Rethinking Ostia : a spatial enquiry into the urban society of Rome's imperial port-town

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8 – Scaled Approaches to Urban Space: Ostia's Guild Seats and the Movement Economy in Roman Cities

This chapter examines the relationship between individual buildings and street space, applying Space Syntax concepts and techniques to Ostia's guild buildings and the street network. Constructed in the second century AD, the guild buildings served as club-houses, accommodating the activities performed by the guilds, the so-called *collegia*. The guild buildings played an important role within Ostia's second century AD society, marking those hot-spots within the city, which offered platforms for social and economic activities and potentially sustained a greater social dialogue than most other places. To appreciate the guilds' spatial behaviour in a more comprehensive way, questions about the interaction between the guild buildings and the city's streets and public spaces will be addressed.

This chapter begins with an overview of Roman guilds and the history of their study before taking a closer look at the guild seats and their topographic setting. Next, the data-sets for spatial analysis are introduced. This is followed by the analysis of the individual buildings, matching them to the results obtained from the assessment of the street network. Finally, by way of conclusion the value of the method will be considered in the light of the results obtained and how these contribute to our understanding of the movement economy in Roman cities.

8.1 THE GUILDS AND THEIR BUILDINGS: COLLEGIA AND SCHOLAE

The *collegia* or *corpora,* the so-called guilds*,* were probably the most important private associations in Roman society. Organised on the basis of voluntary membership, the guilds pursued goals with stated religious, social or professional objectives, which in practice often overlapped. Their members belonged to the *tenuiores,* the lower classes, below the three orders *(ordines)* of senators, knights and municipal decurions.[1] This class distinction seems foremost a legal one, since at the same time the members must have been of good financial standing since their memberships involved considerable financial commitment.[2] The guilds could hold property and inherit legacies.[3] Their investment in urban assets becomes primarily visible through their guild buildings, the so-called *scholae*.[4] These often form part of a larger building complex, sometimes comprising entire *insulae* with diverse land uses.[5]

8.1.1 History of research

About 60 different guilds and their activities have been identified for Ostia through inscriptions.[6] These guilds are mainly connected to port activities (e.g. the guilds of the ship owners, the weight controllers, the grain measurers and the bargemen), but also to services required by parts of the city's inhabitants.[7] Concurrently these guilds also dealt with the social and religious needs of the local community. In one way or another, the guilds covered almost every aspect of the town's life, involving a considerable part of the population.[8] The complexity of guilds and their extent of involvement compares well to networks in various senses: functional, social and spatial. As social networks the guilds provided interaction between individuals, groups and institutions;[9] while

1.Bollmann (1998: 22).
2. Ausbüttel (1982: 46-48).
3. See Meiggs (1973: 312 note 4).
4. See Ausbüttel on donations and investments by guild members to construct or embellish guild buildings (1982: 43).
5. See Hermansen (1982: 95-121) on urban property owned by Ostia's guilds; and specifically Hermansen's assessment of possible guild property based on Roman building laws; contra Bollmann (1998: 213-221).
6. Chevallier (1986: 153-157).
7. Hermansen (1982: 56).
8. Meiggs (1973: 312).
9. Cf. Remus (1996).

on a functional level they offered a flow of commercial services, communication and man-power. As spatial networks the guilds manifested themselves through the city-wide distribution of their buildings.

Information about the social activities of *collegia* comes almost entirely from dedicatory inscriptions, *alba*, decrees conferring offices, and legal codes.[10] In this way little is known about daily routines or less 'celebrated' activities, while the commemorated activities are mostly religious observance, acts of patronage, reciprocation and conviviality.[11] These activities were often attached to particular and identifiable locations, the so-called *scholae* (guild buildings). Thus the guild buildings played an important role in second century AD Ostian society. Out of a larger number of Ostia's possible guild buildings, only 18 have been archaeologically identified as *scholae.*[12] Their identification is based on the combined evidence of architectural remains and inscriptions found *in situ*, often corroborated by iconography and décor of wall paintings, floor mosaics, as well as statuary.[13]

Roman *collegia* and *corpora* have a long research tradition, attracting scholarly interest as early as the 16th and 17th centuries.[14] In the 19th century, when ancient historians were inspired by their personal experience of newly founded 'bourgeois' voluntary associations, their research interest was principally focussed on the legal and political status of Greek and Roman *corpora.* With the compilation of the *Corpus Inscriptionum Latinarum* at the end of the 19th century, *collegia* research experienced a major advance. Waltzing's four volumes (1895-1900), resting firmly on the basis of the *CIL*, included a collection of all then available relevant epigraphic and literary material. The work remains an unmatched landmark in *collegia* studies.[15] The interest in Roman associations peaked a second time in Italy in the 1930s/40s, when the corporative state ideology of Italian fascism prompted a renewed fascination with Roman associations. The resulting studies however did not reflect the bias of the political system which created the renewed interest.[16] De Robertis, the foremost authority on the legal status of the Roman *collegia*, produced academic analyses that bore no trace of the environment in which they were created.[17] Recent scholarship has been mapping out the modern evolution of the ancient concept of Roman *collegia*, taking a keen interest in how the political and social movements of the 19th and 20th centuries in Western Europe have shaped scholarly work on the ancient Roman *collegia.*[18]

Until the 1980s research on *collegia* seemed to be firmly in the hands of historians, relying exclusively on epigraphic and literary sources. Hence the material culture of *collegia* and *corpora* was only explored through epigraphic material and its references to certain buildings and related objects. Even when large-scale excavations in Ostia (between 1938-40) substantially broadened the material record, it took almost two decades before the first essays concerned with *scholae,* the actual *collegia* buildings, appeared.[19] Such excavations gave the first indications of what *scholae* could look like, when confirmed by epigraphy, which alone gives certainty and allows for limited comparative inference.[20] Subsequently, various *scholae* and their architectural characteristics were published independently. The first compilation of all Ostia's presumed *scholae* appeared in 1982.[21] Yet other publications, although presenting combined archaeological and epigraphic

