compared to churches from the same period. This may be caused by the fact that the wall was built during a very short timespan (Gibson/Ward-Perkins 1979; 1983).

was also carried out in this period. The materials used were stones from the Roman pavement supplemented with all kinds of extra materials[24].

The original street plan of most Italian cities has generally been well preserved (Ward-Perkins 1988, 20). Examples of cities in which an almost perfect grid plan has been preserved include Verona, Piacenza and Lucca[25]. Ward-Perkins originally argued that continuity of street plans indicated government intervention of some kind. In later publications, however, he modified his opinion in response to criticism from Brogiolo. Using the continuity of the street plan as proof for the maintenance of streets should be treated with caution[27].

A better form of evidence for the presence or absence of maintenance is the rise of street levels. Rising streets may have different causes: the dumping of waste, problems with repairing the paving, floods or even attempts at harmonising street levels (Arthur 2002, 39). In Verona, in contrast to the picture painted in the *Versus de Verona*, the ancient pavement is sometimes hidden below metres of remains from later times. The differences in height vary greatly. In the Corte del Tribunale, the early mediaeval level is barely above the Roman level; in the Via Dante, the difference is somewhat greater, forty centimetres. Nearby, however, on the Piazza delle Herbe, the difference amounts to five metres. Some streets, therefore, were probably cleared whereas in others the rubble was allowed to pile up (La Rocca Hudson 1986, 71). Sometimes we know that the street surface was removed because parts of the pavement were used to build houses. In Verona, several constructions contain materials originating from the Roman pavement (La Rocca Hudson 1986, 64-66).

3.2 Streets: Rome

In many areas of Rome the current street plan deviates to a large degree from the early-mediaeval one because these areas were part of the *disabitato* during the Middle Ages and were subject to city planning in later periods. The only area of Rome in which we can observe a continuous development of the street plan between Antiquity and the Middle Ages is the Campus Martius.

There, the ancient street plan is still recognisable in the current street plan[28]. The

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[24] Classis: Zanini 1998, 189; Bologna: Ortalli 1984, 388-392; Pescara: Zanini 1998, 154; Staffa 1991, 210-213.

25 The street plan of Naples has been preserved quite well: Arthur 2002, 39. In many other cities the street plan has been well preserved. Somewhat less in: Brescia, Ravenna. Rimini, Aosta, Turin, Novara, Como, Pesaro, Osimo, Albegna, Genua, Pisa, Florence, Spoleto, Parma, Cremona, Bologna and Imola. In for instance Padua, Modena and Mantua current streetplans deviate a lot from the Roman ones: Brogiolo 1987, 31.

[26] For references, see: Brogiolo 1987, 31-35; Ward-Perkins 1997, 266 n. 16.

[27] Streets are frequently narrower than in Antiquity. This was probably caused by the process of *encroachment*. Encroachment occurs for example in streets in Brescia and Naples: Arthur 2002, 50.

[28] See for a particularly illuminating map of the Campus Martius area: Claridge 1998, 174-175.

original Roman pavement has been preserved beneath the surface of several important streets in this area[29]. But important changes can also be observed, such as the subdivision of monumental buildings into several blocks. In this way, the street plan in this region became much more finely meshed[30]. This must be explained by the exceptional nature of the area as a conglomeration of monumental building. At some point between Late Antiquity and the Middle Ages, the area became the *abitato* of the mediaeval city. In the course of this process, the ancient monuments were incorporated and gradually subdivided by new roads.

Though, on the whole, the street plan in other areas shows little continuity, important thoroughfares have preserved their original course. An artery such as the Clivus Suburranus (Via dei Selci), followed its original route, and even its Roman pavement has remained intact[31]. Saxer has shown that this is exactly the route mediaeval processions followed from the Forum Romanum to Santa Maria Maggiore (Saxer 1989, 966). Excavations at Vicus Capitis Africae have proved that the route of this road did not substantially change between the fifth century and the nineteenth century (Pavolini 1993, 57).

Although important roads remained the same over time, changes can also be observed. Between the Porticus Minucia and the Theatre of Balbus a new road came into existence which extends to the Via Pallacinae towards the west. The road ran via an already dilapidated portico. In the Middle Ages, this street (the current Via delle Botteghe Oscure) formed part of the route between the Lateran and the Vatican. On the other hand, roads that ran along the slopes of the Capitoline hill, like the Clivus Capitolinus and the Vicus Jugarius, lost their importance[32].

Building new roads seems to have been an *ad hoc* process, at least compared to the examples of Pescara and Bologna mentioned above. The street that forms the current Via delle Botteghe Oscure was first made from earth and pieces of rubble. The accumulation of waste caused the street level to rise gradually. It had no drainage system and *spolia* seem selected at random and were used in a chaotic manner (Manacorda 1993, 38). In the Vicus Capitis Africae, the old pavement was replaced by a surface of rubble and beaten earth during the eighth or ninth century (Pavolini 1993, 57). I have, however, not examined enough evidence to

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[29] Lanciani 1901, 146. Several medieval thoroughfares date back to ancient roads. Compare for example the map in Krautheimer 1980, 246 with the map in Claridge 1998 mentioned above.

[30] Manacorda 1993, 35-36. At the Colosseum a similar process can be observed. There, a road through the monument comes into being: Rea 1993, 73.

[31] Other examples: Clivus Scauri on the Celio where also original façades of the houses have been preserved. The Alta Semita is reflected in the current Viale XX Septembre, Vicus Patricius in Via Urbana and Via Lata in Via del Corso.

[32] For the Vicus Jugarius and the Clivus Capitolinus: Filippi 2000, 1-3; Krautheimer 1980, 250; Campese Simone 2004, 448. Archaeological evidence suggests as well that these routes supposedly were not used regularly as on the Vicus Jugarius a house blocked part of the street.

answer the question whether the construction of roads in Rome was generally more provisional than elsewhere.

The street level of Rome increased considerably during the transition from Antiquity to the Middle Ages. This can be inferred from a number of examples where the street levels at the beginning and the end of our period can easily be compared[33]. Just as in Verona, the differences in height vary greatly. A good example of this are the so-called called *monti* that came into existence on the originally flat Campus Martius, as, for example, Montecitorio (Claridge 1998, 177). But because of these variations, it is difficult to compare the situation in Rome to that in other cities.

4. Aqueducts and sewerage

4.1 Aqueducts and sewerage: Italy

After the beginning of the fifth century, references to repairs of aqueducts become extremely scarce. Only in a couple of important cities, such as Ravenna, Verona and Parma, are aqueducts still mentioned (Ward-Perkins 1984, 128-130). In Naples there was still a functioning aqueduct in AD 598, as a letter by Gregory the Great shows (Gregory the Great, *Epistula* XII.6). This aqueduct continued to exist up to the early Middle Ages, witnessed by the discovery of baths from this period that go back to Roman baths, exactly above the course of the aqueduct (Arthur 2002, 44-45). Outside Naples, no more indication is found of working aqueducts after the sixth century.

In place of aqueducts, wells seem to have become essential for the water supply. This may be deduced from the fact that authorities assured that wells were open to the public, even when they were private property (Ward-Perkins 1984, 132) However, the occurrence of wells does not necessarily indicate a deterioration of the urban infrastructure. In Naples, some wells probably drew their water from ancient aqueducts and cisterns (Arthur 2002, 44). The presence of wells therefore does not need to indicate the breakdown of the water supply.

From the sixth century onwards, there is no more proof that the sewerage system was being maintained. During the Ostrogothic reign, the inhabitants of Parma were still obliged to keep their sewers in good repair (Cassiod., *Var.* VIII.29-30). For later periods, there is no such proof. Nevertheless, the sewers frequently con-

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[33] At the time of the construction of the new basilica of S. Clemente the old fourth-century street lay five meters below street level: Krautheimer 1980, 161. Ten meters below the ninth-century church of S. Martino ai Monti buildings have been discovered from the second or third century: Claridge 1998, 302. At S. Adriano in Foro (the Curia Julia) medieval graves are visible in the façade: ibidem, 72. In the lower areas the increasing street level can be explained by the frequent floods of the Tiber: Hubert 1990, 108.

[34] Ward-Perkins 1984, 134. They continue to function onto this day.

tinued to function. The sewers of Pavia, for example, have been particularly well preserved. In Verona the mediaeval street grid was adjusted to the existing Roman drainage system, which may therefore be supposed to still have been functioning (La Rocca Hudson 1986, 71). In Naples the system of sewers remained intact until the Middle Ages[35].

4.2 Aqueducts and sewerage: Rome

During the Later Empire Rome possessed a dozen aqueducts[36] and in Ostrogothic times these were maintained (Cassiod., *Var.* VII.6). During the Gothic wars the aqueducts were temporarily cut off by Gothic as well as Byzantine forces,. This probably had no permanent impact and the aqueducts were subsequently repaired[37]. In the *Pragmatic Sanction,* the maintenance of the aqueducts is mentioned as a government responsibility. For the remaining period, we have little information, but in 602 a number of aqueducts still functioned, as a letter of Gregory the Great shows. However, it is unclear which aqueducts Gregory was referring to (Gregory the Great, *Epistula* XII.6).

In the seventies of the eighth century, Hadrian I carried out extensive repairs to four aqueducts[38]. Some of these aqueducts had been out of use for twenty years. Apparently these aqueducts had kept functioning until half-way through the eighth century[39]. The aqueducts that Hadrian repaired were the Aqua Claudia, Virgo, Traiana and Jovia.

The aqueducts were of great importance in early mediaeval Rome. During this time, a new village developed near the Porta Maggiore and the Aqua Claudia, and the presence of a water mill there indicates that the aqueduct still functioned[40].

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[35] In the tenth century "running water from a sewer" and a "public sewer" are mentioned. At excavations a sewer has been found which continued to function until the fifteenth century: Arthur 2002, 45.

[36] The aqueducts provided the city with more than 100,000 m³ water a day: Claridge 1998, 59-59. In the fourth century Rome numbered eleven large baths (*thermae*), 856 small baths (*balneae*), 1352 public cisterns, and 144 public toilets and a large number of fountains: Ward-Perkins 1984, 121.

