

## POLITICS, PATRONAGE AND THE TRANSMISSION OF CONSTRUCTION TECHNIQUES IN EARLY MEDIEVAL ROME, c. 650–750

by Hendrik Dey<sup>1</sup>

*Well into the seventh century, masons in Rome built bonded-masonry walls using materials and techniques directly descended from antiquity. But walls erected starting in the eighth century are very different and distinctively ‘medieval’. The late seventh / early eighth century therefore represents a moment of rapid transition or even rupture in the Roman building industry, when older ways of doing things ceased forever. Drawing on recently excavated structures on the Palatine and at San Paolo fuori le Mura that offer new insights into this crucial transitional period, I suggest that the break with centuries-old building traditions reflects a fundamental shift in mechanisms of patronage, and of control over the city’s built environment. After a hiatus in the second half of the seventh century, when the Roman construction industry languished between a Byzantine administration in decline and a Church bureaucracy not yet empowered to supplant it, early eighth-century popes faced the challenge of creating anew the means and methods to build on a substantial scale. The newly excavated structures of the early eighth century offer an unexpected perspective on the growth of, and the growing pains experienced by, Rome’s nascent papal government.*

*Fino al VII secolo inoltrato, i muratori romani costruiscono strutture legate con malta utilizzando materiali e tecniche improntati sul modello antico. I muri eretti a partire dall’VIII secolo sono invece diversi, e assumono un profilo chiaramente ‘medievale’. Il periodo tra tardo VII e inizio VIII secolo rappresenta dunque un momento di transizione, o addirittura di rottura, nell’industria edilizia romana. Prendendo in esame le strutture recentemente scavate sul Palatino e a San Paolo fuori le mura, che offrono nuovi spunti su questo periodo di passaggio, l’articolo cerca di dimostrare come la rottura con tradizioni costruttive secolari sia il riflesso di un profondo mutamento nei meccanismi del mecenatismo e del controllo sul tessuto urbano della città: dopo una fase in cui l’industria edile romana aveva languito tra un’amministrazione bizantina in declino e una burocrazia ecclesiastica non ancora nelle condizioni di sostituirla, agli inizi dell’VIII secolo i papi affrontarono la sfida di trovare nuovi mezzi e tecniche adatti a costruire su ampia scala. Le strutture recentemente indagate, databili all’inizio dell’VIII secolo, offrono una prospettiva inaspettata sull’espandersi graduale, e a volte travagliato, del governo papale a Roma.*

Well into the seventh century, Roman masons built bonded-masonry walls using materials and techniques directly descended from antiquity. But walls erected

---

<sup>1</sup> My thanks to Lucrezia Spera, Tom Noble, Mike McCormick, Marios Costambeys, and the two anonymous readers enlisted by PBSR, for their helpful comments on earlier written or oral versions of this paper; all naturally remain blameless for whatever failings remain, which are entirely of my own devising.

starting in the eighth century are unmistakably different and distinctively ‘medieval’. This is a development that should concern the social historian as much as the fanatical masonry buff or the blinkered architectural typologist. Changes in the way brick, stone and mortar were assembled into standing walls have much to reveal not only about the transmission and practical implementation of specialized knowledge inherited from the classical past, but also about the transformation of the city and the evolution of Roman society during the transitional centuries between late antiquity and the early Middle Ages. Staring more at walls, I want to suggest, can offer important insights into topics as broad and varied as urban administration and politics, stewardship of public buildings and infrastructure, social complexity and the organization of the labour force, and demographics.

The wars and sieges, pestilence and famines that afflicted Rome in the fifth and sixth centuries reduced its population from hundreds to tens of thousands. Much of the city transformed into expanses of crumbling, sparsely inhabited ruins, such that broad swathes of the seventh-century cityscape would have been unrecognizable to a Roman living in the fourth century.<sup>2</sup> In other important ways, however, seventh-century Romans inhabited a world that clung tenaciously to older forms. They still ate from and stored foodstuffs in ceramic cups, bowls and jugs, many of them imported from southern Italy, North Africa and the eastern Mediterranean, in shapes that had changed relatively little in the intervening centuries. Dietary staples such as wine, olive oil and grain still arrived from much the same regions.<sup>3</sup> They could still transact business and make purchases with gold, silver and bronze coins, many locally minted, whose denominations and iconography closely followed fourth- and fifth-century precedents (Rovelli, 1998, 2000).

Roman construction workers, too, continued to operate in familiar and time-tested ways, such that a wall built in the seventh century can look quite similar, albeit not identical, to one built in the fourth. This persistence of older forms is most apparent in religious architecture, which accounts for most of the new building projects undertaken in the seventh century, or at any rate for the bulk of the relatively monumental constructions that presently survive. Salient examples include the churches of San Pancrazio on the Janiculum and Sant’ Agnese on the Via Nomentana, both erected during the pontificate of Honorius I (r.625–38), and the San Venanzio chapel reconstructed adjacent to the Lateran Baptistery in the 640s.

The walls of all three structures were built with *opus vittatum* (sometimes called *opus vittatum mixtum* or *opus listatum*) facings over a concrete core composed of mortar mixed with fragments of rubble. At Rome, *opus vittatum* came to rival in popularity facings built entirely of mortared brick in the third and fourth centuries AD, and to surpass brick in the sixth and early seventh. It

---

<sup>2</sup> The bibliography is vast: useful overviews include Delogu, 2000a, 2001; Pani Ermini, 2001; Meneghini and Santangeli Valenzani, 2004; Liverani, 2009; Lipps, Machado and von Rummel, 2013.

<sup>3</sup> Sagù, Ricci and Romei, 1997; Panella and Sagù, 2001; Sagù, 2002; Romei, 2004.



Fig. 1. Sant' Agnese, north side of nave, exterior. Photo by the author.

consists of repeating courses of brick and small, roughly rectangular blocks of cut stone (called *tuffelli* in Italian) fashioned from one of the local varieties of tuff. The materials used are fairly homogeneous, and the courses tend to be reasonably level and evenly spaced. Usually one, but sometimes two or more courses of *tuffelli* alternate with one or more courses of brick in generally regular order. Two courses of brick follow one of *tuffelli* at Sant' Agnese (Fig. 1); at San Pancrazio, single courses of *tuffelli* and brick alternate (Fig. 2), as they do at San Venanzio (Fig. 3).<sup>4</sup> The technical characteristics of all three are broadly similar to those of numerous structures built in the preceding centuries, among them the fourth-century House of Cupid and Psyche at Ostia (1 *tuffelli*/2 brick); the early-fifth-century church of San Vitale (1 *tuffelli*/1 brick in the walls of the nave and facade (Fig. 4); 1 *tuffelli*/2 brick on the facade of the narthex); and the late sixth-century church of San Lorenzo fuori le Mura (1 *tuffelli*/1 brick; Fig. 5), to name but a few.<sup>5</sup>

So little survives at Rome from the second half of the seventh century that it is difficult to say whether builders kept using 'ancient'-style wall-facings in brick or (more likely) *opus vittatum* somewhat longer still, but there is growing evidence

<sup>4</sup> With regard to San Venanzio, I refer specifically to the walls inserted to enclose the older arcades on the north and south sides of the chapel, which are almost certainly part of the seventh-century phase and which feature the single alternating courses of brick and *tuffelli*.

<sup>5</sup> For an overview of Roman building techniques in this period, see Cecchelli, 2001; on technical continuity into the seventh century, cf. Santangeli Valenzani and Meneghini, 2004: 135.





Fig. 2. San Pancrazio, apse, exterior. Photo by the author.



Fig. 3. San Venanzio chapel, interior: seventh-century masonry blocking fourth-century arcades. Photo by the author.



Fig. 4. San Vitale, apse, exterior. Photo by the author.



Fig. 5. San Lorenzo fuori le Mura, nave, interior. Photo by the author.



that by the early eighth century, new bonded-masonry walls erected in the city partook of a distinctly different technical vocabulary. By then, the traditional *opus vittatum* still employed during the first half of the seventh century seems mostly to have disappeared from the repertoire of Roman builders, replaced by distinctly less regular, apparently more amateurish forms, even in important buildings commissioned by leading figures on the Roman scene, chief among them the popes.

We can say more about construction techniques in this critical transitional period thanks to recent archaeological discoveries. One comes from the area of the Orti Farnesiani on the northern edge of the Palatine Hill, overlooking the Forum, where new structures were inserted among the crumbling walls of the Domus Tiberiana, part of the old imperial palace, in the early eighth century. The largest is an 'L'-shaped building measuring *c.* 14 m × 10 m that has been very plausibly associated with the papal residence (*episcopium*) that Pope John VII (r.705–7) established on the Palatine, according to a well-known passage in the *Liber Pontificalis* (Fig. 6).<sup>6</sup> The surviving portions of its perimeter walls are cobbled together from a heterogeneous assortment of *tuffelli*, fragmentary bricks, irregularly shaped pieces of marble and other stones, chunks of concrete and plaster flooring, etc., all mortared together in a chaotic jumble (Fig. 7; Carboni, 2016: 90–5; Spera, 2016a: 397–400). Gone are the carefully sorted building materials of similar size and shape, and the regular horizontal coursing, still visible at Sant' Agnese, San Pancrazio and San Venanzio. A second example, which has also come to light in recent excavations, is the first phase of the monastery established by Pope Gregory II (r.715–31) along the south flank of the church of San Paolo fuori le Mura. There, too, the walls are faced with a hodgepodge of irregularly shaped stones, assembled with only the barest hint of horizontal coursing (Fig. 8; Spera, Esposito and Giorgi, 2011).

These few and rather unprepossessing examples aside, however, the first half of the eighth century is almost as poor in surviving remains of masonry structures as the second half of the seventh. Only from the later eighth century did the pace of building in Rome increase dramatically. The papal alliance with the Franks from 754 and the Frankish conquest of the restive Lombard kingdom to Rome's north, in 774, heralded the start of an era of relative peace and prosperity destined to last a century. Starting with the long pontificate of Hadrian I (r.772–95), the popes who now ruled *de iure* as well as *de facto* over Rome and its surroundings used their growing power and wealth to reshape Rome's built environment in ever more visible ways.<sup>7</sup> Hadrian himself repaired the city walls and four Roman aqueducts, rebuilt the kilometre-long covered portico leading from the Tiber to Saint Peter's, and erected or extensively restored a host of older churches and monasteries (Coates-Stephens, 1999). His immediate successors continued to

<sup>6</sup> *Liber Pontificalis* I: 385: *Basilicam itaque sanctae dei genetricis qui Antiqua vocatur pictura decoravit, illicque ambonem noviter fecit et super eandem ecclesiam episcopium quantum ad se construere, illicque pontificati sui tempus vitam finivit.*

<sup>7</sup> Geertman, 1975: 7–36; Pani Ermini, 1992; Delogu, 2000a, 2000b, 2017; Bauer, 2003.