10. See Bollmann (1998: 37-39) on social activities performed by collegia with references to relevant epigraphic sources, see Bollmann's for Ostia's collegia: catalogue entries A27-A45 (1998: 275-345). These entries describe identified *scholae* with inscriptions attributed to them. In addition, Bollmann's catalogue C provides inscriptions referring to *scholae* which have not been identified archaeologically; catalogue entries C 29-37 are relevant to Ostia (Bollmann 1998: 470-471).
11. Patterson (1994: 233).
12. Bollmann (1998).
13. Bollmann (1998: 275-345), cf. Hermansen (1982: 85-6), cf. Laird (2000) for a controversial view.
14. Ausbüttel (1982: 11).
15. Waltzing (1895; 1896; 1899 and 1900).
16. Ausbüttel (1982: 13).
17. In 1971, after decades of research De Robertis (1971) published a two-volume history of Roman corporations, including his earlier works produced during the crucial period of Italian fascism; see Ausbüttel (1982: 13) and Perry (2001: 205).
18. Perry (2006).
19. See Bollmann (1998: 17).
20. Slater (2000: 495).
21. Hermansen (1982: 55-89).

evidence, concentrated on comparative studies of single groups of *collegia* and their respective type of *schola* in various Roman cities, e.g. the *scholae* of the *augustales*.[22] Flambard's essay provided a model for the integration of architecture and epigraphy, detailing a selection of several important collegial inscriptions.[23] To date the most complete survey of the combined archaeological evidence and epigraphic sources is Bollmann's *Römische Vereinshäuser*.[24] Her study relates to a wider field of interpretations and seeks to understand the *scholae* as a means of self-representation within a civic and urban context. With specific reference to Ostia, various earlier studies have already identified the *collegia* as one of the major urban driving forces.[25] Accordingly, the social and spatial significance of *scholae* has been realised and demonstrated, offering various interpretations of their architectural structures.[26] These are informed by Roman building laws,[27] literary analogies,[28] and to a large extent by a careful reading of topological characteristics.[29] Most of these studies share a notional understanding of the

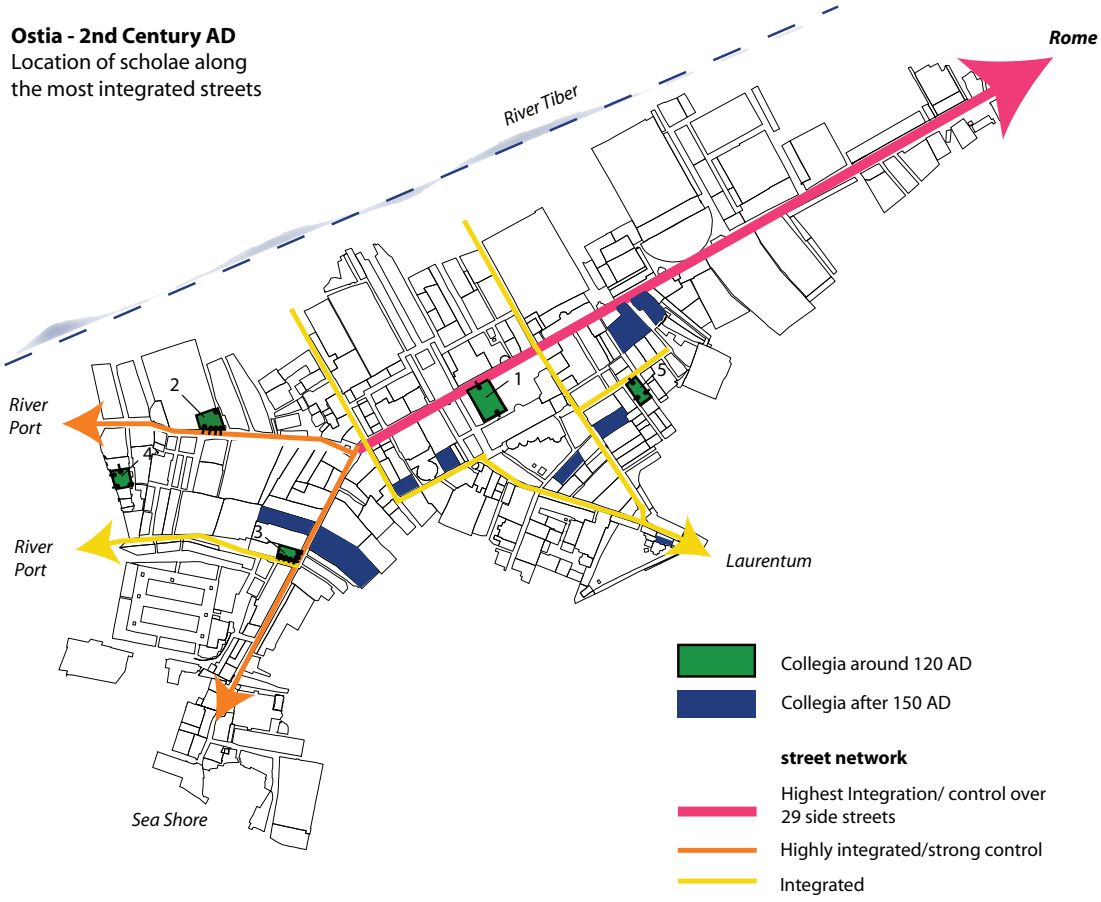


Fig. 8.1 – Ostia in the second century AD (excavated areas only), location of guild buildings (scholae) along the most integrated streets

22. Cf. Bollmann (1998: 18).
23. Cf. Slater (2000: 493); Flambard (1987).
24. Bollmann (1998).
25. Meiggs (1973); Kockel (1993).
26. Bollmann (1996: 195-200); Steuernagel (2004: 176-209).
27. Hermansen (1982).
28. Egelhaaf-Gaiser (2000; 2002).
29. Steuernagel (2005: 73-80).

spatial patterns present in the location of the guild seats and the spatial organisation of the buildings; but do not advance much beyond a descriptive level of this aspect.