[37] Procop., *Goth*. I.19.13 and 18. It seems very improbable that any of them intended to inflict permanent damage to the aqueducts. The assumption that Belisarius undertook a major repair is probably untrue: Ward-Perkins 1984, 130-131.

[38] Krautheimer 1980, 111; *Liber Pontificalis* 97.59, 97.61-62.

[39] Coates-Stephens 1998, 172. In the ninth century the *Liber Pontificalis* frequently mentions a "renovatio a fundamentis": *Liber Pontificalis*, 103.19, 104.21, 107.16 and 66. No archaeological evidence has shown any signs of such extensive rebuilding. Inside the city these are restricted to some rebuilt pillars in and near the villa Wolkonsky. Outside the city there is only one example of such an extensive renovation: Coates-Stephens 1998, 174. The expression "a fundamentis" therefore seems to be rhetorical.

[40] Along the same aqueduct, close to S. Erasmo al Celio, existed a cluster of houses called "Decennia". In the description of the houses the presence of running water is often mentioned. Further, near the Lateran, churches have names like "de forma" or "de formis". This could indicate the importance of this aqueduct: Hubert 1990, 77.

Other indications come from the mention of baths, further water mills, and fountains. References are made to water mills on the Janiculum, which were supplied by the Aqua Traiana[41]. Moreover, there were a number of fountains and a public lavatory[42]. The Lateran palace had baths, which is mentioned as a major reason for repairing the aqueduct[43].

However, even with these aqueducts, wells were responsible for a significant part of the water supply. In the tenth century, one finds regular references to houses grouped around wells[44]. This is not surprising, as the Roman soil is very suitable for digging wells and its groundwater is of good quality.

Rome also possessed an extensive system of sewers since the time of the Early Republic. Like the aqueducts, these sewers were maintained until the Ostrogothic period (Cassiod., *Var.* III.30), although there is also evidence of decline. Although proof of maintenance in later periods is absent[45], the sewers of Rome clearly remained in use, and large parts of the system function to this day.

5. Traditional public buildings

5.1 Traditional public buildings: Italy

There was already a gradual reduction in the number of new monumental buildings and known cases of repairs to existing buildings before the beginning of the fourth century (Ward-Perkins 1984, 14; Fauvinet-Ranson 2006, 209). In the course of the fifth century, new public buildings became extremely rare[46]. The sources indicate that temples in particular were not maintained (Ward-Perkins

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[41] They are mentioned by Procopius in the sixth century: Procop. *Goth.* I.19.19. These watermills are also mentioned during the pontificate of Honorius I (625-638), Hadrian I (772-795) and Gregory IV (827-44) as one of the reasons to repair the aqueduct: Ward-Perkins 1984, 143-144. It does not seem probable that the water mills would be a reason for the repairs if they had been out of use for a long period of time.

[42] In the atrium of S. Peter in the fifth century a fontain was erected. At the beginning of the sixth century pope Symmachus (498-514) erected one at the entrance of the S. Peter and one at S. Andrea nearby. Pope Hilarius (461-468) set one up in front of the Lateran baptistery. Ward-Perkins 1984, 142-144.

[43] The baths are mentioned in 664 when the emperor Constans II uses it: *Liber Pontificalis* 78.3 mentions that the emperor came to the Lateran and washed himself.

[44] For example the "puteus Probae", close to S. Agatha in Suburra: Hubert 1990 78-79. Inscriptions that indicate the patronage of wells have been found at the churches S. Giovanni a Porta Latina and S. Marco: Ward-Perkins 1984, 145.

[45] On the Palatine, in the fifth century a sewer became blocked by waste: Augenti 1996, 25-27. The drainage system of the Colosseum becomes blocked in the second half of the sixth century: Rea 1993, 76-77.

[46] An important exception are Christian public buildings like churches and monasteries to which I have dedicated a separate section. In the Ostrogothic period only in the Lombard and Byzantine capitals Ravenna, Verona and Pavia new monumental buildings are built or the existing buildings repaired.

1984, 86-88), but other types of public buildings also suffered a decline[47]. These buildings were sometimes in very prominent locations[48]. Buildings that fell into disrepair were frequently demolished, as is evident from the extensive use of *spolia* in monuments from this period onwards[49]. However, this process of demolition took place under relatively regulated circumstances[50]. Up to the Lombard period, ancient public buildings remained public property (La Rocca 1992, 168).

Public buildings that were still used were often used for a new purpose. The most frequent type of reuse was as a church. From the fourth century onwards, all kinds of public buildings (basilicas, baths, temples) were converted into churches[51]. Reuse as a house was also quite common, for example on the *forum* of Verona, where the mud walls of a house have been found at the excavations in the Palazzo Maffei[52]. Only in the eighth century were ancient public buildings once again used for public purposes; in Verona, Milan and Pavia, mints were established in buildings on the former *forum* (La Rocca Hudson 1986, 68-69).

5.2 Traditional public buildings: Rome

Rome naturally differed from all other cities in its sheer number of monumental buildings. In contrast to the rest of Italy, new public buildings were still being built in Rome in the fourth century[53]. Although in Rome, as well as in other cities,

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[47] A restricted selection of buildings, such as baths and palaces occurs in building inscriptions. But a whole range of buildings, temples, *basilicae*, *curiae*, theatres, amphitheatres, porticus, are hardly ever mentioned (Ward-Perkins 1984, 30-37, 86-88 and 95; Fauvinet-Ranson 2006, 210-211.

[48] The *basilica* on the *forum* of Squillace had become a rubbish dump in the fifth century: Arthur 2002, 44. The same applies to Odenzo and Brescello: Fauvinet-Ranson 2006, 209.

[49] That the use of *spolia* became customary quite quickly is shown by the arch of Constantine and the large numbers of ancient ornaments which are reused in nearly all stones constructions.

[50] This is clear from several passages in the *Codex Theodosianus*, in which the use of *spolia* is discouraged and repair promoted: Ward-Perkins 1984, 32. In this period a priest from Spoleto, who wants an abandoned *porticus* for private ends, has to petition the king for it. In 808 the abbot of S. Vincenzo al Volturno has to get authorisation for the reuse of parts of a temple in a church: ibidem, 204-206.

[51] For instance, the *basilicae* of Cosa, Bolsena and Fasano were converted into churches. In Ravenna the church of S. Giustina was established in a *porticus*: Vaes 1989, 300-302. In Naples the basilica of S. Lorenzo was established in the *macellum* on the *forum*: Arthur 2002, 44.

[52] Bierbrauer 1991, 278. In Luni a house has been built partially on the foundations of an ancient *porticus*: Ward-Perkins 1981, 92. On the *forum* of Milan houses from the early Middle Ages have been discovered: Brogiolo 1994, 6. In Ordona the *basilica* was subdivided during the fifth century into separate houses: Arthur 2002, 44. In Terni the amphitheatre was used for habitation: Angelelli/Zampolini Faustini 2006, 225.

[53] Diocletian built the baths now opposite Termini station; Constantine built baths on the Quirinal. Maxentius built an amphitheatre on the Via Appia and a large basilica on the Forum Romanum.

building projects became less conspicuous, they continued nevertheless[54]. From the fifth century onwards, however, no more cases of new public buildings are known. After a very long period of silence, the column of Phocas, erected in 608 on the Forum Romanum, was the last new monument to be erected, but even that was probably an adaptation of an older monument[55].

In Rome also, preservation appears to have been considered more important than adding new buildings. A number of decrees dating from the fourth century prohibited the *praefectus urbi* from building new buildings and obliged him to spend the money on dilapidated buildings (*Codex Theodosianus* XV.I.11, 19, 27 and 29). Restoration activities also continued longer in Rome than elsewhere. Sources indicate that the restoration of public buildings still continued in the fifth century[56]. It is unmistakable, however, that public buildings, in spite of the attempts to maintain them, were already in decay during Late Antiquity[57]. Several examples of buildings which were left to decay occur in the archaeological material. The central hall of Basilica Aemilia, for example, was deserted in the fifth century[58]. Buildings were also being demolished in the Later Empire, as is evident from the use of *spolia*. The custom of using *spolia* started in the second century AD and had become omnipresent by the time of Constantine. As can be inferred from an edict by Majorian from 458, the demolition of public buildings was already standard practice. With his edict, Majorian protected some of the public buildings, but he legalised the demolition of those that could no longer be repaired (Ward-

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[54] Constantius II shortly after 367 erected an obelisk (now situated at the Lateran) at the Circus Maximus: Amm., Marc. XVI.10.15-17 and XVII.4.12. Valentinianus I built two porticos and also the portico which is now part of S. Maria in Cosmedin was probably built around 400: Krautheimer 1980, 35.

[55] Claridge 1998, 84. In later times buildings which could be characterised as "public" were built sporadically, for example the new papal palace at the Vatican during the pontificate of Paschalis I (817-824).

[56] The baths on the Aventine were restored in 414 and those of Constantine in 443. In 367 and 378 the Macellum Liviae, a market building from the first century, was thoroughly renovated. In the course of the fifth century several repairs to the Colosseum were conducted. The buildings of the *praefectus urbi* are restored at the beginning of the fifth century. In the fifth century the porticus of the Theatre of Pompey was restored. Repairs to the buildings of the senate in the course of the fifth century and the beginning of the sixth. Many restorations of statues are mentioned in inscriptions as well.

[57] An interesting passage from Cassiodorus (*Var.* IV.51) possibly shows the condition of public buildings in this period. In 395-402 the patrician Symmachus has the Theatre of Pompey repaired. The costs are later compensated by the authorities. Restoration activities appear to be a government responsibility. On the other hand, the lack of care by the government could be the reason for this individual to take action. The fact that the government was not up to this job can be inferred from an inscription of 433 in which the *praefectus urbi* mentions lack of funding: Ward-Perkins 1984, 46.

[58] Coates-Stephens 1996, 250. During the fifth century the buildings of the Nuntii Circi and the Domus Tiberiana on the Palatine were filled with rubble. The Horrea Agrippiana were abandoned during the sixth century: Augenti 2000, 46.

Perkins, 45-46). A decree by Theoderic also shows that demolition was omni-present.