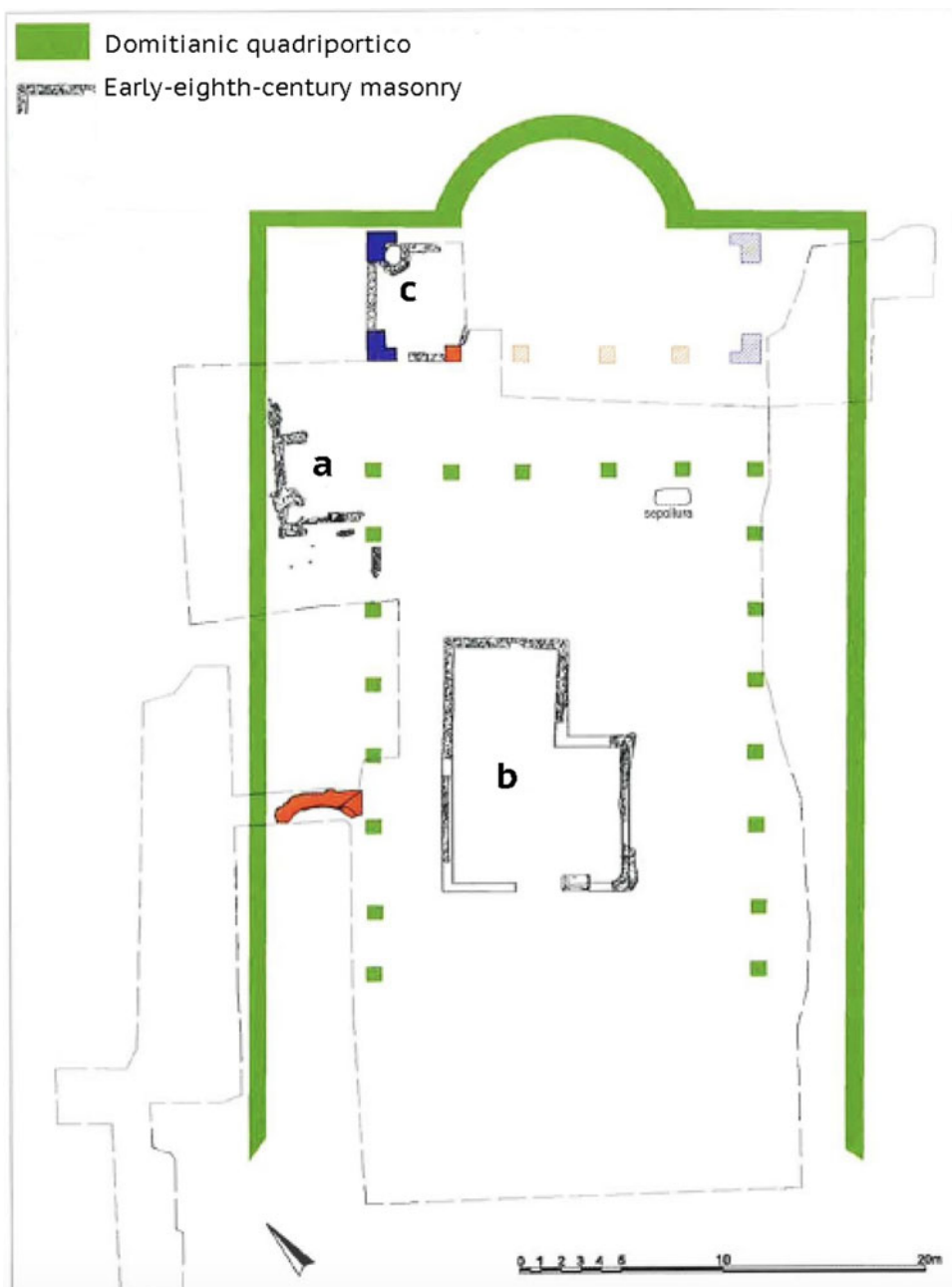


Fig. 6. Early eighth-century structures (a, b and c on plan) inside Domitianic quadriportico at the Domus Tiberiana. Plan courtesy of Lucrezia Spera, modified by the author.

build extensively through the pontificate of Leo IV (r.847–55), the pontiff best known for constructing a 3-km-long circuit of walls around Saint Peter's and the Vatican *borgo* (Giuntella, 1985; Meneghini and Santangeli Valenzani, 2004: 63–5).



Fig. 7. Early eighth-century masonry at the Domus Tiberiana (at upper left; this is building 'a' in Fig. 6). Photo courtesy of Lucrezia Spera.



Fig. 8. Standing masonry from the first phase of Gregory II's monastery at San Paolo fuori le Mura. Photo by the author.



The later eighth- and ninth-century structures are typically built either in brick-faced concrete, or from large, quadrangular blocks of tuff recycled from older buildings. In this respect, they most closely resemble the ashlar and mortared brick masonry characteristic of public buildings erected at the height of Roman power in the later republican and imperial periods, a similarity likely to be more than coincidental in an age when emboldened popes made a concerted effort to present themselves as the successors of the emperors of old, and thus also to build *more Romano*, ‘in the (ancient) Roman manner’ (Heitz, 1976; Esposito, 1998: 30; Dey, 2011: 253–7). The quality of the work is generally superior to that of the early eighth century, too: more care is taken in the sorting and selection of materials, and coursed masonry is the norm.

Yet the masonry of the later eighth and ninth centuries also differs markedly from its Roman-period antecedents. The recycled tuff blocks are often worn and irregular enough to require the insertion of mortared fragments into the interstices between them, while the varying dimensions of the blocks themselves made it difficult to achieve the exceptionally regular horizontal courses typical of ancient construction. Brick facings, too, are considerably less regular, with irregular courses of reused and frequently fragmentary bricks that tend to undulate in wavy patterns: the horizontal level that featured in the toolkit of Roman builders evidently remained unknown, or at least sparingly and inexpertly used, throughout the building-boom of the later eighth and ninth centuries (Coates-Stephens, 1995; Santangeli Valenzani and Meneghini, 2004: 135–40; Barelli, Fabbri and Ascitti, 2005). The reasonably regular *opus vittatum* still used at Sant’ Agnese and San Pancrazio falls out of use entirely; though walls are sometimes faced with a mixture of bricks and stone blocks, the components are more heterogeneous in terms of both size and shape, and the consistent horizontal coursing of the earlier work is lacking. Thus, even when the pace of monumental construction in Rome quickened after the middle of the eighth century, building typologies belonged to a new (and, if one wishes, distinctly ‘medieval’) architectonic idiom that differs markedly from the ancient or late-antique tradition that persisted well into the seventh century (cf. Santangeli Valenzani, 2002, 2003).

We can therefore say with some confidence that the late seventh / early eighth century represents a moment of rapid transition or even rupture in the Roman building industry, when older ways of doing things went out of fashion once and for all. All the historical and archaeological evidence currently available supports the conclusion, first, that there was a relative hiatus in monumental construction during the later seventh century, a void that recent studies have mostly failed to fill and that now seems unlikely to have resulted from simple lack of evidence or scholarly attention.<sup>8</sup> Second, it begins to show, via sites like the probable Palatine residence of John VII and Gregory II’s monastery at San Paolo, that when building work did occur in the early eighth century, bonded

---

<sup>8</sup> See below at n. 13.

masonry consisted of more haphazard assemblages of materials employed with less care and technical proficiency than previously, a situation only partially remedied after the mid-century.

The question is why this pronounced shift in building praxis occurred when it did. It is worth asking because shifts in the way Romans built walls are indexes of broader changes in the organization and functioning of Roman society. It takes a village, as it were, to build a substantial masonry wall: to train workers and organize the labour force, to plan the structure, to acquire the real estate and prepare the ground, to fabricate or otherwise acquire building materials, to cook lime and prepare mortar, and finally to assemble all the components into a standing structure. When something occurs — some upheaval, some societal reordering — to shake this interdependent web of contingent processes, the finished product can look quite different (Santangeli Valenzani 2002, 2003; Spera, 2016a). So it is that looking more closely at Roman walls can enrich our understanding of the city's political, economic and social trajectory during the period *c.* 650–750 that now, more than ever, looks to have been one of profound transformation and, in some ways, discontinuity with the past; a sharp swerve in Rome's historical trajectory.

Reams of archaeological data collected in recent years consistently point to the decades after *c.* 690 as the moment of most pronounced systemic change. Until the very end of the seventh century, Rome was deeply implicated in Mediterranean-wide networks of trade and exchange. The majority of the thousands of transport amphorae in the later seventh-century deposit at the Crypta Balbi came from North Africa (*c.* 40 per cent) and the Levant (*c.* 30 per cent) (Panella and Saguì, 2001: 791–813; Saguì, 2002). In levels from the early eighth century, at the Crypta Balbi but also elsewhere, imports from these regions are almost completely absent (Saguì, Ricci and Romei, 1997: 42–6; Romei, 2004: 278–94), which puts the fall of Carthage to Arab invaders in 698 and the final collapse of Byzantine rule in North Africa front and centre of explanations for the curtailment of Rome's trans-Mediterranean commercial contacts (cf. Delogu, 2000a: 100; 2010: 76–7). When Pope Gregory II clashed with Byzantine emperor Leo III over taxes and iconoclasm beginning *c.* 725, prompting Leo to confiscate the Roman Church's vast properties in Sicily and southern Italy probably by the early 730s, Rome's political and economic isolation deepened (Arnaldi, 1981; Marazzi, 1991, 1993; Patlagean, 2002: 12–18).<sup>9</sup> Imports from the south declined rapidly, as did the flow of precious metal into the city, leading to the radical debasement of gold coinage produced by the mint of Rome and the collapse of the trimetallic monetary system that had

---

<sup>9</sup> There is general but not universal agreement that the arrogation of the Church patrimonies (and the revenues they produced) to the imperial fisc had occurred by 732–3; Prigent, 2004, argues that the definitive seizure occurred only under Pope Zachary I (r.741–52). In any case (the precise chronology is not essential for present purposes), the devaluation of gold coinage had begun already from *c.* 700, but picked up speed under Gregory III and, even more, Zachary I, under whom emissions of silver coinage also plummeted (Prigent, 2004: 580–6).

prevailed in the city up until the 720s (Rovelli, 1998; Romei, 2004: 278–85). From the 730s on, Rome effectively left the Byzantine orbit in both political and economic terms: it became a regional polity, fed and supplied from its immediate hinterland, administered by ecclesiastical functionaries and ruled by the popes.