8.1.2 A fresh look at guild seats

To reach past these descriptive interpretations and to understand better the dynamics at play, different ways of spatial assessment should be explored. The architectural structures of Ostia's *scholae* and their overall integration within the urban network are the point of departure for the spatial investigations presented here. A number of independent spatial aspects of the city's *scholae* have been considered: the size and shape of buildings and rooms, and the internal organisation of space and their accessibility. Size and form of the buildings often correspond to physical expressions of economic and social standing and might betray a link to the status of the guild and their members. The organisation of space and the degree of control or ease of access reflect the level to which the *scholae* have been structured to promote and encourage social encounter. The accessibility of the buildings and their location in relation to the street network are indicative of the spatial behaviour of *collegia* and their interaction with the city. Therefore, by examining the buildings' spatial properties this study investigates whether the spatial organisation of Ostia's *scholae* matches their presumed integrative role in society, a role suggested by previous investigations based on ancient literary sources and intuitive approaches to space.

Moreover, to appreciate better how Ostia's guilds organised and negotiated space, the locations and distribution of their *scholae* need to be studied within the wider context of the city's street network (Fig. 8.1).

8.1.3 An integrated approach with two data sets: buildings and streets

The integrated approach proposed in this study, combining aspects of Space Syntax at the micro-scale level of individual buildings and at town plan level, appears to be a promising way to capture thespatial properties of Ostia's guild buildings.[30] From a larger group of guild buildings, dating to the second century AD, five guild buildings have been selected for closer spatial assessment (Table 8.1). These form a small but coherent sample for spatial analysis, since all were built during the 1st half of the second century AD, within a period of *c.* 20 years. The second data set concerns Ostia's street network, for which two sets of streets have been taken into consideration. Firstly, the streets and public spaces which make up the street network of the excavated area, which amounts to about one third of the original expansion of Ostia.[31] Secondly, the extended street network based on the preliminary results of the geophysical surveys, tentatively assessed for control purposes only.[32] The Space Syntax analysis of Ostia's streets has been presented in detail in chapter seven of this study.

Names of the Guild Buildings[a]	Site-Reference	Date	Location
Casa dei Triclini	I, xii, 1	c. AD 120	Decumanus/Forum
Aula e Tempio dei Mensores	I, xix, 1-3	c. AD 112	Via della Foce
Domus di Marte	III, ii, 5	c. AD 127	Decumanus (west)
Domus accanto al Serapeo	III, xvii, 3	AD 123-126	Via del Serapide
Caseggiato dei Lottatori	V, iii, 1	c. AD 120	Via della Fortuna Annonaria

Table 8.1 – Sample for spatial analysis: five selected guild buildings of Ostia

[a] The names have been attributed to the buildings by the excavators. Some reflect proximity to other buildings or have been inspired by archaeological features present in the buildings, e.g. the walled *triclinia* or the statue base dedicated to Mars

30. See Stöger (2009; 2011), for earlier published work on a syntactical assessment of Ostia's guild buildings.
31. Heinzelmann (2002).
32. See Chapter Seven, section 7.5, p. 213, note 130.

8.1.4 Guild seats - buildings with low architectural definition

Ostia's guild buildings and Roman guild buildings in general, are characterised by varied layouts and a lack of formal architectural language, making it hard to identify them as *scholae* in the first place. The ultimate confirmation comes from epigraphy, which alone gives certainty.[33] While they display architectural diversity, their functional role seems to be shared by all guild buildings. Above all, these buildings had to offer suitable premises to accommodate a range of activities performed by the guilds (banquets, religious and cult practice, as well as formal and informal encounters and gatherings).

Although the small sample size of five guild buildings does not offer sufficient statistical material to allow for a strictly quantitative assessment, still some general characteristics can be evaluated, and a comparative examination between the individual *scholae* can be achieved. Space Syntax is well equipped to compare different ground plans, since it permits the assessment of architectural structures of very different spatial configurations.[34] Space Syntax does not attach functional labels to space; instead it understands buildings as structured configurations of space, which form patterns of movement and encounter.[35] Given the fragmentary nature of archaeological data, such a value-free characterisation seems most welcome in archaeological research, even more so since 'labelled spaces' with evident land-use properties and clearly defined functions are often only found in exceptional sites such as Pompeii, where spaces can be identified through well-preserved finds and detailed architectural records, which is rarely the case for Ostia.

8.2 THE SCHOLAE: ARCHITECTURE AND SETTING

The *scholae* selected for analysis will be briefly introduced and for better clarity their specific urban setting will be explained. The *scholae* are located in various parts of the city; the significance of their trans-spatial distribution will be discussed later. The following descriptions of their spatial layout, which also formed the basis for the access diagrams, are largely based on Bollmann's descriptive reconstructions, complemented by the Calza's 1953 site-plans,[36] and an on-site assessment of the architectural structures by the author.