Nevertheless, the care of ancient monuments in Rome was probably better than elsewhere than elsewhere. The authorities continued to be the legal owner of many of the monuments, which meant that they remained public property and enjoyed some kind of protection. The *Pragmatic Sanction* states that the maintenance of public buildings is an official duty and that this maintenance is paid for out of the same resources as before. The fact that these state building activities do not show up in the sources might be explained by the fact that these sources, primary the Liber Pontificatis are ecclesiastical (Coates-Stephens 2006).

From the seventh century onwards, there are no longer any sources indicating that public buildings were being maintained. That buildings were neglected is clear from the *monti* mentioned above. The development of these hills can sometimes be explained by buildings that were left untended and then used as a rubbish dump, for example Monte dei Cenci where the Circus Flaminius was once located (Claridge 1998, 177).

Little is known about the purpose these buildings were used for in the seventh and eighth centuries. The two most important sources of information on this are the *Itinerary of Einsiedeln* and the *Mirabilia Urbis Romae*. In both texts, ancient pub-lic buildings are referred to by their old denominations. Theatres are still called theatres, baths baths and palaces palaces. Buildings appear to be mentioned sole-ly as landmarks in the urban landscape. They kept their original name, but lost their corresponding use[59].

In Rome as well as in other cities, the most frequent adaptation of public build-ings is when they were reused as churches and houses. Various prominent build-ings were adapted for these purposes from the sixth century onwards[60]. In this period, a concentration of public buildings reused as churches could be observed around the Forum Romanum. At the end of the sixth and beginning of the seventh century, two churches were established in former public buildings near the Forum Boarium and the Velabrum. In the seventh century, a *diaconia* was established in the Circus Maximus. Halfway through the eighth century, the *diaconia* of S. Angelo in Pescheria was established in the Porticus Octaviae. SS. Pietro e Paulo

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[59] This may be explained by the nature of the sources ("travel guides" for pilgrims) or by the fact that these texts date back to earlier versions from late antiquity. But on the other hand the sources reflect the archaeological material, from which it appears clearly that buildings received no new public destinations; for example the Porticus Minucia: Manacorda/Zanini 1989.

[60] For all these examples: Valenti 2003, 139-156. Other examples mentioned by Valenti: in first half of the sixth century an auditorium at the Forum Pacis was converted into the church of SS. Cosma e Damiano. Fifty years later S. Maria Antiqua was established inside former barracks of the Pretorian Guard. During the pontificate of Honorius (625-638) the church of S. Adriano was established in the former Curia Senatus and S. Martina in the Secretarium Senatus, S. Teodoro in the Horrea Agrippiana and S. Maria in Cosmedin in the buildings of the Statio Annonae or perhaps on the remains of the Ara Maxima Herculis.

sulla via Sacra in the remains of the *basilica* of Constantine and Maxentius and S. Agnese in Agone in the stadium of Domitian also date from the eighth century. Public buildings were also reused for housing. This applies, for example, to porticos, *horreae*, and several buildings on the Forum Romanum and in the Circus Maximus were also inhabited[61]. The Crescentii settled in the baths of Nero and Severus, the temple of Serapis and the theatre of Pompey from the tenth century. During the eighth century, the family of Paul I resided in a temple (Krautheimer 1980, 255).

6. Christian public buildings

6.1 Christian public buildings: Italy

In the late fourth and fifth century, many churches were built in Italian cities. This is particularly conspicuous in large cities like Ravenna and Milan (Ward-Perkins 1984, 51-52), but similar activities can be observed in many other cities[62].

In the sixth century, many churches were still being built. In Lucca, a regional centre, many churches were constructed about which much written material has survived. The difference between Lucca and an important city like Ravenna lies in the scale of individual buildings and not in their number (Ward-Perkins 1984, 52). Naples, where no new churches were built whatsoever, constitutes an extreme on the negative side (Arthur 2002, 60)[63]. In this period, churches were more often located in the old monumental centre than in the fourth and fifth century. From the sixth century onward, many more secular public buildings of all sorts were converted into churches[64].

The number of churches built in this period may have been large, but the size of the individual churches diminished drastically. The churches of this period generally were much smaller than those in the fourth and fifth century[65]. Their size increased again only at the end of the eighth century.

Churches not only became smaller, but the quality of their construction deteriorated too. Newly cut marble became extremely rare and is in fact only found in

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[61] In the Atrium Vestae on the Forum Romanum layers of habitation have been found by Lanciani in the nineteenth century. Unfortunately all traces have been destroyed and therefore it is impossible to confirm his observations. But it is quite striking that in the *Mirabilia* this same location is mentioned as the location of two houses. In the *tabernae* of the Basilica Aemilia late-antique and medieval walls and a floor of *opus sectile* have been found: Coates-Stephens 1996, 250-251. For the Circus Maximus: Brandizzi-Vittucci 1991, 12-18.

[62] Trieste, Aquileia, Padua, Grado, Concordia, Ancona, Vicenza, Brescia, Castelseprio, Vercelli, Albegna, Luni, Florence, Perugia, Spoleto en Nola. Aquileia had a large number of beautifully decorated oratories: Humphries 1999, 195.

[63] This is striking since Naples shows a large degree of continuity in other respects.

[64] For an overview of public buildings converted into churches: Vaes 1989, 318.

[65] In Ravenna no large church was built after S. Severo of 570-595. In Pavia en Milan the only churches of which the size is known, S. Maria in Pertica en de S. Maria di Aurona, were very small compared to late antique basilicas. In Brescia the church of S. Salvatore measured only 28 m.: Ward-Perkins 1984, 59.

important cities like Ravenna, and even there its use was discontinued in the middle of the sixth century (Ward-Perkins 1988, 18). The main construction material for these new churches was *spolia*, frequently used exactly as it had been found, without any tooling to improve its structural properties. In contrast to houses[66], however, brick was also used in the construction of churches[67]. Newly-made brick, however, was extremely rare and generally bricks were taken from ancient buildings[68].

Although the churches were small and badly constructed, they were sometimes fitted with beautiful decorations, like for example the frescos of S. Maria foris Portas in Castelseprio or S. Maria in Valle in Cividale. Skilfully-made liturgical objects such as altars and *ciboria* have frequently been preserved from this period as well, and many documents commemorate the donations of these artefacts (Ward-Perkins 1988, 18). Furthermore, existing churches were successfully restored during this period. The many fourth-century and fifth-century basilicas that have survived bear witness to these restorations, for example, S. Reperata in Florence. This maintenance had probably been formalised, judging by the fact that Lombard kings were supposed to contribute to the costs. Monumental entranceways were added to existing churches, for instance at S. Lorenzo in Milan and at the cathedral of Lucca (Ward-Perkins 1984, 63).

In Italy, the custom of founding monasteries spread rapidly, and Gregory the Great established the important monastery of Bobbio in the Apenines. From the seventh century onwards, many new monasteries were established, and many of these were located in or very near cities as, for example, with S. Salvatore (later S. Giulia) in Brescia and S. Sofia near Benevento. By founding convents in or close to cities, the Lombard elite tried to increase its prestige just as it did by founding churches (Azzara 2002, 96-98).

6.2 Christian public buildings: Rome

Fourth-century Rome, like other Italian cities, witnessed the foundation of a number of very large churches, starting with S. Peter's basilica and S. Giovanni in Laterano. The fourth- and fifth-century basilicas are sometimes exceptionally large[69]. Moreover, their numbers in Rome were greater than in other cities, where

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[66] For the building material used in houses, see section 7.

[67] At Pavia a fragment of a wall from the end of the seventh/beginning of the eighth century was found at S. Maria della Cacce. A wall of the nave of S. Felice, also in Pavia, is made of brick, but the masonry is coarser and the windows smaller: Bullough 1966, 103. Also S. Salvatore (second half of the seventh century) and S. Giulia (end of the eighth century) in Brescia represent remarkable achievements: Liebeschuetz 2001a, 374.

[68] There are exceptions, in an important city like Ravenna and the building of large monastic complexes such as S. Vicenzo al Volturno en S. Cornelia: Parenti 1994, 7-8.

[69] S. Peter's and S. Paul's are the largest ones, followed by S. Giovanni in Laterano (approximately 100 m.) and S. Maria Maggiore (75 m.). Also S. Sabina (55 m.), S. Pietro in Vincoli (60 m.) en S. Stefano Rotondo (65 m.) were large compared to churches elsewere in Italy.

one *duomo* and possibly a couple of other churches were the norm[70]. Frequently, these churches were also decorated quite lavishly. S. Sabina and S. Maria Maggiore were fitted with superb mosaics[71].

Just as in the rest of Italy, Roman churches became smaller from the sixth century onwards. In Rome, however, the development was less marked than in the rest of Italy. Relatively large churches continued to be built in Rome[72]. Existing churches were regularly renovated and extended during this period[73]. The custom of abundantly decorating churches continued in the sixth century[74]. During the papacy of Honorius I the basilica of S. Agnese fuori le mura was fitted with columns and mosaics, as was the S. Pancrazio. The ceiling of S. Peter's was gilded, its doors fitted with silver and its mosaics embellished (Krautheimer 1980, 87).

During the seventh century, only small churches are mentioned but their number hardly decreases. For a long time, however, this fact remained unnoticed, since many of the churches built during this period have been destroyed and since our main source, the *Liber Pontificalis* mentions only churches built by the Papacy (Coates-Stephens 1997, 223 and 2006, 154-163). The number of churches built in Rome is much larger than in another well-documented city like Ravenna. Repair activities also still continued. The wooden ceilings of the large basilicas were replaced regularly, an enormous undertaking (Ward-Perkins 1984, 60-65 and his Appendix 2). No large-scale artefacts such as mosaics or wall-paintings from this period have survived, but this does not imply the churches were not decorated. During the eighth and ninth century, the *Liber Pontificalis* mentions donations of six thousand curtains, altar cloths and tapestries, containing gold embroidery, gems or silk (Noble 2000, 81-82).