Yet even during this period of contraction and flux, whose effects transpire so clearly in the archaeological record, there was little or no impoverishment of technical standards across a broad range of Roman material culture (cf. Pani Ermini, 2001: 293–7). In terms of ceramics, for example, while local products increasingly predominate from the early eighth century, in everything from transport containers to cooking pots and table wares, the quality of the work is generally comparable with that of the imports it replaces. The increasing demand for local wares to replace imports seems if anything to have stimulated local potters to produce more and better wares than previously (Saguì, Ricci and Romei, 1997: 42–6; Romei, 2004: 283).<sup>10</sup> So too in the case of glass production, Roman workshops went on producing everything from cups and phials to window glass, with no sign of interruption from the seventh century to the eighth, and with eighth-century manufactures approaching those of the seventh in quality, though perhaps not in quantity; the impression again is of basic continuity throughout the period in question (Saguì and Lepri, 2015).

More to the point, there is substantial continuity even in spheres of artisanship closely connected to the building industry. The mosaicists who decorated the chapel of Mary that John VII installed in the south aisle of Saint Peter's, in c. 706, were as proficient in their craft — as 'professional', as it were — as those who decorated the San Venanzio chapel at the Lateran and the chapel of SS. Primus and Felicianus at Santo Stefano Rotondo in the 640s (Ballardini and Pogliani, 2014). The creators of the new mosaics installed on the facade of the atrium of Saint Peter's under Sergius I (r.687–701), and of the extensive mosaic cycles installed in the Lateran palace under Zachary I (r.741–52), very probably also achieved similar results, though their work is lost (*Liber Pontificalis* I: 375 and 432, respectively). In fresco painting, too, ambitious decorative programmes continued to be executed to high standards throughout the early eighth century and beyond. To cite but one example, the extensive cycle of frescoes extant in the presbytery at Santa Maria Antiqua, also dating to the pontificate of John VII, shows no sign of technical impoverishment, and fits comfortably in a stylistic and iconographical continuum stretching across the early Middle Ages.<sup>11</sup>

Thus, universal social and economic and technical regression cannot be invoked to explain why Roman builders of the early eighth century used lower-quality and more heterogeneous materials, assembled to less exacting specifications, to create

---

<sup>10</sup> In the later eighth century, Roman potters would begin producing a distinctive new type of high-quality tableware, the so-called 'Forum Ware', in industrial quantities: see Romei, 1992.

<sup>11</sup> For an overview of John VII's interventions at Santa Maria Antiqua, see Andaloro, 2016. A second example is the frescoes at San Saba on the piccolo Aventino, now also dated to the early eighth century: see Bordi, 2008.



generally less solid standing walls with distinctly more irregular facings, even for important commissions sponsored by the popes themselves. Potters, glassblowers, mosaicists (and those who supplied them with stone and glass tesserae) and fresco painters all continued working to high and fairly consistent standards in the same period, even as the city dropped out of Mediterranean-wide trade networks and exited the Byzantine political and economic sphere.

One might indeed expect the building industry to have been, if anything, more resilient to changes occasioned by Rome's inward turn, for construction was essentially a local affair. The raw materials employed in Roman buildings (travertine and tuff, the clay for bricks, the sand and lime for mortar) always came from Rome and its immediate surroundings, rarely beyond the confines of the modern region of Lazio. There is likewise no reason to think that most of the builders working in the city at any period were anything other than local. And of course, by contrast with portable commodities such as pots or glass, local shortfalls could hardly be compensated for by imports: the buildings were either produced on site, or not at all. And yet techniques of bonded masonry construction proved particularly susceptible to change and qualitative degradation.

Continuity in construction techniques depends on a certain continuity in construction projects, a continuum of labour that allows for the transmission of technical knowledge and practical skills from one generation to the next. It also requires ready access to, and a steady supply of, building materials: when there is constant building activity, there tend also to be robust mechanisms to provide both the raw materials (clay, lime, sand, quarried stone, timber) and the finished building components (shaped stone blocks, bricks, mortar, lumber) required. When these subsidiary industries function continuously, the products they provide can attain a degree of consistency in quality and form that contributes further to the regularization of construction techniques. But the continuum of labour and the ready availability of standardized components ultimately depend on the additional factor of demand, the presence of a steady stream of individuals with the mandate and the resources to launch ambitious architectural projects; in a word, on patronage.

The break with centuries-old building traditions that unfolds across the period *c.* 650–750 in Rome may ultimately boil down, I would suggest, to a fundamental shift in mechanisms of patronage, and of control over the city's infrastructure and architectural patrimony. These mechanisms of patronage and control were intimately connected with local politics and administration, whose tumultuous evolution over the century in question may help to explain why a local industry not particularly dependent on interregional political and economic networks (nor, therefore, susceptible to the progressive interruption thereof) transformed as profoundly as it did. The political situation in Rome, in short, resulted in a 'patronage gap'. In exploring how and why this patronage gap formed during the century in question, we might better explain why Roman walls began to look so different. We might also gain a new perspective on the vexed political dynamics of the period: on the evolving relationship between Rome's Byzantine

administrators on the one hand, and the popes and their functionaries on the other, who between them controlled the fate of Rome's public buildings and infrastructure.

The material record and the historical record correspond closely enough, I think, to permit dividing the pivotal century roughly into two phases. The first runs from the pontificate of Martin I (r.649–55) through that of John VI (r.701–5); the second from John VII (r.705–7) through Zachary I (r.741–52). Phase I saw increasing discord — occasionally tending to open hostility — between Roman popes and the authorities in Constantinople in doctrinal matters, a rupture that darkened relations, and presumably hindered cooperation, also between popes and local, Rome-based representatives of the Byzantine state (Bertolini, 1968; Noble, 1984: 1–18; Delogu, 2000a: 100–2). At the same time, the resources and attention that Constantinople could devote to Rome and Italy were drastically curtailed as a result of the Muslim blitzkrieg in the eastern Mediterranean from the 630s on: by mid-century, Constantinople's resources and energies were directed primarily to defending what remained of its territory in the East.<sup>12</sup> This phase is characterized, at Rome, by an almost total lack of monumental construction as attested both by written sources and material remains. Even allowing for deficiencies in the evidence, it is safe to say that the period represents an absolute low point in construction, even in comparison with the first half of the seventh century and the first half of the eighth.<sup>13</sup>

Theodore I, the last of the seventh-century popes to build on an apparently ambitious scale (the church of San Valentino on the Via Flaminia; the San Venanzio chapel; the Sant' Euplo chapel outside Porta San Paolo; and the chapel of SS. Primus and Felicianus at Santo Stefano),<sup>14</sup> was the first of a series of 'Greek' popes who held the papacy for much of the following century, native Greek-speakers of eastern or south Italian origin, many of whom arrived in Rome as religious refugees from the monotheletism promulgated under Emperor Heraclius (r.610–41), and of course the Arab conquests from the 630s on (Economou, 2007). Theodore himself led the Roman opposition to monotheletism, which came to a head at the Lateran Council of 649, convened by Theodore but

<sup>12</sup> On the situation in Italy, Brown, 1984: 144–58; on the East, Haldon, 1997: 9–40.

<sup>13</sup> See especially Coates-Stephens, 1997: 183–9, whose systematic effort to catalogue monumental building projects in early medieval Rome turned up remarkably little for this period. The principal written source, the *Liber Pontificalis*, mentions very few building projects of any sort, and those few it does include mostly involve repairs to existing churches. There is nothing at all between 649 and 672, and a total of four projects of any seeming magnitude between 672 and 705: the restoration (*restauravit*) of the small church of San Pietro on the Via Portuense under Deodatus (r.672–6; *Liber Pontificalis* I: 346); the restoration (*restauravit*) of the small church of SS. Pietro e Paolo on the Via Ostiensis under Domnus (r.676–8; *Liber Pontificalis* I: 348); the construction (apparently *ex novo*) of the small church of SS. Simplicio, Faustino e Beatrice near Santa Bibiana under Leo II (r.682–3; *Liber Pontificalis* I: 360); and the oratory of Sant' Andrea on the Via Labicana under Sergius I (r.687–701; *Liber Pontificalis* I: 376).

<sup>14</sup> On the first three, *Liber Pontificalis* I: 332–3. The Sant' Euplo chapel in Santo Stefano Rotondo retains its original dedicatory inscription in the apse mosaic.

held after his death under his successor, Martin I. Martin's continued support of the Lateran Council's anti-monothelite decrees resulted, in 653, in his arrest by local Byzantine authorities; he was deported to Constantinople, tried, and died in exile in 655 (*Liber Pontificalis* I: 336–8; Llewellyn, 1993: 146–56; Economou, 2007: 113–57). The episode undoubtedly soured relations between Roman popes and clergy, who thereafter remained staunch in their anti-monothelism and their support of the Lateran Council's decrees, and the local Byzantine officials charged with enforcing Constantinopolitan policy. In the decades that followed, the Church began tentatively to step into spheres of administration and local governance that had once been the province of the civic authorities: by the 680s, we hear of 'monasteries of the *diaconia*', charitable institutions charged with providing the sort of relief for the poor traditionally administered by the civic administration.<sup>15</sup> Also by the later 680s or early 690s, the first low-denomination, bronze coins bearing papal monograms were minted in Rome (Morrison and Barrandon, 1988; Rovelli, 1998: 79–91). It is such signs that the Church was beginning to act more independently of the civic authorities that led Tom Noble to begin his seminal *The Republic of St Peter* in c. 680, a chronology that has held up quite well in light of new material evidence uncovered in the past few decades (Noble, 1984).