8.2.1. The Casa dei Triclini, I xii 1 (Fig. 8.12)

The building is located on the southern side of the eastern *decumanus* (Fig. 8.1 building nr 1), bounded by the Via della Forica in the south and separated by a colonnaded passage from the *forum* proper in the west. The area east of the *schola* was at a later stage (fourth century AD) occupied by the so-called Foro della statua eroica creating an extension to the open areas of the Terme del Foro. The Foro della statua eroica had been built over the structures of earlier baths, dated to the Hadrianic period,[37] contemporaneous with the Casa dei Triclini.

The *Casa dei Triclini* has been identified as the meeting place of the *fabri tignuari* (the guild of the builders) by an inscription found on the base of a statue which presumably once carried an image of Septimius Severus.[38] There is no secure evidence for earlier use as a *schola*. Nevertheless, constructed in *opus reticulatum/brick* of remarkable regularity and finish, the building appears to be well-suited to represent the trade of the builders. The layout resembles a large *domus* with a central inner courtyard, a *tablinum*-style cult-room and ranges of rooms on both sides of the courtyard. The following architectural description neglects later alterations and attempts to reconstruct the building at its earlier phases as represented on the schematic plan (Fig. 8.12). The building's main entrance (E1) leads from the *decumanus* into the courtyard (Fig. 8.2). This wide entrance is flanked by two *tabernae* on both sides and a flight of stairs leading to upper

33. Bollman (1998); Slater (2000).
34. Lawrence (1990: 75), cf. DeLaine (2004: 161-3).
35. Grahame (2000: 40).
36. Bollman (1998); Calza (1953).
37. Pavolini (1983: 108); Cicerchia and Marinucci (1992: 20-22); Calza (1953: 128, fig. 32).
38. Calza (1927: 380); Pavolini (1986: 137); and Hermansen (1982: 62).

floors, no longer extant. *Tabernae* and stairs have no access to the inner part of the building. A secondary entrance (E2) opens to the Via della forica, while a third entrance links room (4) to the area to the east which was later to be occupied by the Foro della statua eroica. This southern entrance is also flanked by rows of *tabernae* and stairs, none of which are linked to the house's interior. The narrow entrance corridor provides access to room (K), which might have served as a kitchen/utility room. The corridor connects to space (8); a room that is best defined as one of the two *alae* flanking the *tablinum*-style central cult room (A).

Fig. 8.2 – Casa dei Triclini, I xii 1, seen from the entrance corridor when accessed from the *decumanus*; the tablinum-type room is in frontal view located opposite the entrance; patches of *opus spicatum* pavement are visible in the left corner below (photo courtesy of Ostia website)

Inside the building are two staircases (st1, st2) leading to upper floors no longer extant. Without having to cross much of the interior porticoes (3, 8), the stairs can be reached by a single right-hand turn from the corresponding entrance closest by, making accessibility of the upper floors relatively independent of the ground floor. On both sides of the central courtyard, ranges of rooms open behind the porticoes. Four larger rooms are located on the eastern side (4, 5, 6, 7) and five smaller ones (10, 11, 12, 13, 14) on the western side. The location and the size of the doors connecting the rooms to the portico are significant. The eastern rooms, characterized by walled *triclinia* placed there at a later point, have wide, centrally positioned doors (1.50 m w, 2.40 m h), offering full visibility from the courtyard into the rooms and vice-versa. The rooms on the western side show a different pattern. Smaller door openings (1.15 m w) are placed right next to the southern walls, while centrally placed windows offer an additional light source. By locating the door next to the corner where the wall along the portico meets the southern walls at an angle, only a small part of the room is visible from the outside. The major part of the room is kept "out of sight" and potentially offers more privacy. All rooms have travertine thresholds with grooves to insert doors that could be closed from the inside.

From the main entrance (E1) the ample courtyard presents itself in full axial alignment. The first part of the portico (3), linking the entrance to the courtyard, creates a spacious foyer measuring twice the size of the lateral porticoes (8, 9). An atrium-like rectangular space forms the central space of the courtyard, its floor is covered by a slightly concave surface paved with white mosaic *tesserae*. A bronze ring was placed at the lowest point in the centre presumably collecting and conducting rain water.[39] 12 columns enclose the apparent *atrium* and support the surrounding porticoes (3, 8, 9, 15). The *tablinum*-style cult room (A) opposite the main entrance represents the focal point of the building. A separate space (15) in front of it provides access to the cult-room and a passage between the flanking *alae* (8, 9).

8.2.2 Aula e Tempio dei Mensores, I xix 1-3 (Fig. 8.3)

These buildings are located within a trapezoid enclosure, situated at the northern side of the Via della Foce (Fig. 8.1, building nr 2). The enclosure also includes a courtyard and a range of rooms east of the temple (Fig. 8.4).[40] The *schola* complex seems structurally and functionally linked to the *Horrea dei*

39. Calza (1929: 170).
40. Bollmann (1998:291-295), Hermansen (1982:65-66), Calza (1953:125).

Mensores (I xix 4), and occupies the south-eastern corner of the street block otherwise fully taken up by the *horrea*. Along the eastern boundary of the *insula*, a street leads from the Via della Foce to the Tiber, separating the *horrea cum schola* from the *Terme del Mithra.*