In the late eighth and early ninth century, churches on average became larger: S. Maria in Domnica, S. Prassede, S. Marco and SS. Quattro Coronati measure between 35 and 55 metres in length. The decorations also became overwhelming, like for example at S. Prassede. A large number of churches was established during a short period. The *Liber Pontificalis* for the period 772-816 mentions 147 construction projects; just as many as in the fifty years before and after combined (Noble 2000, 68). That the churches from the Carolingian period have survived more frequently is probably due to the better quality of the construction work

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[70] See the maps in Cantino Wataghin *et al*. 1989.

[71] The vault of S. Pudenziana and the Lateran baptistery were also adorned with splendid mosaics. Krautheimer 1980, 35, 39, 40-50.

[72] S. Pancrazio of 625-38 (55 m.) was exceptionally large for this period. The rebuilt S. Lorenzo en S. Agnese measure 30 metres in length.

[73] S. Peter's was constantly being repaired. S. Lorenzo en S. Agnese were rebuilt in 579-590 en 625-638. Many new oratories were built at the Lateran, S. Peter and S. Saba: Coates-Stephens 1997, 202-203.

[74] The mosaics of SS. Cosma e Damiano and the wall paintings of S. Maria Antiqua (Krautheimer 1980, 71-72) and S. Lorenzo, which was characterised by contemporaries as "of admirable beauty" (*ibidem*, 83-87).

compared to that from the preceding period. The building materials used in this period are also considerably better (Coates-Stephens 1997, 223).

Compared to other Italian cities, large numbers of monasteries existed in Rome. Monasticism reached Rome relatively early (Gregorovius 1953-1957, I.246). In the time of Gregory the Great, three thousand nuns received an annual benefit from the church. The *Liber Pontificalis* mentions eight foundations of monasteries during the fifth to seventh century (Vieilliard 1959, 138-142). In the eighth and ninth century, the pace increased even more, so that in the ninth century as many as forty monasteries could be found in Rome (Krautheimer 1980, 138; Gregorovius 1953-1957, I.481-482).

7. Housing

7.1 Housing: Italy

In Roman cities, the most common types of housing were *domus* and *insulae*. Furthermore, modest houses have been found in smaller cities (Brogiolo 1989, 161). However, houses changed drastically from the fifth century onwards, as traditional *domus* were subdivided and converted into houses of the smaller type. These new houses had a single storey and a portico on the street side. They frequently had a courtyard and a garden. Generally the walls were not made of stone, but of timber or mud, sometimes on a foundation of stone. Bricks were only used in very exceptional situations, for instance in Ravenna or for large complexes, such as S. Vincenzo al Volturno, in which case the bricks were often produced at the building site (Parenti 1994, 7).

In Brescia, for instance, a part of a grand Roman *domus* on the S. Giulia site was again inhabited in the course of the fifth or sixth century (Brogiolo 1989, 158-159). Some rooms were reused without any adaptation. The portico was fitted with a clay floor and subdivided by means of wooden partitions. At a later stage, only parts of the former *domus* were inhabited. Individual rooms of the *domus* were turned into separate houses. The floor was made of beaten earth. Two classic examples of houses in this period have been found in Luni (Ward-Perkins, 1981). One of these measured five by twelve metres and was probably two stories high. Its floor was made of hard clay and pebbles. Only post-holes and a flimsy footing of dry stones survive of its walls; the rest was probably made of some perishable material like wood or mud-brick. Houses of this type have been found at several other sites[75]. Some houses, however, did have stone walls, for example in Verona (La Rocca Hudson 1986, 55-56).

Houses of the same type appear in written sources. The *Breviarium Ravennatis* mentions houses containing stone walls bound with mortar, sometimes reaching roof height, but generally not higher than floor level (Bavant 1989, 521-522). The construction on top of the stones could be made of several types of material,

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[75] At Rimini, Naples, Ravenna, Monte Barro, Lucca and Pisa (Wickham 2005, 648-649).

wood, wattle-and-daub, or entirely of loam. Some papyri mention houses made of stone blocks and wet mortar. An edict from 643 seems to imply that houses are generally made of wood[76]. Bricks are never mentioned as a building material. Two types of roofing are mentioned, tiles or wood. As the many notary acts mentioning a *casa solariata* show, houses generally have an upper storey[77]. The living space could be found on the first floor. The ground level was usually used as a barn, the so-called *canafa*. A kitchen or bath could also be found there. Houses without a second storey (*pedeplanae*) are also mentioned, but not before the tenth century.

In a large city such as Naples, the *insulae* remained inhabited, but they were sub-divided into narrow houses with a staircase on the street side (Arthur 2002, 47). It therefore seems that the *insulae* were converted into houses of the above type as well.

All this seems to imply that housing became much more modest. However, this conclusion is premature for a number of reasons. If the living space was located on the first floor, houses may look barn-like because we are in fact looking at the barn. This is confirmed by finds of for instance furnaces and metal slag (Brogiolo 1989, 158). Nor is it always clear whether these "houses" were indeed separate houses or parts of a larger complex. In Pavia, a rich acolyte bought up the plots of his neighbours (Bullough 1966, 108).

7.2 Housing: Rome

Rome differed from smaller cities by a much larger diversity in housing. On the one hand, there were the grand *domus* of rich aristocrats, on the other hand a large number of *insulae* to accommodate the poor.

Before the first half of the sixth century, many rich *domus* were probably abandoned or converted into churches (Guidobaldi 1986, 229). There are indications, however, that *domus* of a considerable size continued to exist. A large *domus*, the "Domus Pinciana", was used by Belisarius as a headquarters during the Gothic wars. Also, a certain "Domus Palmata", supposedly to be identified with a house known from the fifth century, is still mentioned by Cassiodorus (Cassiod. *Var.* III.10, IV.30). Another extensive *domus*, the "Domus Merulana" was still mentioned in 593 by Gregory the Great and up to the ninth century the area north of the Lateran was referred to as "in Merulana". The best-known example is the house of Gregory the Great, the residence of the influential Anicii family. Sometimes these houses were transformed into monasteries, which gives an indication of their size. Many years later the family of Alberic of Spoleto possessed

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[76] Bullough 1966, 106: this is implied by the Edict of Rothari of 643: "si quis de casa erecta lignum quodlibet aut scandolam furaverit" ("in case someone steals some wood or shingles from a house").

[77] This is not always certain because *solarium* can also have the meaning of "portico". In Pavia a *solarium* supported by columns and a roof construction (*arcusvolutus*) partially spans the street: Bullough 1966, 108.

a large house on the Aventine, which he donated in 940 for the foundation of the convent of S. Maria in Aventino. Frequently these houses had already been owned by such a family for centuries and it may rightly be assumed that they go back to ancient *domus*[78].

Insulae probably continued to be inhabited as well. During the flood of AD 791 people were trapped in their houses[79]. The *Ordo Benedicti* mentions a certain "insula Milicenam et draconiorum" (*Ordo Benedicti*, 1). However, it is uncertain which meaning of *insula* is used here: "apartment complex" or "area enclosed by streets". Unfortunately, archaeological evidence is scarce, since *insulae* have rarely been examined for traces of mediaeval habitation. Nevertheless, some such traces have been identified. In the *insula* near Aracoeli, of which several stories remained intact, suggesting maintenance, several phases of mediaeval renovations can be identified (Packer 1968-1969, 132 and 142). In other *insulae* in this same area traces were found that indicate early-mediaeval habitation (Coates-Stephens 1996, 247-248). The same applies to *insulae* at Palazzo dei Esposizioni, at SS. Apostoli and via Arenula (Coates-Stephens 1996, 244 n. 7, 8 en 11).

Unfortunately, most of these finds are not precisely datable, because they have been published inaccurately and probably also contain later alterations. For the same reason it remains an open question whether these *insulae* were still as densely populated as the apartment complexes of Antiquity or were less densely populated like the *insulae* of Naples.

Domus solariatae like those at Luni and in other Italian cities, were also present in Rome. Property documents from the tenth century describe the *domus* from this period (Hubert 1990, 155-165)[80]. They have a first storey. The staircase is always located on the outside. Regularly the houses have a courtyard, which sometimes contains a well. The courtyard is separated from the adjacent plots by a wall.

Two ninth-century houses of this type have been discovered on the Forum of Nerva (Santangeli Valenziani 2000, 104). These houses show some important differences with the examples from other cities. First, they were quite large: one of the houses measures approximately ten by nineteen metres. Secondly, they were built of very good materials. One of the houses was built of regular blocks of *peperino*, held together with mortar; bricks were used for the first storey. The staircase is made of reused marble. Santangeli Valenzani and Meneghini examined publications of earlier excavations, looking specifically for early mediaeval

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[78] Often these houses are mentioned in the sources because they were donated to the church. If these donations were motivated by economic circumstances, these donations are evidence for economic decline.

[79] From the fact that the water rose to twice a man's height, Coates-Stephens concludes that these people lived on the upper storeys of *insulae*: Coates-Stephens 1996, 247. This is not necessarily the case since regular houses also had an upper storey.

[80] It is striking that the documents give the impression that this type of housing was the only type. This might be caused by the nature of the sources (church records). It is possible that bigger or more humble houses do not occur because these were not owned by the church.

structures. They discovered that similar houses were also found elsewhere. Remains of a tuff building with two columns at the entrance were discovered in the Area Sacra of the Largo Argentina, for example (Santangeli Valenziani 2000, 105-6). Unfortunately these finds were not properly examined and as a result cannot be dated.

The quality of the construction materials is explained by the abundance of these materials in Rome, especially in the areas where these houses were found. But, on the other hand, the materials were skilfully applied. On the whole the houses look much more distinguished than those in, for example, Luni.

8. Farmland

8.1 Farmland: Italy

The presence of farmland was common in early-mediaeval Italian cities. In several cities, strata of dark earth have been found in the archaeological material. These layers have, for instance, been found at excavations in Cremona; and in Mantua a thick layer of dark earth has been found at Piazza Sordello, as well as at the excavations of the early-Christian baptistery (Brogiolo 1987, 29). In Naples such layers have been found in five locations (Arthur 2002, 53). These plots of land inside cities can probably be best explained by the fact that households became more self-sufficient. The finds of holes for the storage of foods (La Rocca Hudson 1986, 53-54) and large numbers of bread furnaces (Arthur 2002, 56; Ward-Perkins 1981, 92) lead to the same conclusion: written sources mention the presence of cattle inside cities (Gelichi 2002, 181).