It is crucial to stress, however, that throughout the seventh century and into the eighth, the titular prerogatives of the Byzantine administrative apparatus at Rome remained fully in force, though the exiguous (and heavily ecclesiastically biased) extant texts offer only occasional glimpses of the actions of non-ecclesiastical agents. But there is good reason to assume that the State and its local representatives, headed by a resident *dux*, retained sovereign power over the local population, including the popes, as the arrest and deportation of Martin I itself indicates.<sup>16</sup> Indeed, the popes had been imperial officials since the fourth century, their election subject to official confirmation, and they remained so in the late seventh (Delogu, 2000b: 198–9; Humphries, 2007; Thacker, 2013); still in the time of Agatho (r.678–81), the *Liber Pontificalis* acknowledges the prerogative of the Constantinopolitan emperor to approve papal elections.<sup>17</sup>

Imperial jurisdiction also manifestly still extended to the monumental patrimony of the city. As it had since imperial days, that monumental patrimony included civic infrastructure and public buildings, churches among them. While the author of the *Liber Pontificalis* life of Pope Vitalian (r.657–72)

<sup>15</sup> The term first occurs in the *Life* of Benedict II (r.684–5; *Liber Pontificalis* I: 364); see generally Bertolini, 1947; Falsiedi, 1995; Dey, 2008.

<sup>16</sup> *Liber Pontificalis* I: 338: Emperor Constans II issued a warrant for Martin's arrest, which was regularly served in Rome by the exarch himself and a *cubicularius*, apparently without opposition; there is no hint in the text that Constans had exceeded his legal authority in doing so, his heterodoxy notwithstanding.

<sup>17</sup> *Liber Pontificalis* I: 354–5. The author of the life notes that Agatho was confirmed in his office by Constantinople, after having dispatched the customary *decretus generalis* upon his election; and further goes well out of his way to stress that subsequent popes, too, would be expected to send the *decretus generalis* for imperial approval; see also the seventh/eighth-century formula for the *decretus generalis* in the *Liber Diurnus Romanorum Pontificum*: 209.



might lament the Emperor Constans II's despoliation of Roman monuments, the bronze roof tiles of the church of Santa Maria *ad martyres* (the Pantheon) included, during his brief visit to Rome in 663, he never suggests that Constans lacked the legal authority for this: Rome's physical plant was Constans's to dispose of as he wished as much as that of Constantinople or any other city in his dominions.<sup>18</sup> Byzantine officials also continued to supervise essential complexes such as the imperial palace on the Palatine, certainly as late as the 680s, on the evidence of the epitaph of Plato, *cura(tor) palatii urbis Romae*, and probably for some decades thereafter.<sup>19</sup> Right up until the end of the Byzantine civil administration in Rome, in the 740s, the Roman Church continued to acknowledge the legal distinction between public (i.e. imperial) and Church property — between the *ius publicum* and the *ius ecclesiae Romanae*.<sup>20</sup>

In legal terms, the popes were no more sovereign agents or autonomous proprietors in the seventh century than they had been in the days of Constantine in the fourth century. In late antiquity, patronage of important ecclesiastical building projects at Rome usually (always?) depended on collaboration between the popes on the one hand, and the emperors and their local representatives on the other (Humphries, 2007: 55; Thacker, 2013: esp. 147–8). Whenever it is possible to say something about the funding and sponsorship of Rome's grandest fourth- and fifth-century churches, the involvement of emperors and/or the urban prefects who governed in their place is likely or certain. The role of Constantine and his family in church-building at Rome need not be rehashed here.<sup>21</sup> Imperial sponsorship of the huge new basilica of San Paolo fuori le Mura is famously attested in a rescript of the emperors Valentinian II, Arcadius and Theodosius to Symmachus, *praefectus urbi* in 384–5.<sup>22</sup> In the 430s and 440s, Valentinian III and his wife Eudoxia collaborated in the realization of the greatest churches of the age, certainly for San Pietro in Vincoli, but very probably also Santa Sabina and Santa Maria Maggiore; and Rome's 'last great church of antiquity', Santo Stefano Rotondo, rose on imperial property in the 460s, surely again with official sanction.<sup>23</sup>

<sup>18</sup> Paul the Deacon, *Historia Langobardorum*, 5.11; *Liber Pontificalis* I: 343–4.

<sup>19</sup> *ICUR* 2/1, p. 442, no. 152 (anno 687); cf. *Liber Pontificalis* I: 386, n. 1; Augenti, 1996: 46ff.

<sup>20</sup> This comes through clearly at *Liber Pontificalis* I: 433, where Zachary I (r.741–52) successfully petitions Constantine V for the transfer of two estates from the *ius publicum* to the *ius ecclesiae Romanae*.

<sup>21</sup> Curran, 2000: 91–115, 128–9; Fiocchi Nicolai, 2001: 50–105.

<sup>22</sup> *Collectio Avellana* 3: 46–7.

<sup>23</sup> Cf. Humphries, 2007: 40–3; Kinney, 2017: 76–80. On San Pietro in Vincoli, see the dedicatory inscription of Pope Sixtus III (*ICUR* II, 110, no. 67; 124, no. 3), along with another inscription commemorating Eudoxia's patronage: *ILCV* I: 1779. For Santo Stefano, see Brandenburg 2004; the church rose on the site of the former *castra peregrinorum*, certainly still imperial property at the beginning of the fifth century, as it presumably remained in the 460s. The homogeneous column-sets used at San Pietro in Vincoli and Santa Sabina, and the matching pairs used at Santa Maria Maggiore, must have come from important public buildings that can only have been used with imperial sanction; the same is true for the porphyry columns (with their bases and capitals) flanking the entrance of the Lateran baptistery, which was also rebuilt during the pontificate of

Saint Peter's itself remained a privileged locus of imperial and senatorial display, especially funerary display, well into the fifth century; at least until the time of Leo I (r.440–61), who began the tradition of papal burial at the Vatican, senators and emperors left more durable signs of their presence in the Vatican complex than the popes.<sup>24</sup>

While the situation after the fall of the western Empire in the 470s is murkier, Byzantine emperors and their subordinates retained similar powers and privileges following the Byzantine reconquest of Italy (535–53) and the promulgation of the so-called Pragmatic Sanction by Narses in 554, which still presumes imperial control of public architectural patrimony in Rome in line with late-antique precedent.<sup>25</sup> Several passages in Gregory I's (r.590–604) copious letters, sometimes cited as evidence for the expansion of papal control over infrastructure, demonstrate rather that Gregory continued to accept his role as an imperial official, and to expect government-appointed administrators to take responsibility for urban infrastructure whenever possible, though he filled in — as the leading imperial official left in the city at various times — when Lombard pressure cut Rome off from the outside world.<sup>26</sup> And throughout the first half of the seventh century, we find the imperial authorities intimately involved in the foundation or restoration of the greatest churches of the era. The conversion of the Pantheon into a church, in 609, by Boniface IV explicitly required imperial sanction (*Liber Pontificalis* I: 317), as probably did Honorius I's (r.625–38) conversion of the old Senate House in the forum (a public building if ever there was one) into the church of Sant' Adriano.<sup>27</sup> Honorius certainly sought, and received, special permission from Emperor Heraclius to use bronze roof-tiles from the temple of Venus and Rome to repair the roof of Saint Peter's (ibid., 323). Moreover, Honorius's new church of Sant' Agnese, the grandest *ex novo* project of his pontificate, was built (next to the mausoleum of Constantine's daughter, Constantia) on what may well have remained imperial property, as it had been in the fourth century (Curran, 2000: 128–9).

The point is this: well into the seventh century, the realization of Rome's most prestigious ecclesiastical building projects should be presumed to have — still — depended on close cooperation between ecclesiastical and civic authorities, the

---

Sixtus III (Kinney, 2017: 80). See also Thacker, 2013: 147–8 on the joint efforts of Valentinian III and Sixtus III to adorn the interior of Saint Peter's with vast quantities of precious metalwork.

<sup>24</sup> Johnson, 2009: 167–74; McEvoy, 2013; on papal burials at Saint Peter's, see also Picard, 1969.

<sup>25</sup> *Constitutio Pragmatica*, 25 (*Corpus Juris Civilis*, vol. 3, *Novellae*, App. VII, p. 802), with Coates-Stephens, 2006a: esp. 299–303; 2006b: esp. 149–53.

<sup>26</sup> For a summary of scholarly perspectives on this issue and a sampling of relevant texts from Gregory's letters, see Dey, 2011: 243–4. See also Delogu, 2000a: 83–4.

<sup>27</sup> *Liber Pontificalis* I: 324. Though the *Liber Pontificalis* omits mention of imperial permission in this instance, it also claims that Honorius 'built' (*fecit*) the church, as Mark Humphries points out (2007: 54–5), which of course is fully consonant with its tendency to exaggerate the contributions of popes.

twin pillars of the late Roman, and Byzantine, imperial order (Coates-Stephens, 2006a, 2006b; Humphries, 2007: 53–6).<sup>28</sup> Though it frayed and strained at times over the centuries, there is no reason to think that such cooperation and coexistence was not the norm more than the exception (Brown, 1984: 175–7). It would not then be a matter of pure chance that evidence of monumental building in Rome reaches its nadir in the later seventh century, when the state of mutual interdependence between Roman Church and Byzantine administration entered the process of terminal decline that led to its eventual dissolution in the eighth century.

We might speculate further on the causes and implications of the ‘building hiatus’. Regarding ‘secular’ building, we know very little for the seventh century, but the almost total absence of documented work on Rome’s walls, aqueducts and non-ecclesiastical public buildings in general during this period suggests that the local authorities (such as the *curator palatii* attested in the 680s) concentrated their efforts on essential maintenance and repairs (Dey, 2011: 244–5).<sup>29</sup> Such is a priori to be expected, given the impoverishment of the seventh-century Byzantine state and the allocation of what resources remained to the defence of the eastern frontiers and of Constantinople itself. While individual functionaries, whether of Roman or foreign origin, might still sponsor the occasional pious dedication (a late example is the new cycle of frescoes added to a chapel at Santa Maria Antiqua by the *dux* Theodotus in the 740s) (Belting, 1987; Bordi, 2016), the civic administration and its functionaries in an official capacity probably avoided ambitious new projects. (It is true that the *Liber Pontificalis*’s overwhelming focus on Church-sponsored initiatives makes it still harder to assess the effective contributions of non-papal actors (Bauer, 2004: 27–38; Coates-Stephens, 2006a, 2006b), but it is at any rate doubtful that ‘secular’ patronage was flourishing at a time when ecclesiastical patronage, including patronage attested in the *Liber Pontificalis* itself, reached new lows.)