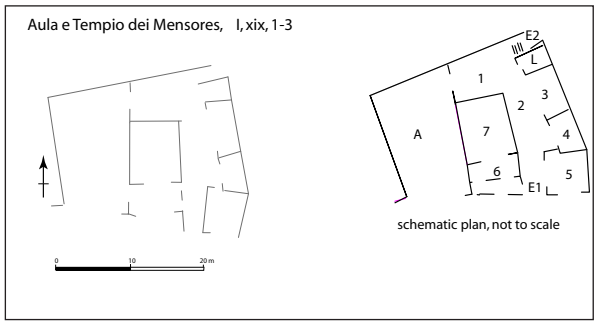


Fig. 8.3 – Aula e Tempio dei Mensores, I xix 1-3

Confirmed by epigraphy and iconography the so-called *aula* has been identified as the seat of the *collegia* of the *mensores*, the grain measurers.[41] The aula (A) consists of a single room fully open towards the Via della Foce, yet separated from the street level by a 50 cm high travertine threshold. Adjacent to the aula, elevated on a podium lies the presumably tetrastyle prostyle temple (7). The remaining *cella* is oriented towards the Via della Foce and accessed by stairs (6) which reach out into the street space. East of the temple the surrounding irregular L-shaped space starts as a passage (E1, 2) and opens up into a courtyard (1) north of the temple. Starting from the Via della Foce the floor levels of the L-shaped space gradually descend, creating a difference in height of about two meters between courtyard and adjacent aula (Fig. 8.4).

Fig. 8.4 – Aula e Tempio dei Mensores (I xix 1-3): aula and temple have access points to the Via della Foce

41. Bollmann (1998:290).

Fig. 8.5 – Aula e Tempio dei Mensores (I xix 1-3): inside courtyard (1) facing the wall between aula and courtyard; the original wide opening was constricted during later periods of use; the 3rd century well (left)

East of the courtyard are a range of rooms (3, 4, 5), with a latrine (L) placed in the northernmost room next to the stairs. These provide a secondary entrance (E2) connecting the courtyard to the street leading toward the Tiber. The difference in height of 2.0 m between the floor levels of the aula (A) and the courtyard (1) is critical when considering a possible connection between these spaces. The published plans in Calza (1953) suggest that the two spaces were interconnected. When checked against the architectural remains on site this seems to be confirmed.

Clearly, the wall bounding the spaces has a wide door opening, although slightly narrowed down by later interventions. In addition, the black and white floor mosaics in the aula, although dating to a later phase, still suggest a continuation of space rather than a boundary. In front of the door opening, the mosaic's framing pattern which runs along the walls of the aula was interrupted to feature a symbolic object (possibly a *rutellum* and a *modius*), pointing outward in direction of the courtyard. According to the excavation reports no remains of stairs to overcome the difference in height have been found.[42] This does not exclude that stairs of perishable materials like wood once connected these spaces, although no traces can be identified in the remaining walls of the court.

The relationship between aula and courtyard plays a key-role for investigating the spatial organisation of the *schola* complex. Space Syntax states that a building unit is defined by a continuous outer boundary (such that all parts of the external world are subject to some form of control) and continuous internal permeability, such that every part of the building is accessible to every other part without going outside the boundary.[43] Continuous internal permeability within the *schola* complex would only be retained as long as the aula and the courtyard are interconnected. Therefore it needs to be examined why this link would have been significant for the overall organization of the *schola* complex. As indicated by the *SO I* site-plan the courtyard adjacent to the aula comprises a fountain and two rectangular water basins, today no longer visible.[44] Water facilities and latrines seem almost standard

42. Bollmann (1998: 292, notes 383, 342).

43. Hillier and Hanson (1984: 147).

44. Ricciardi and Scrinari (1996) date the fountain to the 3rd century AD, replacing an earlier well.

features of guild seats.[45] Convenience and ease of access to these water facilities could certainly have been an important consideration when decisions were taken to link the aula to the courtyard. While such considerations might have played a role, it is difficult to estimate their influence. However, based on the archaeological evidence which suggests a wide door opening later to be constricted (see Fig. 8.5), this study treats the aula and the courtyard as interconnected spaces (see schematic plan Fig. 8.3).

8.2.3 Domus di Marte (III ii 5) (Fig. 8.6)

Located right at the corner where the western *decumanus* and the Cardo degli Aurighi intersect, the so-called *Domus di Marte* enjoys an exposed location (Fig. 8.1, building nr 3). Bounded by a commercial building (part of the *Domus sul decumano* (III ii 3, 4) on the *decumanus* to the north, and the Trajanic *horrea* (III ii 6) on the Cardo degli Aurighi to the west, the *schola* occupies space within a street block of largely commercial use. The original structures of the *Domus di Marte* have been dated to about 127 AD,[46] with considerable alterations taking place over time.

The building has been identified as *schola* for a number of considerations,[47] none of them compelling on their own. Only the combined evidence of epigraphy and architecture make a convincing enough case. Above all, it is not really clear whether the building was originally built to serve as a *schola*, or it was used as such at a later point in time. Central to the argument whether it is a *schola* at all, is the marble altar with the inscription "Marti/ Avg/Sacrvm",[48] placed in the northern corner of the courtyard (Fig. 8.7). No parallels for such altars have been found within a domestic context elsewhere in Ostia. Likewise the *Domus di Marte* does not seem fitting as a private house, with the majority of rooms interconnected and open to the street. Whether upper floors ever existed is difficult to establish, as no traces of stairs can be identified; however, the amount of reworking and subsequent abandonment might have removed evidence for stairs.[49] Through its openness the *Domus di Marte* suggests a close similarity to the spatial model of a traditional corner-shop that exploits the basic potential of its structure and its location.[50] Hillier and Hanson claim that this elementary spatial structure is generated whenever the logic of circumstances dictates the maximizing of random encounters without losing minimal spatial control.