The existence of farmland inside the city walls is often regarded as evidence for the depopulation of cities. Is this conclusion right? I think a couple of facts plead against this conclusion.

First, the size of these plots used for agriculture was probably quite limited. The dark earth is frequently found near buildings, for example in Verona (La Rocca Hudson 1986, 53-54). At the excavations of Cortile del Tribunale such a layer was found in combination with buildings. At Vicolo Monachine too, dark earth was found in the centre of the *insula* in combination with a number of wooden houses. In Milan, layers of dark earth have been found at the remains of two *domus* from Late Antiquity that were subsequently re-inhabited (Brogiolo 1987, 30). At the Piazza Duomo-*insula* in Milan, remains have been found that indicate that the centre of the *insula* was used for agrarian purposes (Brogiolo 1994, 6). The *Breviarium Ravennatis* regularly mentions gardens situated next to houses (Bavant 1989, 515). Other gardens could be found next to churches for instance in Milan and Verona (Cagiano de Azevedo 1977, 480; La Rocca Hudson 1986, 57).

Secondly, the depopulation hypothesis assumes that classical Roman cities contained no uninhabited areas. This is certainly untrue. Cities in Antiquity contained gardens as well.

Accordingly, the conclusion that the presence of farmland meant a population

decline has to be treated with caution. On the other hand, it cannot be denied that the early-mediaeval city definitely had a more rural appearance than its ancient predecessor.

8.2 Farmland: Rome

We know little about the presence of farmland during the sixth and seventh centuries. Literary as well as archaeological evidence for this is absent. On the other hand, we do know that farmland existed in large quantities in the city of Rome in the ninth and tenth century. In the inhabited areas vineyards and gardens near houses could be found. Fruit trees were particularly omnipresent (Hubert 1990, 82-83). The Forum Pacis was used for agricultural purposes in the eighth century. Recently, a vineyard and an orchard have been discovered on the Forum of Caesar (Santangeli Valenzani 2003, 228). Large fields were as rare in Rome as in other cities and were often situated near the wall (Hubert 1990, 82-83). The lack of evidence for the earlier period might be caused by the fact that farmland did not exist, but more likely by the fact that earlier archaeological research did not document the findings of dark earth layers.

There is some interesting literary evidence about the increase of farmland: in the descriptions of floods in the *Liber Pontificalis* an interesting difference can be noticed. The description of the flood during the pontificate of Adeodatus in the second half of the seventh century differs at one important point from the description of the flood at the time of Gregory II in the first half of the eighth century. In the former, the damage of the flood made it impossible to grind or store grain, in the latter, the flood eradicated fruit trees and caused the fields to be deserted because the Romans were unable to sow (Santangeli Valenzani 2003, 228-230). It is uncertain what these texts prove: do they prove that around this time farmland was introduced into the city as a whole or did it spread from other parts of the city to the lower, floodable, areas.

As a result of the lack of data in the sixth and seventh centuries, it is very difficult to compare the presence of dark earth in Rome with that in other cities. If future archaeological research fails to find any more traces of dark earth, we might conclude that Rome was less rural than other cities during this period.

9. Burials

9.1 Burials: Italy

In the transition from Antiquity to the Middle Ages, an important change occurred in the location of burials. From the fourth century onwards, burials increasingly occurred inside the city walls[81]. Isolated burials or burials in small groups have been found in a number of cities[82]. From this period onward, however, even actu-

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[81] For the location of burials in late-antique and early medieval Italy: Cantino Wataghin 1999.
[82] Brescia, Verona, Lucca, Reggio Emilia, Bergamo, Piacenza, Parma and Aquileia: Cantino Wataghin 1999, 158.

al cemeteries could be encountered inside city walls, for example in Cosa and Roselle (Celuzza & Fentress 1994, 1 and 3). Frequently, these burials occurred near buildings.

The presence of burials within the city walls is often considered as another indication for population decline. But, just as with the farmland, this has to be treated with caution. Burials are frequently located in places that in Antiquity were used for public buildings (the theatre, amphitheatre or *forum* in Verona or the Theatrum Tectum in Naples) or near contemporary public buildings (such as the Lombard Curtis Regia). In Verona, areas used for habitation in antiquity were hardly ever used for burials[83]. On the contrary, using the ground of public buildings may well indicate a shortage of space. In property documents, for example, the borders of a plot are meticulously described. According to La Rocca Hudson this is an indication that building space was indeed scarce.

Moreover, the eccentric location of cemeteries in the Imperial period was sometimes caused by an overestimated expectation of the development of the city and not by its actual size. This has led scholars to misinterpret the size of cities in the Imperial period (Cantino Wataghin 1999, 152).

9.2 Burials: Rome

In Rome relatively many burials have been found[84] inside the city walls and in Rome too, they were always located within the walls from the sixth and seventh century onward. Burials were very frequently found in public buildings; in baths such as those of Caracalla, but also in the Porticus Liviae, the temple of Magna Mater on the Palatine, (Augenti, 2000, 46), the mausoleum of Augustus, in *horrea* and in barracks of the Praetorian Guard.

A striking difference with the rest of Italy is the large extent of these cemeteries. Their size is not always easy to determine but they are larger than in other Italian cities. Furthermore, the density of the burials is low: for the baths of Caracalla it has been estimated at one grave per thirty square metre, for the Porticus Liviae at one sepulchre per twenty square meters.

This might lead to the conclusion that in Rome space was available in abundant qualities and thus the population was indeed very small. Costambeys, however, convincingly argues that cemeteries which were not inside public buildings were established on former public or uninhabited areas such as the gardens of palaces (Costambeys 2001, 180-181). Rome, of course, had much larger public spaces than other cities. So the conclusion of a relationship between the extent of the cemeteries and the size of the population is not warranted as such. But, again, much more research is needed.

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[83] For Naples: Arthur 2002, 41; For Verona: La Rocca Hudson 1986, 39-53.
[84] For the following, unless indicated otherwise: Menenghini/Santangeli Valenzani 1993.

10. The City surface area

10.1 The city surface area: Italy

The shrinking of cities that took place in the rest of Western Europe did not occur in most Italian cities (Liebeschuetz 2001a, 94). There are, however, exceptions, for instance, Cosa and Fiesole, where a new walled circuit encloses only the ancient *arx*. In Bologna, a city wall that probably dates back to the Byzantine period cut through the original street plan and enclosed an area much smaller than the ancient city. In Cesena, the city shrunk to an already existing fortification on the Garampo-hilltop[85].

When the circuit of the city wall was shortened, however, this did not always mean that the areas outside the wall fell into disuse. In Ventimiglia, the walled city was reduced to a defensible hilltop, but judging by the repair of houses, activity in the districts below did not stop.

Furthermore, signs of habitation outside the walls are perhaps discernible in cities that did not shrink. There is direct evidence for extramural suburbs in some cities, most notably Lucca (Wickham 2005, 646). Existing churches dedicated to martyrs frequently lie on old cemeteries outside the walls. Cases in point are S. Zeno (Verona), S. Frediano (Lucca) and S. Apollinare in Classe (near Ravenna). Milan even numbered four of these churches, among which S. Lorenzo and S. Nazaro[86]. It is possible that these attracted habitation, but archaeological data are scarce. In some cities new churches and convents were built outside the city walls. In Ventimiglia, a church was built outside the walls in the eighth or ninth century. This could prove the existence of habitation, because in this period it was already common practice to move the relics of saints inside the walls. The church of S. Giorgio in Ferrara was established at the same time as the town itself. This church is situated on a defensible *isthmus* outside the actual Byzantine fortifications. This probably proves that habitation extended outside the walled city (Zanini 1998, 124-126).

10.2 The city surface area: Rome

The walled circuit of Rome did not shrink as it did in some Italian cities. As described in section 2, the course of the Aurelian Wall remained the same. The surface area of the city of Rome, however, did shrink. In mediaeval Rome of the ninth or tenth century habitation was clearly located on the Campus Martius, particularly in the Tiber bend. The remaining city, the *disabitato*, was very thinly populated and rural in character.

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[85] For Cosa: Celuzza & Fentress 1994, 1; For Fiesole: Ciampoltrini 1994, 5; For Bologna and Cesena: Zanini 1998, 170-171; Zanini adds however that the dating in the Byzantine period is not entirely certain. In Terni the habitation was confirmed to the area of the cathedral, next to the amphitheatre (Angelelli/Zampolini/Faustini 2006, 225).

[86] For Milan: Cagiano de Azevedo 1977, 477; For Verona, Lucca and Classe: Ward-Perkins 1984, 56.

The dating of this decrease in area is the subject of some debate. It could have occurred as a result of the sacking of the city by the Goths and Vandals in the fifth century but it could also have occurred later as a result of economic decline. For a long time, the dominant theory has been that a declining population caused the city to contract very early[87]. There are, however, many indications that this process of contraction started rather late. Until late in our period, all kinds of areas, and not just the Campus Martius, show signs of habitation.

The Campus Martius was probably not particularly densely populated during the Early Middle Ages. Excavations such as those of the Crypta Balbi and the Theatre of Pompey have yielded no traces of early-mediaeval habitation whatsoever. Property documents from monastery archives show that the Campus Martius did contain deserted areas (Coates-Stephens 1996, 242).

Houses mentioned in written sources are hardly ever located in the Tiber bend. Houses of popes mentioned in the *Liber Pontificalis* are located near the Via Lata, on the Caelius, in the Suburra and on the Esquiline. The same dispersion pattern applies to other houses sporadically mentioned. These are located on the Esquiline, in the Suburra, as well as on the Campus Martius. In the ninth and tenth century, when the concentration on the Campus Martius was a *fait accompli*, conglomerations of habitation on the Caelius, Esquiline, Aventine and Palatine also continue to be mentioned[88]. Archaeological evidence of the presence of housing has been found in several places: on the Esquiline, at Piazza Vittorio Emanuele, in the Via dei Selci, near Porta Maggiore, on the western slope of the Quirinal and in the Suburra, in the *insulae* on the slope of the Capitol, on the Palatine, on the Caelius, at the Monte Testaccio, in Trastevere, as well as on the Campus Martius[89]. Only in the course of the eighth century habitation is concentrated on the Campus Martius (Santangeli Valenzani 2003, 226-228).