This brings us to the question of why the popes, too, were erecting fewer churches and other religious foundations at the time. Reduced support from the civic authorities and individual lay patrons undoubtedly had its effect, but we can presume that the popes would still have wished to sponsor new monuments in their own right, regardless of what was occurring in the civic/administrative sphere. Yet they were evidently unable, or only very sporadically able, to do so on a significant scale. Several related possibilities present themselves to explain why this might have been so.

The first regards the sources of financing for ecclesiastical commissions. While it is easy to imagine why lay/administrative financing for construction declined in the later seventh century, it is not apparent that the impoverishment of the Byzantine administration following the loss of the eastern provinces to the

---

<sup>28</sup> Any churches constructed using public funds or lands should have required the active consent of the emperors: see below at n. 33.

<sup>29</sup> On the *curator palatii*, see above, n. 19.



Arabs should have dramatically reduced the resources of the Roman Church itself, including the funds available for building. Church revenues came largely from rents on church lands, the sale of commodities grown or produced on church properties, and pious donations and bequests.<sup>30</sup> All of these sources probably continued more or less unabated in the later seventh century, a period when the flow of pilgrims to Rome, especially from northwest Europe, was in fact increasing, along with the volume of offerings they brought (Thacker, 2014). Relations with the Lombards also improved in the later seventh century, which can only have benefited the Roman Church (Delogu, 1980: esp. 96–109). One possible conclusion is that lay and/or civic funding for ecclesiastical building projects, including all those commissions that the *Liber Pontificalis* attributes to the popes, had been more substantial and more instrumental for getting churches and other religious foundations built than is generally recognized. Faced with greatly reduced infusions of ‘Byzantine’ cash, the popes of the later seventh century may have been forced to confine themselves to the maintenance or repair of existing structures, limited interventions of the sort the *Liber Pontificalis* tends to report for the period.<sup>31</sup>

A second consideration involves the legal status of the papacy, especially enduring limitations on papal sovereignty and autonomy, fiscal and otherwise. As already noted, late seventh-century popes still belonged to the administrative apparatus of the Byzantine state.<sup>32</sup> The Theodosian and Justinianic codes were adamant that imperial officials should not undertake construction of new public buildings — which, I repeat, included churches — without imperial approval, unless they did so entirely with their own resources.<sup>33</sup> Granted that popes might nonetheless have sponsored other projects without official sanction (on land already belonging to the Church, and with exclusively private or ecclesiastical funds), the fact remains that, once built, churches entered the public domain and were subject to imperial legal strictures, as various laws in the *Codex Iustinianus* indicate.<sup>34</sup> Thus, with papal–imperial relations at a new low in the later seventh century, the popes, in addition to finding it difficult to get imperial sanction for any projects involving public funds and/or lands, may also simply have lacked the motivation to build at all; to devote their own resources to

<sup>30</sup> On the landed possessions of the Roman Church and their management in the seventh and eighth centuries, see Marazzi, 1998: esp. 103–56.

<sup>31</sup> On the terminology used in the *Liber Pontificalis* for renovations and restorations, as opposed to new construction, see Coates-Stephens, 1997.

<sup>32</sup> See above, nn. 16–18.

<sup>33</sup> *Codex Theodosianus* 15.1.37; *Codex Iustinianus* (*Corpus Juris Civilis*, vol. 2), 8.11.5, 8.11.9.1, 8.11.13.

<sup>34</sup> Churches and their landed endowments and possessions could not be sold or otherwise transferred into private hands without imperial assent, for example (*Codex Iustinianus* 1.2.14, of 470); the right of asylum in churches — who might claim it and under what circumstances — was defined by imperial fiat (*ibid.*, 1.12.1–6); and in a decree of 530 (*ibid.*, 1.12.23), Justinian indeed conflated *ius divinum* and *ius publicum*, and placed private gifts and bequests to churches and other religious foundations under the same legal umbrella as gifts to cities.

expensive and arduous architectural commissions that would officially belong as much to the increasingly hostile and doctrinally suspect Byzantine emperors as to the Church of Rome.

A third and final factor is logistical support, including the workforce itself and also the materials used for construction. In late antiquity, since the early fourth century, the professional associations (*collegia*) in Rome, including the builders, had come under state control, and clearly operated at the behest of the emperors and urban prefects when it came to erecting public buildings, including churches.<sup>35</sup> The workers employed on Maxentius' villa on the Via Appia were probably put to work just across the street on the Basilica Apostolorum (San Sebastiano) almost immediately after Constantine took control of Rome in 312, and the workforce for all the monumental churches sponsored by Constantine and his sons must have participated in their capacity as servants of the emperors, assigned to gargantuan projects that had imperial priority.<sup>36</sup> The exceptionally high-quality architectural *spolia* incorporated into churches such as Saint Peter's and the Lateran basilica must also indicate direct imperial involvement, as approval to procure and use such materials can only have come from on high.<sup>37</sup>

While we know next to nothing about the state of the building corporations or the organization of the construction industry in general in Rome after the fifth century, we can assume that Italy's Byzantine authorities exercised considerable control over the masons and labourers needed for public works, however this control worked in legal/institutional terms. If a choice had to be made at Rome between repairing city-walls, aqueducts or bridges, and assisting the papacy in building a new church, the human resources undoubtedly went to the former over the latter. But it is surely the same professional builders who were also employed on important ecclesiastical commissions, whenever they could be spared. The technical characteristics of sixth- and seventh-century civic and ecclesiastical foundations are similar enough to suggest that much the same workforce was involved; certainly nobody has ever claimed that the masonry of Rome's late-antique churches differs so markedly from that of coeval civic constructions as to suggest the existence of separate and differently trained labour pools.<sup>38</sup> Thus, the decline of state-sponsored building might have so reduced demand for skilled, full-time builders that few were available to the popes, even had they been able to commission and finance important new work (which they apparently were not). With the end of regular employment, the pool of skilled builders would have dissipated quickly; after a decade or two,

---

<sup>35</sup> On the constraints imposed on corporations in late antiquity, see De Robertis, 1955: 155–87, with Dey, 2011: 102–6.

<sup>36</sup> On San Sebastiano, see Nieddu, 2009: 143–5. On the Constantinian church-building programme, see Krautheimer, 1980: 18–31; Curran, 2000: 90–114; Fiocchi Nicolai, 2001: 50–105.

<sup>37</sup> See, for example, Bosman, 2013, on Saint Peter's; for a broader overview, see Pensabene, 2001.

<sup>38</sup> On late-antique masonry in Rome, see Heres, 1982; Cecchelli, 2001; Esposito, 2014.

few would have remained even to train a new generation of workers, if and when demand for their services increased.

Regarding the sources and availability of building materials, two simple and uncontroversial points can indicate why the Church might have faced shortages in the later seventh century. The first is that the vast majority, if not all, of the brick and stone used in Roman masonry consisted of reused materials by the seventh century.<sup>39</sup> After the first half of the sixth century, there is not a shred of evidence for the manufacture of structural ceramics (bricks and roof-tiles) until the reign of John VII, for which there is a total of two stamped roof-tiles found long ago near his presumed Palatine residence and the site of the recent Orti Farnesiani excavations (Steinby, 2001: 143; Spera, 2016a: 400–2). The heterogeneous and often fragmentary nature of the bricks (and the *tufelli*) used in sixth- and seventh-century walls is further evidence that the materials were overwhelmingly recycled. The second point is that, as noted above, the civic administration still owned Rome's physical plant in the seventh century, and the stringent prohibitions in the Theodosian and Justinianic law-codes against unauthorized despoiling of building materials from older structures presumably remained in effect.<sup>40</sup> A logical inference — the sources are mute on the subject — is that the civic administration determined when and how older structures might be dismantled and their materials recycled; that the State, in other words, controlled the main sources of high-quality architectural *spolia*, perhaps even via an organized system for recovering, sorting and stockpiling materials. Just such a system has been proposed for the fourth and fifth centuries, when it would help to explain how builders of churches such as Santa Sabina and San Pietro in Vincoli were able to access matching column-sets that can only have come from grand public buildings.<sup>41</sup> The extensive use of recycled materials in Roman churches prior to the middle of the seventh century would then have occurred with the sanction, and perhaps the active assistance, of the civic authorities. As tensions between those authorities and the Roman Church grew in the later seventh century, popes may have found it more difficult to mine (state-owned) crumbling buildings, or stockpiles of building-supplies, for their own projects.<sup>42</sup>

All of these explanations for the late-seventh-century building hiatus are necessarily speculative. It is impossible to say which (if any) was most significant, and other factors unaccounted for here may also have contributed. All the possibilities cited, however, converge in emphasizing the importance of non-ecclesiastical actors, the Byzantine administration above all, for the local

<sup>39</sup> On brick, see Steinby, 2001; on *tufelli*, see Bertelli, 2001.

<sup>40</sup> See above, nn. 25–7. Prohibitions: see, for example, *Codex Theodosianus* 15.1.19; 15.1.37; *Codex Iustinianus* (*Corpus Juris Civilis*, vol. 2), 8.11.9, 8.11.13.

<sup>41</sup> See above, n. 23. On the churches, see also Bauer, 2013: 265–6; on the possibility of organized stockpiling of *spolia* in late-antique Rome/Italy, see Christie, 2001: 118–19.

<sup>42</sup> I would add further that I think it very likely that the civil administration controlled even most of Rome's abandoned non-public, i.e. residential, buildings in the seventh century: extensive tracts of uninhabited *insulae*, for example, were rich mines of valuable building materials that the administration had every reason to appropriate (and not leave available to anyone for the taking).



building industry as a whole, and for the capacity of the Church to realize important architectural commissions. If there is merit to any of these explanations, the case strengthens for proposing that in terms of architectural patronage, too, the popes were not the autonomous agents that the *Liber Pontificalis* would like them to be. Ecclesiastical dependence on non-ecclesiastical actors and resources would in turn help to explain why even church-building reached such a low ebb at the time. It also provides a plausible framework within which to situate the developments of the early eighth century: the gradual increase in papal construction projects, and the novel technical characteristics apparent in the new generation of papal commissions. These eighth-century developments would then represent the inverse, or the attempted resolution, of the constraints the Roman Church faced in the late seventh century, as increasingly empowered popes found ways to translate their growing capacity for independent action into the realm of building patronage.