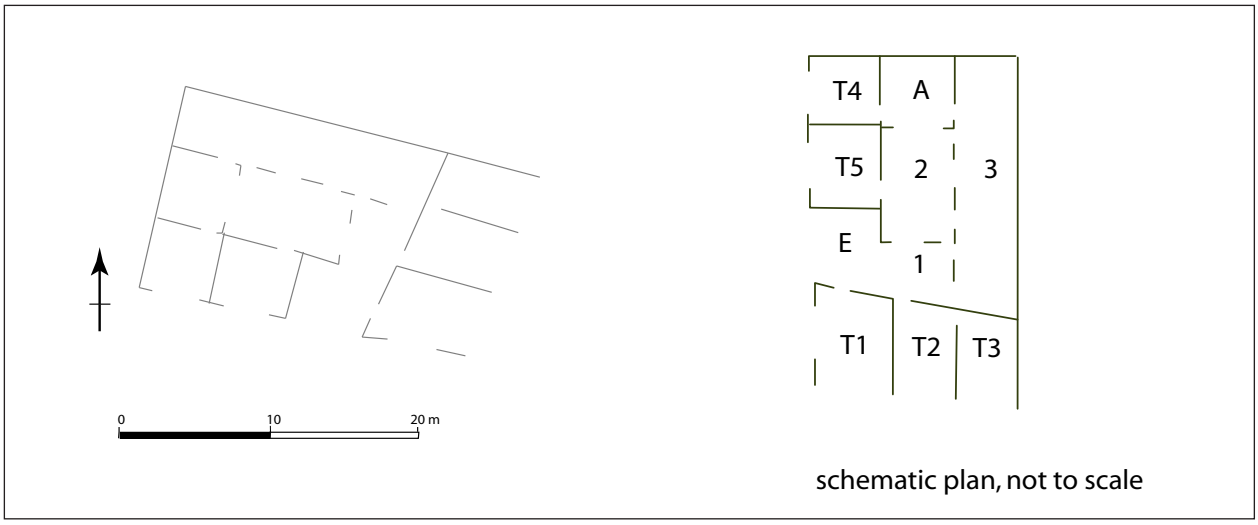


Fig. 8.6 – Domus di Marte, III ii 5

45. Hermansen (1982: 66).
46. Calza (1953: 222).
47. Bollmann (1998: 308-309); Hermansen (1982: 75-76).
48. Hermansen (1982: 76).
49. Bollmann (1998: 308, note 436) claims that the walls of *c.* 0.50 cm thickness could not support upper floors.
50. Hillier and Hanson (1984: 176-177).

Fig. 8.7 – The marble altar (room 2) with a dedication to Mars is visible through the door opening from room T5

The *Domus di Marte* represents a spatial structure that compares well to Hillier's shop model (see schematic plan). It takes full advantage of its corner position by locating three *tabernae* (T1, T2, T3) on the *decumanus* and two on the Cardo degli Aurighi (T4, T5). At the same time two of the *tabernae* on the *decumanus* (T1, T2) and both on the *cardo* are directly connected to the interior of the building, thus making the interior as continuous as possible with the outside space. The actual entrance (E) on the *cardo* is reached from a ramp. It directs into an L-shaped foyer (1) that leads deep into the building. The courtyard (2) runs perpendicular to the *decumanus* and links to the *tablinum*-style room (A) at the western extension. To the north of the courtyard is a hall (3) stretching along the whole length of the inner building, providing ample space for potential meetings of the *collegium*. The hall is connected to the *tablinum*-style room as well as to the courtyard and the foyer.

The requirements of the owners of the *Domus di Marte*, presumably the guild in question, must have influenced the planning decisions. The 'logic of circumstances' that generated this pronounced commercial space might be related to the mercantile interests pursued by the guild. Within the context of commercial value the absence of upper floors would seem surprising; serving as rental property the upper floors could have potentially generated additional income. Considering the *schola*'s construction date of around 127 AD, a time when Ostia experienced a major building boom and multi-storey buildings dominated the streetscapes, one would expect any building to take advantage of this prime location and strive to achieve its full development potential. In view of Ostia's urban expansion the moderate scale of the *Domus di Marte* appears to be a statement of conservatism and financial and 'spatial' independence from the city's booming housing market.[51]

8.2.4 Domus accanto al Serapeo (III xvii 3) (Fig. 8.8)

This so-called *domus* forms part of a larger set of buildings dedicated to the cult of Serapis. The complex comprises three inter-linked courtyard buildings (III xvii 3-5) located within a triangular area on the southern side of the Via della Foce (see 8.1 building nr 4), extending from the Caseggiato di Bacco e Arianna (III xvii 5) towards the *horrea* (III xvii 1) on the Cardo degli Aurighi. The central building hosted the temple dedicated to Serapis (III xvii 4), while the two others, located on either side, acted as service corridors and spaces for banquets and meetings. Together these buildings created a unitary function linked through a system of doorways and passages, running along the rear of the buildings. The complex was built in between 123-126 AD and inaugurated in 127 AD.[52] Later interventions blocked the original interconnections between the buildings, and new entrances accessible from the so-called Via del Serapide were created.