Rather paradoxically, also the fact that the presence of farmland in this area started in the eighth century might be taken as an indication for the fact that the concentration started at the same time, as farmland in our period is often found near housing.

The location of churches can be considered as another indication for population distribution. Churches owned real estate from which they extracted income. S. Susanna on the Esquiline is a case in point (Coates-Stephens 1996, 241). When one studies all churches established in the period of AD 550-850, as Louis Reekmans has done, a concentration is visible on the southern and eastern part of

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[87] Vieilliard (1959, 14, 60, 104 and 148) argues at length that the contraction to low-lying areas started at the beginning of the sixth century; also Lewellyn 1971, 194; in rather weakened form Krautheimer 1980, 56.

[88] For the dispersion of Housing: Coates-Stephens 1996, 239. For late habitation outside the Campus Martius: Hubert 1990, 74-84. In the tenth century, well-to-do Romans lived on the Aventine, in the area north of the Forum of Trajan and in the Cannapara district, west of the Basilica Julia: Krautheimer 1980, 254-256 and 363.

[89] For archaeological finds outside the Campus Martius: Coates-Stephens 1996, 242; for the Campus Martius: Santangeli Valenzani 2000, 105-106.

Campus Martius, on the Imperial Forums and the Forum Boarium. However, churches were built in the areas of the Suburra, Cispius and Porta Tiburtina as well. According to Reekmans, there is very little activity on the Quirinal, Caelius, Aventine and in Trastevere. In all these places, however, churches were being established (Reekmans 1989, 901).

For specific churches there is additional reason to postulate a link between church and habitation. *Tituli* were the parish churches of Rome. It is evident that these were founded in places where many people gathered. Their continued existence meant that these churches still had a community to serve. The *tituli* outside Campus Martius continued to exist and maintained a prominent position among the churches of Rome. All twenty-five original *tituli* except SS. Nereo ed Achille, SS. Silvestro e Martino and SS. Pietro e Marcellino are still mentioned in the ninth century (Bavant 1989, 495).

Diaconiae were the ecclesiastical centres for food distribution, and doubtlessly these too were established in places where people gathered. The first *diaconiae* of the second half of the eighth century were located especially in the neighbourhood of the Forum Boarium, on the Forum Romanum, as well as in the Borgo. Later, they were established all over the city: on the Quirinal, on the Esquiline, on a slope of the Palatine, on the Aventine, on the Caelius and at the baths of Caracalla (Bavant 1989, 503)[90].

In all three cases (churches in general, *tituli* and *diaconiae*), a similar pattern is discernible: the surface area did not decrease in the way it is often assumed.

Another development that contradicts an early contraction to the Campus Martius is the rise of the Lateran. In the Early Middle Ages, the Lateran became the residence of the popes and their entourage, and, as a result, the neighbourhood attracted many pilgrims. The neighbourhood became adorned with monumental churches such as S. Stefano Rotondo. In the Early Middle Ages, habitation was present close to the convent of S. Erasmo al Celio (Hubert 1990, 77). The presence of the Lateran, therefore, probably attracted people to move to this area.

Rome, too, had sanctuaries outside the city walls and settlements around them. New settlements came into existence around S. Paolo and S. Lorenzo fuori le mura[91]. The largest of these arose around the basilica above the grave of Saint

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[90] On the Quirinal: S. Agatha de Caballis; on the Esquiline: S. Lucia in Orphea, SS. Silvestro e Martino and S. Vito; on the Palatine: S. Lucia in Septem Vias; on the Aventine: S. Bonifacio; on the Caelius: S. Maria in Domnica; at the baths of Caracalla (SS. Nereo ed Achille).

[91] S. Lorenzo: Around the basilica erected by Constantine a number of buildings were built: a couple of other churches, convents, a praetorium, libraries, bath institutions and charities. At the beginning of the sixth century a new centre developed around it. Around the beginning of the sixth century pope Symmachus built a bathhouse and housing for the poor at S. Paolo fuori le mura. According to an inscription a certain Eusebius established a number of similar buildings, as well as a *palatium*. In the sixth century Procopius mentions a *porticus* linking the complex with the city and "many buildings around the sanctuary". Reekmans 1989, 910.

Peter[92]. In the course of the sixth and seventh century, two monasteries came into existence. Gregory the Great established his Schola Cantorum in this area. In the eighth century, several conglomerations of foreign pilgrims, the *scholae peregrinorum*, developed, each complete with its own church, hospice and cemetery. But these were not the only conglomerations outside the city. There were also smaller nuclei around less important sanctuaries, of which there were about forty (Krautheimer 1980, 54). On the basis of an analysis of the building projects mentioned in the *Liber Pontificalis,* Noble concludes that approximately one third was undertaken outside the city – the three large ones excluded (Noble 2000, 67)[93]. An important question is whether these conglomerations attracted much habitation. Just as in the rest of Italy, there is little knowledge as to their size.

11. Coming to my summary
Before any conclusions, I will present a short summary of the argument above.
City walls. During a long period (the late sixth century and the seventh century), there is little proof that city walls were being maintained. The situation in Rome was worse than in some other Italian cities, where the walls were maintained. However, many other Italian cities also did not maintain their walls in this period.
Streets. The Campus Martius is the only area of Rome that was continuously part of the built-up area. It shows much more deviations from the ancient street plan than other cities. This is explained by the exceptional nature of the area, so that a comparison with other cities is not very fruitful. Other areas show discontinuity, but also some continuity where important thoroughfares are concerned. This discontinuity is caused by the fact that during the later Middle Ages these areas were practically uninhabited and not necessarily by changes during our period. The street level increased considerably, but general comparison with other cities is difficult, because of the variations within each location.
Water supply and sewerage. A much larger number of aqueducts than in other cities continued to function. Sewers, just like in other cities, continued to function, although without much proof of maintenance.
Traditional public buildings. Maintenance of public buildings continued in Rome longer than elsewhere. From the seventh century onwards all traces of conservation disappeared and decay and demolition were widespread also in Rome. The manner in which the buildings were reused (mainly for housing and churches) did not differ from other cities.
Christian public buildings. As in the other Italian cities, churches in Rome

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[92] It is mentioned for the first time at the beginning of the sixth century. Pope Symmachus turned the mausoleum of Hadrian into a fort, established a papal palace near the *basilica* and built houses for the poor. Procop. (*Goth*. II.1.4-6) mentions several streets and, already older, houses on the Ager Vaticanus. Therefore already at the beginning of the sixth century a conglomeration must have existed at the Vatican.

[93] Unfortunately Noble does not distinguish between activities close to the city and as far away as Orvieto or Ravenna.

became smaller in the sixth century, but they were still relatively large and skilfully decorated. The number of churches and monasteries built remained very high compared to other Italian cities as well.

Houses. There was more diversity in housing in Rome; rich *domus* probably continued to exist. Also *insulae* remained inhabited; but it remains an open question how densely populated they were. At least some *domus solariatae* (from the end of our period) were built of *opus quadratum* in contrast to the other cities.

Farmland. We know too little about the presence of farmland in Rome to draw any firm conclusions. If archaeology fails to find evidence for farmland in the sixth and seventh century, we might conclude that Rome had a less rural appearance during this period than other cities, but for now, more evidence is needed.

Burials. In Rome, as well as in other cities, mainly former public spaces were used for burials. Though the scale of the burials as well as the scale of the public spaces is bigger, this situation reflects that in other cities.

Surface area. The habitation extended for the best part of our period over a large part of the former metropolis. The concentration on the Campus Martius occurred rather late. In Rome, there was a larger number of sanctuaries outside the city walls, probably with settlements surrounding them. This contradicts the traditional image of a rapidly contracting city.

12 Conclusions

Does the evidence presented here support the conclusion that the economic and demographic decline of Rome was exceptional compared to other Italian cities?

I do not think so. Of course, Rome, like other Italian cities, changed, and – others will say – declined. But Rome shows more or less the same pattern as other cities and, in some cases, Rome stands out positively. Deviations are often explained by the specific situation in Rome and not by a larger measure of decline.

Many observations contradict an exceptional economic decline: (1) more of the aquaducts continued to function; (2) traditional public buildings were maintained longer than elsewhere; (3) churches were more numerous; also, they were built of better building materials and were more skilfully decorated; (4) houses were also built of better construction materials and (5) very rich houses continued to exist. A rapid demographic decline is contradicted by other observations: (1) the walls were not shortened; (2) the contraction to the Campus Martius occurred at a relatively late date; and (3) *insulae* remained inhabited.

I think these observations show that much more nuanced pronouncements should be used to characterise the urban development of Rome during this period. This development was complex and multi-faceted. Much more archaeological research is needed to answer the open questions and to define precisely the processes at work. Hard evidence will of course remain difficult to obtain because so much data has been destroyed, but archaeology is our only hope.

It may be asked how a metropolis like Rome, which depended for its existence on imports and even free food distribution, could *not* collapse in the face of dramat-

ic events like wars, sieges, plagues and the loss of an empire. Although I think it is not possible to draw any firm conclusions on this point, I can suggest a couple of factors that I think might be part of an explanation, with some references to relevant literature.

An already reduced population. There are a number of clues that the population of Rome was already in decline by the fourth century. This decline is not visible in the numbers of distributed food rations, because these were also distributed to people who did not actually live in the city (Purcell 1992, 145-146). In this way, Rome could have adapted more easily to the hardships of the fifth and sixth century.

The continuity of long distance trade. Long distance trade probably continued during our period. Byzantium and the Carolingian West maintained constant contact, and this almost certainly included commercial contact. African and Eastern Mediteranean wares have been found in Rome in contexts as late as the end of the seventh century (Noble 2000, 84; Rovelli 2000, 87).