The brief pontificate of John VII looks to be a kind of watershed. His Palatine residence in particular is a project pregnant with symbolic significance, which portends increasing papal assertiveness and a desire to juxtapose the locus of papal government with the traditional epicentre of temporal power; whether this was done in cooperation with or in defiance of the Byzantine authorities is an open question.<sup>43</sup> Within a decade of John VII's death, popes began embarking on other ambitious and symbolically potent initiatives: according to the *Liber Pontificalis*, Sisinnius is said to have ordered the preparation of mortar for use in repairing the Aurelian Wall during the twenty days of his papacy in 708, leaving it to his successor, Gregory II (r.715–31), to undertake the work (Sisinnius: *Liber Pontificalis* I: 388; Gregory II: *ibid.*: 396). It is the first attested instance of papal intervention on the city's defensive circuit, and a telling sign of the papacy's growing involvement in the upkeep of critical infrastructure previously controlled by the Byzantine authorities (Dey, 2011: 63–7, 246–8). Gregory II's successor, Gregory III, became the first pope since Honorius I to erect multiple large churches from the ground up (Santa Maria in Aquiro; SS. Sergio e Bacco; SS. Marcellino e Pietro), along with the monastery at San Paolo fuori le Mura whose remnants were recently uncovered.<sup>44</sup> It is tempting to see more than coincidence in the fact that papal patronage of churches on a significant scale began under Gregory III, just when the rift with Constantinople widened to what, in retrospect, appears a point of no return (Bauer, 2004: 49–58).

Thus, from John VII's Palatine residence, to Gregory II's repairs of the Aurelian Wall, to Gregory III's monumental churches, there is good evidence that the popes in the first decades of the eighth century were anxious to translate their growing

---

<sup>43</sup> Carboni, 2016: 94–5; Spera, 2016b: 103–7; and especially Spera, 2016a: 393–8 for a thorough bibliographical survey of scholarly perspectives on relations between popes and emperors in general in the late seventh / early eighth centuries, and the significance of John VII's initiatives in particular.

<sup>44</sup> On the churches, see Coates-Stephens, 1997: 191–5; Bauer, 2004: 39–40; on the monastery, see Spera, Esposito and Giorgi, 2011.

independence into the realm of built space by intervening in especially visible and symbolically charged locations around the city. Further, it is apparent that the popes were *de facto* empowered to do so, regardless of the legal niceties involved and the opinion of the civic authorities. The buildings themselves are good evidence to this effect, but there are other signs that by the early eighth century the popes enjoyed enough local support, including from the Roman militia, to oppose the will and thwart the designs of imperial officials when necessary (Brown, 1984: 51–8; Noble, 1984: 28–49; Llewellyn, 1993: 160–72). In these early eighth-century popes, then, Rome once again had resident authorities able and willing to build ambitiously, to enhance materially the seat of their spiritual and temporal authority and, in the process, to begin closing the ‘patronage gap’.

This leaves the question of how these popes addressed the other constraints on architectural patronage, both financial and logistical, faced by their predecessors. With regard to finances, we know little in quantitative terms about the cumulative wealth of the Roman Church, or about its total annual revenues and expenditures, at any point between 650 and 750. The one really useful source is a passage in Theophanes, which puts the annual income derived from the church patrimonies in southern Italy and Sicily that Leo III subtracted from the Roman Church in the later 720s at 3.5 talents, or 25,200 solidi.<sup>45</sup> While we do not know what percentage of the total revenues of the Roman Church this sum represented, it was undoubtedly a very considerable portion. The important point, in any case, is that the popes from John VII to Gregory III are hardly likely to have been richer than their immediate predecessors. There is no obvious reason to think that any of them had access to substantial new sources of funding, and the loss of the Sicilian and southern Italian patrimonies must in fact have left the papacy considerably poorer.<sup>46</sup> Subsequent popes would respond by bolstering the economic self-sufficiency of the Roman Church, compensating for shortages in hard cash by relying more on locally based resources and on exchanges in kind, a process that seems to have begun in earnest under Zachary I (741–52), who instituted a new system of church-run agricultural estates (*domuscultae*) in the Roman countryside (Marazzi, 1998: 235–61). The popes from John VII to Gregory III, however, presumably had to make do with very limited, even declining, resources to accomplish their building projects. Their relative poverty has further implications for the question of logistics, which brings us back to the composition of the labour force and the procurement of building materials.

Once again, the textual record for the period in question provides no answers. The early eighth-century walls now documented at the Orti Farnesiani and Gregory II’s monastery at San Paolo, however, do. The materials themselves are what might have been found lying around in rubbish heaps or among the ruins

<sup>45</sup> Theophanes the Confessor, *Chronographia*, s. a. 6224 (vol. 2, p. 410), with the perceptive discussion of Zuckerman, 2005: 84–106.

<sup>46</sup> See above, n. 9.

of collapsed buildings: irregular pieces of stone, chunks of concrete, fragmentary bricks and tiles. As such, they contrast starkly with the materials employed in walls built from the mid-eighth century on: large blocks of tuff and immense quantities of recycled bricks of good quality and similar dimensions. As others have noted, such quantities of bricks and tuff blocks can only have been recovered from substantial Roman-period monuments, some possibly dismantled on demand to supply materials for the new buildings in which they were employed. The logical inference is that from mid-century, Rome's now fully autonomous popes made use of their new power to raze defunct public buildings and repurpose their materials for church-sponsored projects — it was both a practical expedient and a very visible proclamation of their absolute control over Rome's physical plant (Pani Ermini, 1992: 503–7; Barelli, Fabbri and Asciti, 2005: 62–3; Spera, 2016a: 412–19). We might then further infer that in the preceding decades the popes were not yet willing, or able, to assume full control over that physical plant, in part because it still technically belonged to the Byzantine authorities. This in turn would help to explain why builders employed by the Church during the early eighth century were forced to make use of considerably poorer materials. Faced with limited financial resources and restricted access to the best sources of reusable building materials, they made do with whatever came to hand.

As for the workers responsible for these early papal projects, the quality of the masonry walls they produced strongly suggests that they were not full-time, professional builders. The likely explanation for the use of 'amateur' builders is that few full-time professional builders remained in Rome in the early eighth century, probably, as suggested above, because neither the civic administration nor the Church had sponsored enough projects to provide steady work for several generations. If professionals did remain in Rome, they evidently no longer worked on Church-sponsored projects, as they had into the seventh century; we might then see another sign of the growing rift between clerics and Byzantine civil administrators, but the paucity of evidence for all types of building activity in the preceding decades argues in favour of the first explanation. In either case, the popes, already challenged by income shortages and limited access to high-quality building materials, will also have needed to engage new sources of labour, and perhaps even assemble a workforce to be trained in the basic skills necessary to build reasonably solid masonry structures. The best candidates were likely people already in the service of the Church or resident on church estates, who could presumably have been compensated partly or totally in kind rather than in (ever-scarcer) coin.

The Church clearly did employ its own labour force later in the century: Hadrian I brought in groups of mostly unskilled labourers from rural parts of the papal domains in Lazio, and Leo IV employed workers from the *domuscultae*, the church estates in the Roman countryside, in the building of the Leonine Wall around the Vatican (Pani Ermini, 1992: 503–4, 516; Noble, 2000: 63–70; Dey, 2011: 250–3). As the papacy took control of Rome's infrastructure and public buildings, and became the most prolific local patron

of monumental architecture, it also created a new pool of workers among dependants of the Church. When the pace of building picked up from the mid-eighth century, there was enough work on offer to ensure more or less constant employment for some workers, who evidently became increasingly proficient, as the more regular masonry that appears from mid-century on demonstrates. Still, those workers never fully revived the technical standards that had prevailed in Rome from antiquity into the seventh century. Once abandoned, the training, techniques and perhaps also some of the tools that gave the older brick and *opus vittatum* masonry its distinctive characteristics were never duplicated.

In sum: I would suggest that the Roman building industry got caught in the temporal gap that formed, in the second half of the seventh century, between a Byzantine administration in decline and a papal bureaucracy not yet fully empowered to supplant it. It was a period when Rome's titular Byzantine rulers proved no longer able (or willing) to patronize important building projects, while the popes lacked the institutional mandate and the resources, both human and material, to take sovereign control over Rome's public buildings and infrastructure. When the popes did begin to take their first strides toward asserting such control, in the early eighth century, they were consequently faced with the formidable challenge of reconstituting a local building industry practically from scratch. In the untidy masonry at the Orti Farnesiani and Gregory II's monastery at San Paolo, we may be glimpsing the first, tentative efforts of a new generation of Roman builders, relative amateurs with rudimentary training whose successors gradually improved their skills through more regular practice, aided by the growing capacity of papal patrons to organize and finance their labour and provide them with better-quality construction materials.

Thus, the standing walls of the early eighth century offer important testimony to the growth of, and the growing pains experienced by, Rome's nascent papal government. Yet they also prompt reflection on the state of Rome's building industry in the preceding decades, and especially on the factors responsible for the hiatus in building activities that should, in turn, at least partly explain the rupture in centuries-old skills and techniques that occurred in the later seventh century. It is unlikely to be pure coincidence that the pace of church-building slowed when relations between the Roman Church and the Byzantine administration took a dramatic turn for the worse, and also when Byzantium had fewer resources to devote to its Italian possessions. The best conclusion is that the Church had previously depended more heavily on the support of the Byzantine administration for its own monumental construction projects than is generally understood. Until about the middle of the seventh century, the leaders of the Church operated squarely under the administrative aegis of the Byzantine state, and close cooperation between popes and Byzantine officials very probably facilitated much of the church-building that occurred in Rome in the period *c.* 550–650. Without not only the consent of Rome's Byzantine administrators, but very probably also the financial, logistical, material and human resources that they could help to provide, the authors of the papal biographies in the *Liber Pontificalis* would have had fewer buildings to



attribute to popes who depended, far more than those authors ever admitted, on the goodwill of the imperial authorities.