The identification of the *Domus accanto al Serapeo* as a guild seat is based on its structural and functional

51. Cf. Heinzelmann (2005).
52. Bloch (1959: 226).

link to the Serapeum. The sanctuary has been securely identified as a Serapeum by epigraphy and iconography.[53] It might have been the private temple of a religious *collegium*, which used the adjacent buildings for cultic activities. Since the whole complex is of considerable size it is also likely that it served a double function, a public sanctuary open to all worshippers of Serapis and a guild seat of a religious *collegium* in charge of the Serapis cult.[54]

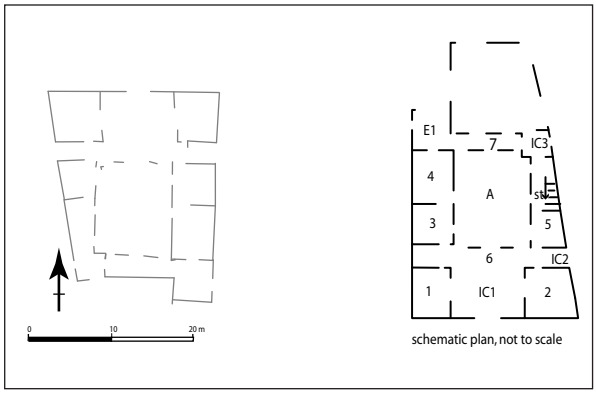


Fig. 8.8 – Domus accanto al Serapeo (III xvii 3)

The so-called *Domus accanto al Serapeo* is situated south of the temple. The original layout, which is reconstructed in the following description (Fig. 8.8 schematic plan), shows a wide door opening placed in the centre of the temple's southern wall and providing a link between the temple's courtyard and the spacious foyer (IC1) of the adjacent *schola*. The foyer is flanked by two rooms (1, 2), both of them connected to the passageway (6) which traverses the building. At its western extension there is an opening (IC2) leading to the service corridor linking the buildings. Behind the passageway (6), separated by pillars is a large *triclinium* (A) representing the focal point of the *schola* (Fig. 8.9). East and west of the *triclinium* are two interconnected rooms each (3, 4, 5 and st). From the south-western room (st), a flight of stairs leads to upper floors no longer extant. The southern wall of the *triclinium* opens to a portico-like passageway (7) that runs across the entire length of the building and connects to the service corridor (IC3). Entrance (E1) links the building to the Via del Serapide. It is partly directed toward the courtyard area south of the *schola* and to the passageway (7).

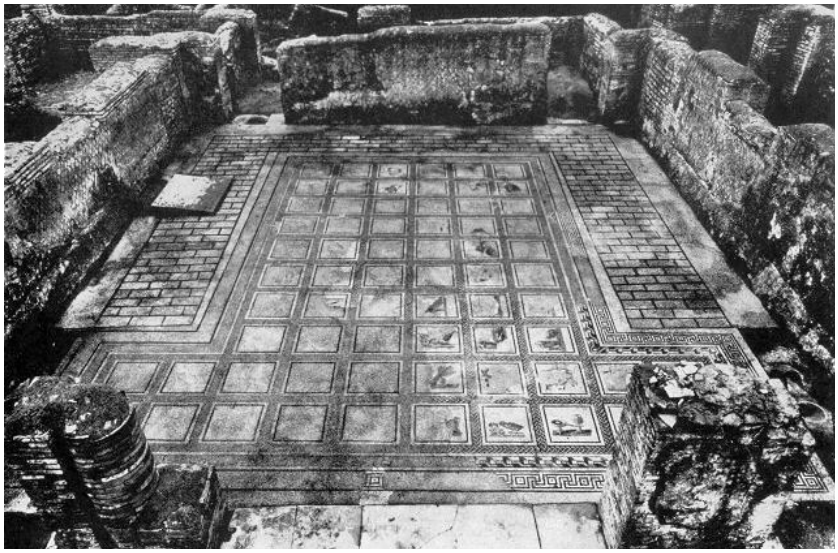


Fig. 8.9 – Domus accanto al Serapeo (III xvii 3), the schola's triclinium; the spaces destined for the reclining couches are visible in the changing mosaic decoration of the pavement (photo courtesy of Ostia website)

53. Calza (1953: 138); Hermansen (1982: 66); Bollmann (1998: 315).
54. Hermansen (1982: 67); Bollmann (1998: 317).

The entrances connecting the *schola* to the public or semi-public space of the Via del Serapide as well as the interconnecting doors (IC1, IC2, IC3) between the *schola* and the adjacent Serapeum relate to different degrees of accessibility from *schola* to the outside space. Since previous attempts to reconstruct the original layout were not overly concerned with space and its structuring properties, the presence or absence of entrances during a certain period of occupation were not given sufficient attention. Bollmann's description of the original layout does not include any entrances linking the *schola* directly to the Via del Serapide,[55] instead the *schola* was only reached through the courtyard of the temple or the service corridors. Mar's plan of the initial phase suggests two entrances from the Via del Serapide,[56] both located at the eastern side of the passageways. This study, based on the author's own on-site assessment, considers entrance (E1) to be part of the original plan, and agrees with Bollmann that the entrance to the passageway (6) was a later adjustment probably linked to the separation of the *domus* from the sanctuary. A telling detail is the long stretch of *reticulate* wall, in which the entrance seems simply inserted, whilst any planned entrance required brick faced doorposts or similar reinforcing techniques to strengthen the end of the reticulate wall.

8.2.5 Caseggiato dei Lottatori (V iii1) (Fig. 8.10)

This *schola* was originally classified as a *domus* according to Calza.[57] It is located at the north end of a street block bordered by the Via della Fortuna Annonaria, Via delle Ermette and Via della Casa del Pozzo (Fig. 8.1 building nr 5). On the south the *schola* is built against the northern wall of the neighbouring building, predating the *schola*. This is evident from the two walled-up doors, originally leading to the plot later to be occupied by the *schola*. The *schola*'s original structures date to the Hadrianic period, with subsequent interventions taking place in several phases. The most pronounced entrance (1) is on the Via della Fortuna Annonaria (Fig. 8.11); it is flanked by a *taberna* on either side, with the entrance hall measuring about the same size as each of the *tabernae*. The latter are not linked to the interior of the building. Left of the entrance hall was a drinking fountain; its presence was marked on the site plan (*SO* I plan section 8); according to Hermansen its remains were removed in the 1970s.[58] The *schola* consists of one large rectangular space with a *tablinum*-type room (A) located opposite the main entrance. On either side of the *tablinum* is a side hall (4, 5). In the centre of the rectangular hall (2) is an *impluvium*, once surrounded by columns.