The Byzantine government. Recent archaeological research has provided evidence that money circulation remained high in Rome until the end of the Byzantine period, when it ceased abruptly at the time of the iconoclastic conflict. This might lead to the conclusion that the Byzantine government was responsible for providing Rome with money (Rovelli 2000, 92).

The Papal estates. From the fifth century onwards, the Papacy tried to keep Rome provisioned (Lançon 2000, 119). Apparently the Papacy succeeded in some way. During this period, the popes organised and expanded the land they had acquired through endowment since the beginning of the fourth century. They owned estates in mainland Italy, Sicily, Sardinia, Corsica, Gaul, Dalmatia and North Africa. Most of these were eventually lost, but from the sixth century onwards the papacy began to expand its possessions in Latium that eventually resulted in the Papal State (Richards 1979, 307-314).

Autarky. The papal possessions were certainly not as large as the farmlands that provisioned Imperial Rome, but they did not have to be. As I have shown, farmland became omnipresent within the city and probably the Roman population was able to provide for part of its own provisions.

Pilgrims and other visitors. The influx of pilgrims and other foreigners may have benefited the Roman economy. Rome, the ancient Capital of the World had become the Christian Capital of the West. The new Christian kingdoms became focused on Rome and the Papacy for religious guidance. This stature as a religious capital was artificially enlarged by importations into the city of relics of famous saints and the invention of legends situated in Rome. Many pilgrims flocked to Rome to see the graves of Saints Peter and Paul. Apart from pilgrims, all kinds of other visitors came to Rome: bishops and other clergymen, envoys and religious exiles from the East. The visitors were aided by an organisation of hostels (*xenodochia)* and by the existence of guide books (Lançon 2000, 159).

Judicial and fiscal rights. When the Papacy replaced the Byzantine government, it probably obtained many judicial and fiscal rights, which also provided for income (Delogu 1988, 37).

Donations by foreign heads of state. The Popes also received donations from foreign kings. There is sparse evidence for these donations (Delogu 1988, 37*)*.

All the above may have helped make Rome into a city that managed to transform itself from an imperial megalopolis into a much smaller early-mediaeval city without suffering severe shocks and with a certain measure of continuity.

BIBLIOGRAPHY AND ELECTRONIC PUBLICATIONS

@ means that the publication cited is an electronic publication without page numbers. The pages of the printed file have been used as page numbers.

Primary sources

Anonymus Valesianus: http://www.thelatinlibrary.com/valesianus.html.
Descriptio Murorum Urbis Romae: Corpus Christianorum, Series Latina 125 (Turnhout, 1965), 341-343.
Einsiedeln Itinerary: Corpus Christianorum, Series Latina 125 (Turnhout, 1965), 331-341.
Liber Pontificalis: ed. L. Duchesne, *Le Liber pontificalis: texte, introduction et commentaire* (Parijs, 1955-1957).
Mirabilia Urbis Romae: http://www.thelatinlibrary.com/mirabilia.html.
*OrdoBenedict:*http://penelope.uchicago.edu/Thayer/L/Gazetteer/Places/Europe/Italy/Lazio/Roma/Rome/_Texts/Ordo_Benedicti*.html.
Pragmatic Sanction Corpus Iuris Civilis: edd. R Schoel & G. Kroll, III: *Novellae*, 798-802.
Versus de Verona and Versum de Mediolano civitate: ed. G.B. Pighi, Versus de Verona, Versum de Mediolano civitate (Bologna, 1960).

Secundary literature, including some references of general interest to the urban development of Rome, not discussed in the text of this contribution

Andrews, F. 2000: "Introduction: Rome and *Romanitas*: aspects of Tradition" in: Smith 2000, 1-18.
Angelelli, C./S. Zampolini Faustini 2006: Interamna Nahars (Terni) tra antichità e medioevo: persistenze e trasformazioni alla luce delle più recenti ricerche archeologiche, in: Ghilardi/Goddard/Porena 2006.
Arthur, P 2002: Naples, from Roman Town to City-State: an Archaeological Perspective, in: *Papers of the British School at Rome Archaeological Monographs* 12, Rome.
Augenti, A. 1996: Il Palatino nel Medioevo. Archeologia e topografia (secoli VI-XIII), in: *Bulletino della commissione archeologica comunale di Roma* Supplementa 4, Rome, 46-60.
Augenti, A. 2000: Continuity and Discontinuity of a Seat of Power: the Palatine Hill from the Fifth to the Tenth Century, in: Smith 2000, 43-57.

Azzara, C. 2002: Ecclesiastical Institutions, in: La Rocca 2002, 85-101.

Baritel, F. (ed.) 1989: *Actes du XIe congrès international d'archéologie chrétienne: Lyon, Vienne, Grenoble, Genève et Aoste (21-28 septembre 1986)* Rome.

Barley, M.W. (ed.) 1977: *European Towns: their Archeology and Early History,* London.

Barnish, S.J.B. 1987: Pigs, plebeians and potentes: Rome's economic hinterland, c. 350-600 AD, in: *Papers of the British School at Rome* 45, 157-185.

Bavant, B. 1989: Cadre de vie et habitat urbain en Italie centrale Byzantine (VIe-VIIIe siècles), in: *Mélanges de l'école Française à Rome: Moyen Age* 101, 465-532.

Bierbrauer, V. 1991: Die Kontinuität städtischen Lebens in Oberitalien aus archäologischer Sicht (5.-7./8. Jahrhundert), in: Eck & Galsterer 1991, 263-286.

Blake, H.M./T.W. Potter/D.B. Whitehouse, eds. (1978), *Papers in Italian Archaeology I: the Lancaster Seminar. Recent research in prehistoric, classical and medieval archaeology.* BAR Supplementary Series 41, London.

Brandizzi-Vittucci, P. 1991: "L'emiciclo del Circo Massimo nell'utilizzazione post-classica", *Mélanges de l'école Française à Rome: Moyen Age*, 103-1, 7-40.

Brogiolo, G.P. 1987: A proposito dell'organizzazione urbana nell' altomedioevo, in: *Archeologia Medievale* 14, 27-46.

Brogiolo, G.P. 1989: Brescia: Building Transformations in a Lombard City, in: Randsborg 1989, 156-165.

Brogiolo, P. 1994: La città longobarda nel periodo della conquista (569-in. VII), in: Francovich & Noyé 1994, @.

Brogiolo, P. 1999: Ideas of the Town in Italy during the Transition from Antiquity to the Early Middle Ages, in: Brogiolo/Ward-Perkins 1999, 99-126.

Brogiolo, G.P./N. Gauthier/N. Christie (eds.) 2000: *Towns and their Territories between Late Antiquity and the Early Middle Ages*, The Transformation of the Roman World 9 (Leiden).

Brogiolo, G.P./B. Ward-Perkins (eds.) 1999: *Idea and Ideal of the Town between Late Antiquity and the Middle Ages*. The Transformation of the Roman World 4 (Leiden), .

Brown, T.S. 1978: Settlement and military policy in Byzantine Italy, in: Blake, Potter & Whitehouse 1978, 323-338.

Bullough, D.A. 1966: Urban Change in Early Mediaeval Italy: The Example of Pavia, in: *Papers of the British School at Rome* 34, 82-131.

Cagiano de Azevedo, M. 1977: Northern Italy, in: Barley 1977, 475-484.

Campese Simone, A. 2004: Fra *l'Ara Coeli* e Piazza Bocca della Verità: persistenze e trasformazioni nel tessuto urbano della Roma tardoantica e altomedievale, in: *Archeologia Medievale* 31, 441-455.

Cantino Wataghin, G. *et al*. 1989: La cattedrale in Italia: Italia settentrionale, in: Baritel 1989, 27-87.

Cantino Wataghin, G. 1999: The Ideology of Urban Burials, in: Brogiolo/Ward-Perkins 1999, 147-180.

Celuzza, M.G./E. Fentress 1994: La Toscana centro-meridionale: i casi di Cosa-Ansedonia e Roselle, in: Francovich & Noyé 1994, @.

Christie, N./S.T. Loseby (eds.) 1996b: *Towns in Transition: Urban Revolution in Antiquity and the Early Middle Ages* (Aldershot).

Christie, N./A. Rushworth 1988: Urban Fortification and Defensive Strategy in Fifth and Sixth Century Italy: the case of Terracina, in: *Journal of Roman Archaeology* 1, 73-88.

Ciampoltrini, G. 1994: Città 'frammentate' e città-fortezza. Storie urbane della Toscana centrosettentrionale fra Teodosio e Carlo Magno, in: Francovich & Noyé 1994, @.

Claridge, A. 1998: *Rome*. Oxford Archaeological Guides, Oxford.

Coarelli, F. 1971: *Guida archeologica di Roma,* Milaan.

Coates-Stephens, R. 1995: Quattro torri alto-medievali della mura Aureliane, in: *Archeologia Medievale* @.

Coates-Stephens, R. 1996: Housing in early Medieval Rome, in: *Papers of the British School at Rome* 64, 239-259.

Coates-Stephens, R. 1997: Dark age architecture in Rome, *Papers of the British School at Rome* 65, 177-232.

Coates-Stephens, R. 1998: The Walls and Aqueducts of Rome in the Early Middle Ages, A.D. 500-1000, in: *Journal of Roman Archaeology* 88, 166-178.

Coates-Stephens, R. 2006: Byzantine Building Patronage in post-Reconquest Rome, in: Ghilardi, Goddard & Porena 2006.

Costambeys, M. 2001: Burial topography and the Power of the Church in Fifth- and Sixth-Century Rome, in: *Papers of the British School at Rome* 69, 169-189.

Delogu, P. 1988: The Rebirth of Rome in the Eighth and Ninth Centuries, in: Hodges & Hobley 1988, 32-41.

Delogu, P. 1993: La storia economica di Roma nell'alto medioevo. Introduzione al seminario, in: Paroli & Delogu 1993, 11-30.

Durliat, J. 1990: *De la ville antique à la ville byzantine: le problème des subsistences,* Rome.

Eck, W./H. Galsterer (eds.) 1991: *Die Stadt in Oberitalien und in den nordwestlichen Provinzen des Römischen Reiches,* Mainz.