Address for correspondence:

Prof. Hendrik Dey

Department of Art and Art History (HN 11054), 695 Park Avenue, Hunter College, New York, NY 10065, USA

[hdey@hunter.cuny.edu](mailto:hdey@hunter.cuny.edu)

## REFERENCES

### Primary sources

- Codex Theodosianus. Theodosiani Libri XVI cum Constitutionibus Sirmondianis et Leges Novellae ad Theodosianum Pertinentes.* Mommsen, T. and Meyer, P.M. (1905) (eds). 2 vols. Berlin, Weidmann.
- Collectio Avellana.* Günther, O. (1895) (ed.) *Corpus scriptorum ecclesiasticorum Latinorum* 35. Vienna, F. Tempsky, G. Freytag.
- Corpus Juris Civilis.* Mommsen, T. *et al.* (eds); revised edition Kunkel, W. (1954) (ed.). 3 vols. Berlin, Weidmann.
- ICUR = Inscriptiones Christianae Urbis Romae.* De Rossi, G.B. (1861–8) (ed.). 2 vols. Rome, Ex Officina Libraria Pontificia.
- ILCV = Inscriptiones Latinae Christianae Veteres.* Diehl, E. (1924–31) (ed.). 3 vols. Berlin, Weidmann.
- Liber Diurnus Romanorum Pontificum.* Foerster, H. (1958) (ed.). Bern, Francke Verlag.
- Liber Pontificalis.* Duchesne, L. (1955–7) (ed.) with additions by Vogel, C. *Le Liber Pontificalis. Texte, introduction et commentaire.* 3 vols. Paris, E. de Boccard.
- Paul the Deacon. *Historia Langobardorum.* Capo, L. (1992) (ed. and trans.), *Storia dei Longobardi.* Milan, Fondazione Lorenzo Valla.
- Theophanes the Confessor. *Chronographia.* De Boor, C. (1883–5) (ed.). 2 vols. Leipzig, Teubner.

### Secondary sources

- Andaloro, M. (2016) I cantieri di Giovanni VII. In M. Andaloro, G. Bordi and G. Morganti (eds), *Santa Maria Antiqua tra Roma e Bisanzio:* 212–19. Milan, Electa.
- Arnaldi, G. (1981) Il papato e l'ideologia del potere imperiale. *Settimane di Studio del Centro Italiano di Studi sull'Alto Medioevo* 27: 341–407.
- Augenti, A. (1996) *Il palatino nel medioevo. Archeologia e topografia (secoli VI–XIII).* Rome, Bretschneider.
- Ballardini, A. and Pogliani, P. (2014) A reconstruction of the oratory of John VII (705–07). In R. McKitterick, J. Osborne, C.M. Richardson and J. Story (eds), *Old Saint Peter's, Rome:* 190–213. Cambridge, Cambridge University Press.
- Barelli, L., Fabbri, M.C. and Ascitti, M. (2005) Lettura storico-tecnica di una muratura altomedievale: *l'opus quadratum* a Roma nei secoli VIII e IX. In D. Fiorani and D. Esposito (eds), *Techniche costruttive dell'edilizia storica. Conoscere per conservare:* 59–76. Rome, Viella.
- Bauer, F.A. (2003) Il rinnovamento di Roma sotto Adriano I alla luce del *Liber Pontificalis.* Immagine e realtà. In H. Geertman (ed.), *Il Liber Pontificalis e la storia materiale:* 189–203. Assen, Van Gorcum.

- Bauer, F.A. (2004) *Das Bild der Stadt Rom im Frühmittelalter. Papststiftungen im Spiegel des Liber Pontificalis von Gregor dem Dritten bis zu Leo dem Dritten*. Wiesbaden, L. Reichert.
- Bauer, F.A. (2013) Sacheggi e distruzioni nell'anno 410? In J. Lipps, C. Machado and P. von Rummel (eds), *The Sack of Rome in 410 AD. The Event, Its Context and Its Impact*: 259–75. Wiesbaden, L. Reichert.
- Belting, H. (1987) Eine Privatkapelle im frühmittelalterlichen Rom. *Dumbarton Oaks Papers* 41: 55–69.
- Bertelli, G. (2001) Elementi da costruzione in tufo a Roma tra IV e VII secolo. In M. Cecchelli (ed.), *Materiali e tecniche dell'edilizia paleocristiana a Roma*: 151–7. Rome, De Luca.
- Bertolini, O. (1947) Per la storia delle diaconie romane del alto medioevo sino alla fine del secolo VIII. *Archivio della Società Romana di Storia Patria* 70: 1–145.
- Bertolini, O. (1968) [1958] Riflessi politici delle controversie religiose con bisanzio nelle vicende del secolo VII in Italia. In O. Bertolini, *Scritti scelti di storia medievale*, vol. II: 265–308. Livorno, Società Editrice Il Telegrafo.
- Bordi, G. (2008) *Gli affreschi di San Saba sul piccolo Aventino*. Milan, Jaka Book.
- Bordi, G. (2016) La cappella del *primicerius* Teodoto. In M. Andaloro, G. Bordi and G. Morganti (eds), *Santa Maria Antiqua tra Roma e Bisanzio*: 260–9. Milan, Electa.
- Bosman, L. (2013) Spolia in the fourth-century basilica. In R. McKitterick, J. Osborne, C. Richardson and J. Story (eds), *Old Saint Peter's, Rome*: 65–80. Cambridge, Cambridge University Press.
- Brandenburg, H. (2004) Santo Stefano Rotondo: l'ultimo edificio monumentale di Roma fra antichità e medioevo. In L. Paroli and L. Venditelli (eds), *Roma dall'antichità al medioevo II. Contesti tardoantichi e altomedievali*: 480–505. Milan, Electa.
- Brown, T.S. (1984) *Gentlemen and Officers. Imperial Administration and Aristocratic Power in Byzantine Italy A.D. 554–800*. London, British School at Rome.
- Carboni, C. (2016) Un complesso altomedievale nel cuore della *domus tiberiana*. In M. Andaloro, G. Bordi and G. Morganti (eds), *Santa Maria Antiqua tra Roma e Bisanzio*: 86–96. Milan, Electa.
- Cecchelli, M. (2001) Le strutture murarie di Roma tra IV e VII secolo. In M. Cecchelli (ed.), *Materiali e tecniche dell'edilizia paleocristiana a Roma*: 11–101. Rome, De Luca.
- Christie, N. (2001) War and order: urban remodeling and defensive strategy in late Roman Italy. In L. Lavan (ed.), *Recent research in late-antique urbanism (Journal of Roman Archaeology Supplement 42)*: 106–22. Portsmouth (RI), Journal of Roman Archaeology.
- Coates-Stephens, R. (1995) Quattro torri alto-medievali delle Mura Aureliane. *Archeologia Medievale* 22: 501–17.
- Coates-Stephens, R. (1997) Dark age architecture in Rome. *Papers of the British School at Rome* 65: 177–232.
- Coates-Stephens, R. (1999) Le ricostruzioni altomedievali delle Mura Aureliane e degli acquedotti. *Mélanges de l'École Française de Rome. Moyen-Age* 111: 209–25.
- Coates-Stephens, R. (2006a) La committenza edilizia a Roma dopo la riconquista. In A. Augenti (ed.), *Le città italiane tra la tarda Antichità e l'alto Medioevo. Atti del convegno (Ravenna, 26–28 febbraio 2004)*: 299–316. Florence, All'Insegna del Giglio.
- Coates-Stephens, R. (2006b) Byzantine building patronage in post-reconquest Rome. In M. Ghilardi, C. Goddard and P. Porena (eds), *Les cités de l'Italie tardo-antique (IVe–VIe siècle). Institutions, économie, société, culture et religion*: 149–66. Rome, École Française de Rome.
- Curran, J. (2000) *Pagan City and Christian Capital: Rome in the Fourth Century*. Oxford, Oxford University Press.
- Delogu, P. (1980) Il regno longobardo. In G. Galassi (ed.), *Storia d'Italia*, vol. 1: *Longobardi e Bizantini*: 3–216. Turin, UTET.

- Delogu, P. (2000a) *Solium imperii — urbs ecclesiae*. Roma fra la tarda antichità e l'alto medioevo. In J.M. Gurt and G. Ripoll (eds), *Sedes regiae (ann. 400–800)*: 83–108. Barcelona, Reial Acadèmia de Bonas Lletres.
- Delogu, P. (2000b) The papacy, Rome and the wider world in the seventh and eighth centuries. In J. Smith (ed.), *Early Medieval Rome and the Christian West. Essays in Honour of Donald A. Bullough*: 197–220. Leiden, Brill.
- Delogu, P. (2001) Il passaggio dall'antichità al Medioevo. In A. Vauchez (ed.), *Roma medievale*: 3–40. Bari, Laterza.
- Delogu, P. (2010) *Le origini del medioevo*. Rome, Jouvence.
- Delogu, P. (2017) The popes and their city in the age of Charlemagne. In J. Moreland, J. Mitchell and B. Leal (eds), *Encounters, Excavations and Argosies. Essays for Richard Hodges*: 105–15. Oxford, Archaeopress.
- De Robertis, F.M. (1955) *Il fenomeno associativo nel mondo romano*. Naples, Libreria scientifica editrice.
- Dey, H. (2008) *Diaconiae, xenodochia, hospitalia* and monasteries: 'social security' and the meaning of monasticism in early medieval Rome. *Early Medieval Europe* 16: 398–422.
- Dey, H. (2011) *The Aurelian Wall and the Refashioning of Imperial Rome, AD 271–855*. Cambridge, Cambridge University Press.
- Economou, A. (2007) *Byzantine Rome and Greek Popes: Eastern Influences on Rome and the Papacy from Gregory the Great to Zacharias, A.D. 590–752*. Lanham (MD), Lexington Books.
- Esposito, D. (1998) *Tecniche costruttive murarie medievali. Murature 'a tufelli' in area romana*. Rome, Bretschneider.
- Esposito, D. (2014) Il cantiere e le opere murarie in Roma tra tardoantico e alto medioevo. In G.P. Brogiolo (ed.), *Tecniche costruttive e cicli edilizi tra VI e IX secolo, fra oriente e occidente (Archeologia dell'Architettura, vol. 18)*: 80–7. Florence, All'Insegna del Giglio.
- Falesiedi, U. (1995) *Le diaconie. I servizi assistenziali nella Chiesa antica*. Rome, Istituto Patristico Augustinianum.
- Fiocchi Nicolai, V. (2001) *Strutture funerarie ed edifici di culto paleocristiani di Roma dal IV al VI secolo*. Vatican City, Istituto Grafico Editoriale Romano.
- Geertman, H. (1975) *More veterum. Il «Liber Pontificalis» e gli edifici ecclesiastici di Roma nella tarda antichità e nell'alto medioevo*. Groningen, H.D. Tjeenk Willink.
- Giuntella, A.M. (1985) «Spazio cristiano» e città altomedievale: l'esempio della civitas leoniana. In *Atti del VI Congresso Nazionale di Archeologia Cristiana (Pesaro – Ancona 19–23 settembre 1983)*: 309–25. Florence: La Nuova Italia Editrice.
- Haldon, J. (1997) *Byzantium in the Seventh Century. The Transformation of a Culture* (revised edition). Cambridge, Cambridge University Press.
- Heitz, C. (1976) More romano, problèmes d'architecture et liturgie carolingiennes. In *Roma e l'età carolingia. Atti delle giornate di studio a cura dell'Istituto di Storia dell'Arte dell'Università di Roma, 3–8 maggio 1976*: 27–37. Rome, Multigrafica Editrice.
- Heres, T.L. (1982) *Paries. A proposal for a dating system of late-antique masonry structures in Rome and Ostia*. Amsterdam, Rodopi.
- Humphries, M. (2007) From emperor to pope? Ceremonial, space, and authority at Rome from Constantine to Gregory the Great. In K. Cooper and J. Hillner (eds), *Religion, Dynasty and Patronage in Early Christian Rome, 300–900*: 21–58. Cambridge, Cambridge University Press.
- Johnson, M.J. (2009) *The Roman Imperial Mausoleum in Late Antiquity*. Cambridge, Cambridge University Press.
- Kinney, D. (2017) Expanding the Christian footprint: church building in the City and the Suburbium. In I. Foletti and M. Gianandrea (eds), *The Fifth Century in Rome: Art, Liturgy, Patronage*: 65–97. Rome, Viella.
- Krautheimer, R. (1980) *Rome: Profile of a City, 312–1308*. Princeton, Princeton University Press.

- Lipps, J., Machado, C. and von Rummel, P. (eds) (2013) *The Sack of Rome in 410 AD. The Event, Its Context and Its Impact*. Wiesbaden, L. Reichert.
- Liverani, P. (2009) Interventi urbani a Roma tra il IV e il VI secolo. *Cristianesimo nella Storia* 29: 1–31.
- Llewellyn, P. (1993) *Rome in the Dark Ages* (second edition). New York, Constable.
- Marazzi, F. (1991) Il conflitto fra Leone III Isaurico e il papato fra il 725 e il 733, e il ‘definitivo’ inizio del medioevo a Roma: un’ipotesi in discussione. *Papers of the British School at Rome* 59: 231–57.
- Marazzi, F. (1993) Roma, il Lazio, il Mediterraneo: relazioni fra economia e politica dal VII al IX secolo. In P. Delogu and L. Paroli (eds), *La storia economica di Roma nell’alto medioevo alla luce dei recenti scavi archeologici. Atti del Seminario Roma 2–3 aprile 1992*: 267–85. Florence, All’Insegna del Giglio.
- Marazzi, F. (1998) *I ‘Patrimonia Sanctae Romanae Ecclesiae’ nel Lazio (secoli IV–X). Struttura amministrativa e prassi gestionale*. Rome, Istituto Storico Italiano per il Medioevo.
- McEvoy, M. (2013) The mausoleum of Honorius. Late Roman imperial Christianity and the city of Rome in the fifth century. In R. McKitterick, J. Osborne, C. Richardson and J. Story (eds), *Old Saint Peter’s, Rome*: 119–36. Cambridge, Cambridge University Press.
- Meneghini, R. and R. Santangeli Valenzani (2004) *Roma nell’altomedioevo. Topografia e urbanistica della città dal V al X secolo*. Rome, Libreria dello Stato.
- Morrison, C. and Barrandon, J.-N. (1988) La trouvaille de monnaies d’argent byzantines de Rome (VIIe–VIIIe siècles): analyses et chronologie. *Revue Numismatique*, 6th series, 30: 149–65.
- Nieddu, A.M. (2009) *La Basilica Apostolorum sulla via Appia e l’area cimiteriale circostante*. Vatican City, Pontificio Istituto di Archeologia Cristiana.
- Noble, T.F.X. (1984) *The Republic of St Peter. The Birth of the Papal State, 680–825*. Philadelphia, University of Pennsylvania Press.
- Noble, T.F.X. (2000) Paradoxes and possibilities in the sources for Roman society in the early Middle Ages. In J. Smith (ed.), *Early Medieval Rome and the Christian West. Essays in Honour of Donald A. Bullough*: 55–83. Leiden, Brill.
- Panella, C. and Saguì, L. (2001) Consumo e produzione a Roma tra tardoantico e altomedioevo: le merci, i contesti. *Settimane di Studio del Centro Italiano di Studi sull’Alto Medioevo* 48: 757–818.
- Pani Ermini, L. (1992) *Renovatio murorum*: tra programma urbanistico e restauro conservativo: Roma e il ducato romano. In *Committenti e produzione artistico-letteraria nell’alto Medioevo occidentale, 4–10 aprile 1991, vol. 2 (Settimane di Studio del Centro Italiano di Studi sull’Alto Medioevo 39)*: 485–530. Spoleto, Centro Italiano di Studi sull’Alto Medioevo.
- Pani Ermini, L. (2001) *Forma Urbis*: lo spazio urbano tra VI e IX secolo. *Settimane di Studio del Centro Italiano di Studi sull’Alto Medioevo* 48: 255–323.
- Patlagean, É. (2002) Variations impériales sur le thème romain. *Settimane di Studio del Centro Italiano di Studi sull’Alto Medioevo* 49: 1–47
- Pensabene, P. (2001) Criteri di reimpiego e nuove mode architettoniche nella basilica paleocristiana di Roma. In M. Cecchelli (ed.), *Materiali e tecniche dell’edilizia paleocristiana a Roma*: 103–25. Rome, De Luca.
- Picard, J.-Ch. (1969) Étude sur l’emplacement des tombes des papes du IIIe au Xe siècle. *Mélanges d’Archéologie et d’Histoire* 81: 725–82.
- Prigent, V. (2004) Les empereurs isauriens et la confiscation des patrimoines pontificaux d’Italie du Sud. *Mélanges de l’École Française de Rome. Moyen-Age* 116: 557–94.
- Romei, D. (1992) La ceramica a vetrina pesante altomedievale nella stratigrafia dell’edera della Crypta Balbi. In L. Paroli (ed.), *La ceramica invetriata tardoantica e altomedievale in Italia*: 378–93. Florence, All’Insegna del Giglio.



- Romei, D. (2004) Produzione e circolazione dei manufatti ceramici a Roma nell'alto medioevo. In L. Paroli and L. Venditelli (eds), *Roma dall'antichità al medioevo II. Contesti tardoantichi e altomedievali*: 278–311. Milan, Electa.
- Rovelli, A. (1998) La circolazione monetaria a Roma nei secoli VII e VIII. Nuovi dati per la storia economica di Roma nell'alto medioevo. In P. Delogu (ed.), *Roma medievale. Aggiornamenti*: 79–91. Florence, All'Insegna del Giglio.
- Rovelli, A. (2000) Monetary circulation in Byzantine and Carolingian Rome: a reconsideration in the light of recent archaeological data. In J. Smith (ed.), *Early Medieval Rome and the Christian West. Essays in Honour of Donald A. Bullough*: 85–99. Leiden, Brill.
- Sagui, L. (2002) Roma, i centri privilegiati e la lunga durata della tarda antichità. Dati archeologici dal deposito di VII secolo nell'edera della Crypta Balbi. *Archeologia Medievale* 29: 7–42.
- Sagui, L. and Lepri, B. (2015) La produzione del vetro a Roma: continuità e discontinuità fra tardoantico e altomedioevo. In A. Molinari, R. Santangeli Valenzani and L. Spera (eds), *L'archeologia della produzione a Roma (secoli V–XV). Atti del convegno internazionale di studi Roma 27–29 Marzo 2014*: 225–41. Rome, École Française de Rome.
- Sagui, L., Ricci, M. and Romei, D. (1997) Nuovi dati ceramologici per la storia economica di Roma tra VII e VIII secolo. In *La céramique médiévale en Méditerranée*: 35–48. Aix-en-Provence, Narration Editions.
- Santangeli Valenzani, R. (2002) Il cantiere altomedievale. Competenze tecniche, organizzazione del lavoro e struttura sociale. *Mitteilungen des Deutschen Archäologischen Instituts, Römische Abteilung* 109: 419–26.
- Santangeli Valenzani, R. (2003) Struttura economica e ruoli sociali a Roma nell'altomedioevo: una lettura archeologica. In R. Brandt (ed.), *Rome AD 300–800* (Acta ad Archaeologiam et Artium Historiam Pertinentia 17): 115–26. Rome, Institutum Romanum Norvegiae.
- Spera, L. (2016a) Il papato e Roma nell'VIII secolo. Rileggere la 'svolta' istituzionale attraverso la documentazione archeologica. *Rivista di Archeologia Cristiana* 92: 393–430.
- Spera, L. (2016b) La cristianizzazione del Foro romano e del Palatino. Prima e dopo Giovanni VII. In M. Andaloro, G. Bordi and G. Morganti (eds), *Santa Maria Antiqua tra Roma e Bisanzio*: 96–109. Milan, Electa.
- Spera, L., Esposito, D. and Giorgi, E. (2011) Costruire a Roma nel medioevo: evidenze di cantiere dallo scavo a San Paolo fuori le mura. *Archeologia dell'architettura* 16: 19–33.
- Steinby, E.M. (2001) La cronologia delle 'figlinae' tardoantiche. In M. Cecchelli (ed.), *Materiali e tecniche dell'edilizia paleocristiana a Roma*: 127–50. Rome, De Luca.
- Thacker, A. (2013) Popes, emperors and clergy at Old Saint Peter's from the fourth to the eighth century. In R. McKitterick, J. Osborne, C.M. Richardson and J. Story (eds), *Old Saint Peter's, Rome*: 137–56. Cambridge, Cambridge University Press.
- Thacker, A. (2014) Rome: the pilgrims' city in the seventh century. In F. Tinti (ed.), *England and Rome in the Early Middle Ages: Pilgrimage, Art, and Politics*: 89–139. Turnhout, Brepols.
- Zuckerman, C. (2005) Learning from the enemy and more: studies in 'dark centuries' Byzantium. *Millennium: Jahrbuch zu Kultur und Geschichte des ersten Jahrtausends n. Chr.* 2: 79–135.