Fauvinet-Ranson, V. 2006: Le devenir du patrimonie monumental romain des cités d'Italie à l'époque ostrogothique, in: Ghilardi, Goddard & Porena 2006.

Filippi, D. 2000: Il Campidoglio tra Alto e Basso Medioevo: continuità e modifiche dei tracciati Romani, in: *Archeologia Medievale* 27, 21-37.

Francovich, R./G. Noyé (eds.) 1994: *La storia dell' Alto Medioevo italiano (VI-X secolo) alla luce dell' archeologia. Atti del Convegno Internazionale (Siena 1992) organizzato dall'École Française de Rome e dall' Università degli Studi di Siena*. (Florence), http://medie-valarchaeology.unisi.it/NewPages/EDITORIA/home1.html.

Geertman, H.A.A.P. 2003: *Atti del Colloquio internazionale "Il Liber Pontificalis e la storia materiale", Roma, 21-22 febbraio 2002,* Assen.

Gelichi, S. 2002: The Cities, in: La Rocca Hudson 2002, 168-188.

Ghilardi, M./C.J. Goddard/P. Porena 2006: Les cités de l'Italie tardo-antique (IV-VIe siècle), institutions, société, culture, religion, in: *Collection de l´École Française de Rome* 369, Rome.

Giardina, A. (ed.) 1986: *Società romana e impero tardoantico II: Roma. Politica, economia, paesaggio urbano,* Roma-Bari.

Gibson, S./B. Ward-Perkins 1979: The Surviving Remains of the Leonine Wall I, in: *Papers of the British School at Rome* 47, 30-57.

Gibson, S./BG. Ward-Perkins 1983: The Surviving Remains of the Leonine Wall II, in: *Papers of the British School at Rome* 51, 222-239.

Gregovorius, F. 1953-1957: *Geschichte der Stadt Rom im Mittelalter*, Darmstadt (reprint).

Guidobaldi, F. 1986: L'edilizia abitativa unifamiliare nella Roma tardoantica, in: Giardina 1986, 165-237.

Hodges, R. 1993: The Riddle of St. Peter's Republic, in: Paroli & Delogu 1993, 353-366.

Hodges R./B. Hobley (eds.) 1988: *The Rebirth of Towns in the West AD 700-1050,* London.

Hodges, R./W. Bowden (eds.) 1998: *The Sixth Century: Production, Distribution and Demand*. The Transformation of the Roman World 3, Leiden.

Hubert, E. 1990: *Espace urbain et habitat à Rome: du Xe siècle à la fin du XIIIe,* Rome.

Humphries, M. 1999: *Communities of the blessed: social environment and religious change in northern Italy, AD 200-400*. Oxford, 185-215.

Krautheimer, R. 1980: *Rome: Profile of a City 312-1308,* Princeton.

La Rocca Hudson, C. 1986: Dark Ages' a Verona. Edilizia privata, aree aperte e strutture pubbliche in una città dell' Italia settentrionale, in: *Archeologia Medievale* 13, 1986, 31-78.

La Rocca, C. 1992: Public Buildings and Urban Change in Northern Italy in the Early Medieval Period, in: Rich 1992, 161-180.

La Rocca, C. (ed.) 2002: *Italy in the Early Middle Ages 476–1000,* Oxford.

Lanciani, R.A. 1901: *The Destruction of Ancient Rome: a Sketch of the History of the Monuments,* London.

Lançon, B. 2000: Rome in Late Antiquitiy: Everyday Life and Urban Change, AD 312-609, Edinburgh.

Lavan, L. 1992a: The Late-Antique City: a Bibliographic Essay, in: *Lavan* 1992b, 9-26.

Lavan, L. (ed) 1992b: *Recent Research in Late-Antique Urbanism*. JRA Supplementary Series 42 (Portsmouth).

Liebeschuetz, J.H.W.G. 1992: The End of the Ancient City, in: *Rich* 1992, 1-49.

Liebeschuetz, J.H.W.G. 2001a: *The Decline and Fall of the Roman City,* Oxford.

Liebeschuetz, J.H.W.G. 2001b: Administration and Politics in the Cities of Fifth to the mid-Seventh Century: 425-640, in: *Cambridge Ancient History* 14, 207-237.

Llewellyn, P. 1971: *Rome in the Dark Ages,* New York.

Macadam, A. 1996: *Rome*. Blue Guides, London.

Manacorda, D. 1993: Trasformazioni dell'abitato nel Campo Marzio: l'area della 'Porticus Minucia, in: Paroli & Delogu 1993, 31-52.

Manacorda, D./E. Zanini 1989: The first Millennium AD in Rome: from the *Porticus Minucia* to the Via delle Botteghe Oscure, in: Randsborg 1989, 25-32.

Marazzi, F. 2000: Rome in Transition: Economic and Political Change in the Fourth and Fifth Centuries, in: Smith 2000, 21-41.

Meneghini, R./R. Santangeli Valenzani 1993: Sepolture intramuranee e paesaggio urbano a Roma tra V e VII secolo, in: Paroli & Delogu 1993, 89-111.

Noble, T.F.X. 2000: Paradoxes and Possibilities in the Sources for Roman Society in the Early Middle Ages, in: Smith 2000, 55-83.

Ortalli, J. 1984: La tecnica di costruzione delle strade di Bologna tra età romana e medioevo, in: *Archeologia Medievale* 11, 379-393.

Packer, J. 1968-1969: La casa di via Giulio Romano, in: *Bulletino della commissione archeologica comunale di Roma*, 81, 127-148

Parenti, R. 1994: Le tecniche costruttive fra VI eX secolo: le evidenze materiali, in: Francovich & Noyé 1994, @.

Paroli, L./P. Delogu 1993: *La storia economica di Roma nell'alto Medioevo alla luce dei recenti scavi archeologici. Atti del Seminario (Roma, 2-3 aprile 1992),* Firenze.

Pavolini, C. 1993: L'area del Celio fra l'antichità e il medioevo alla luce delle recenti indagini archeologiche, in: Paroli & Delogu 1993, 53-70.

Purcell, N. 1992: The Populace of Rome in Late Antiquity: problems of classification and historical description, in: Lavan 1992b, 135-159.

Randsborg, K., ed. 1989: *The Birth of Europe: Archeology and Social Development in the first Millennium*. Analecta Romana, Instituti Danici Supplementa 16 (Rome), .

Rea, R. 1993: Il Colosseo e la valle da Teodorico ai Frangipane: note di studio, in: Paroli & Delogu 1993, 71-88.

Reekmans, L. 1989: l'Implantation monumentale chrétienne dans le paysage urbain de Rome de 300 à 850, in: Baritel 1989, 861-915.

Rich, J. (ed.) 1992: *The City in Late Antiquity,* London.

Richards, J. 1979: *The Popes and the Papacy in the Early Middle Ages, 476-752,* London.

Richmond, I.A. 1930: *The City Wall of Imperial Rome: an Account of its Architectural Development from Aurelian to Narses,* Oxford, 87-90 en 257-267.

Rovelli, A. 2000: Monetary Circulation in Byzantine and Carolingian Rome: a Reconsideration in the Light of Recent Archaeological Data, in: Smith 2000, 85-99.

Santangeli Valenzani, R. 2000: Residential Building in Early Medieval Rome, in: Smith 2000, 101-112.

Santangeli Valenzani, R. 2003: Il paesaggio urbano altomedievale dei testi del Liber Pontficalis, in: Geertman 2003.

Saxer, V. 1989: L'utilisation par la liturgie de l'espace urbain et suburbain: l'exemple de Rome dans l'Antiquité et le Haut Moyen Age," in: Baritel 1989, 917-1033.

Smith, J.M.H. (ed.) 2000: *Early Medieval Rome and the Christian West*. *Essays in Honour of Donald A*. *Bullough,* Leiden.

Staffa, A.R. 1991: Scavi nel centro storico di Pescara, 1: primi elementi per una ricostruzione dell'assetto antico ed altomedievale dell'abitato di Ostia Aterni-Aternum, in: *Archeologia Medievale* 18, 201-367.

Vaes, J. 1989: Nova costruire sed amplius vetusta servare: la réutilisation chrétienne d'édifices antiques (en Italie), in: Baritel 1989, 299-319.

Valenti, M. 2003: *Trasformazione dell'edilizia privata e pubblica in edifici di culto cristiani a Roma tra IV e IX secolo*. *Tesi di Laurea in Storia dell'Arte Medievale,* http://www.santame lania.it/arte_fede/valenti/ indice.htm

Vieilliard, R. 1959: *Recherches sur les origines de la Rome Chrétienne,* Rome, 83-145.

Ward-Perkins, B. 1981: Two Byzantine Houses at Luni, in: *Papers of the British School at Rome* 49, 91-98.

Ward-Perkins, B. 1984: *From Classical Antiquity to the Middle Ages,* Oxford.

Ward-Perkins, B. 1988: The towns of northern Italy: rebirth or renewal?, in: Hodges & Hobley 1988, 16-27.

Ward-Perkins, B. 1996: Urban Continuity?, in: Christie & Loseby 1996b, 4-17.

Ward-Perkins, B. 1997: Continuists, Catastrophists and the Towns of post-Roman Northern Italy, in: *Papers of the British School at Rome* 65, 157-176.

Ward-Perkins, B. 1998: *The Cities,* in: *Cambridge Ancient History* 13, 371-411.

Ward-Perkins, B. 2005: The Fall of Rome and the End of Civilization, Oxford.

Whitehouse, D. 1988: Rome and Naples: Survival and Revival in Central and Southern Italy, in: Hodges & Hobley 1988, 28-31.

Wickham, C. 1981: *Early Medieval Italy*: *Central Power and Local Society 400-1000,* London, 80-105.

Wickham, C. 1994a: Italy and the Early Middle Ages, in: Wickham 1994b, 99-117.

Wickham, C. 1994b: *Land and Power,* London.

Wickham, C. 2005: Framing the Early Middle Ages, Oxford, 591-692.

Zanini, E. 1998: *Le Italie Bizantine*. *Territorio, insediamenti ed economia nella provincia Bizantina d''Italia (VI-VIII secolo),* Bari, 105-208.

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