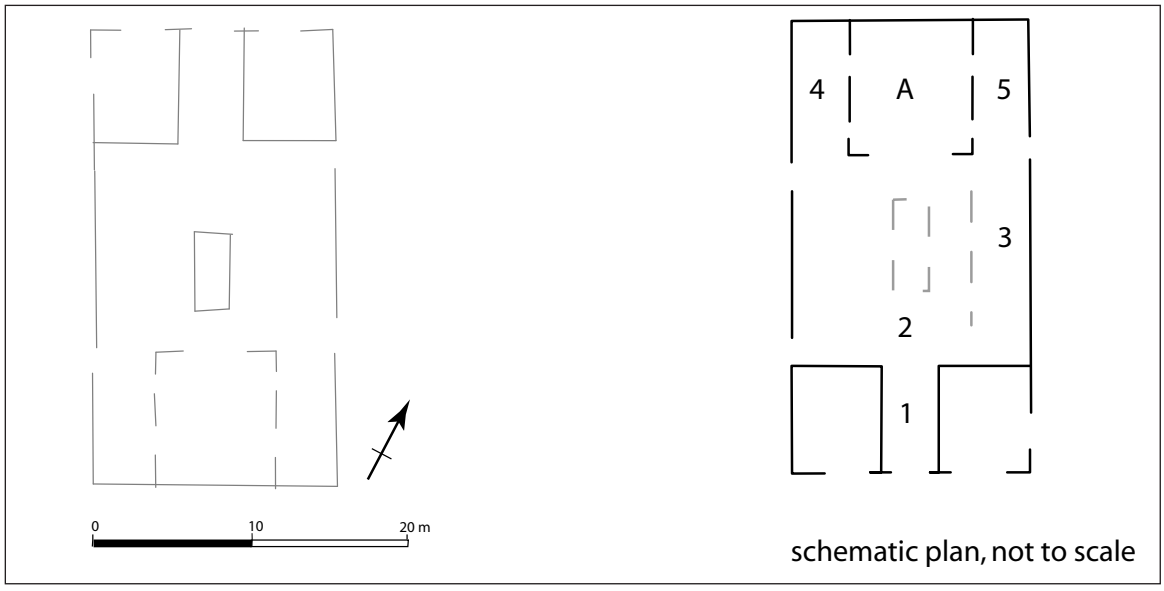


Fig. 8.10 – Caseggiato dei Lottatori (V ii 1)

55. Bollmann (1998: 312).
56. Mar (2001: 51, fig. 14).
57. Calza (1953: 236).
58. Hermansen (1982: 77).

The western part of the hall was separated from the remaining space by a number of pillars, creating a nave-like space all along the western wall (3). A secondary point of access is found on the Via della Casa del Pozzo, leading into the side hall west of the *tablinum*. On the eastern wall along the Via delle Ermette, are two further door openings. Being surrounded on three sides by streets, the building has access points to all of them, maximizing the potential of its location.

Fig. 8.11 – Caseggiato dei Lottatori (V iii 1) view from the main entrance into the atrium-style inner courtyard

8.3 SCHOLAE ARCHITECTURE – A READING FROM ACCESS MAPS AND SPATIAL VALUES

In order to reach beyond on what can be observed on site plans and through careful study of the structural remains, this study, once again, resorts to Space Syntax concepts and techniques. To gain a better understanding of the guild seats' underlying spatial organisation, access analysis will be applied. The basic principles of Space Syntax have been outlined in chapter three, while the analysis tools have been explained in chapter four, hence they do not require further comment. We should however emphasis once more why these techniques allow us to correlate between spatial and social form and provide us with powerful tools to think with. Grahame explains that the actual process of translating the spatial layout of buildings into access maps has two parts, on the one hand it transforms our understanding of built space by reducing the building's architectural layout to its basic relations; on the other hand it creates a system of spaces linked together into a continuous unit, where action in one part affects the rest of the system.[59] The resulting access graphs are both visual representation and a quantitative account of a spatial system.

Two analysis tools have been used for a configuration assessment of the guild buildings, access diagrams (j-graphs) and spatial values. The spatial values applied comprise two independent Space Syntax measures: control values and real relative asymmetry (RRA). These measures respond to the buildings' local and global spatial properties and help in assessing the potential of different building layouts for interaction between the different groups who used the building: the inhabitants (the guild's members) and those visiting the buildings. Hence, access data offer indications about those spaces potentially destined for interaction, and those which were more likely to have provided privacy. Ideally, the spatial values of various specific spaces typical of all *scholae* should be compared to investigate whether similar patterns emerge, or whether pattern variation can be detected. However, the small sample size does not support a strictly formal quantitative evaluation; still, valuable deductions have been made from a comparison between the different spaces present within each individual *schola*, as well as a comparison across the sample between selected spaces common to most *scholae*.

8.3.1 *Scholae* and spatial organisation: a spotlight on the Casa dei Triclini

The *Casa dei Triclini, I xii 1* (Fig. 8.12), appears like the textbook version of guild buildings, drawing on traditional *domus* architecture. Significantly it features four spaces of consistently high local and global interaction potential (3, 9, 8, 15). These are the spaces forming the porticoes designed to facilitate a flow of movement and casual encounter, providing

59. Grahame (2000: 33).

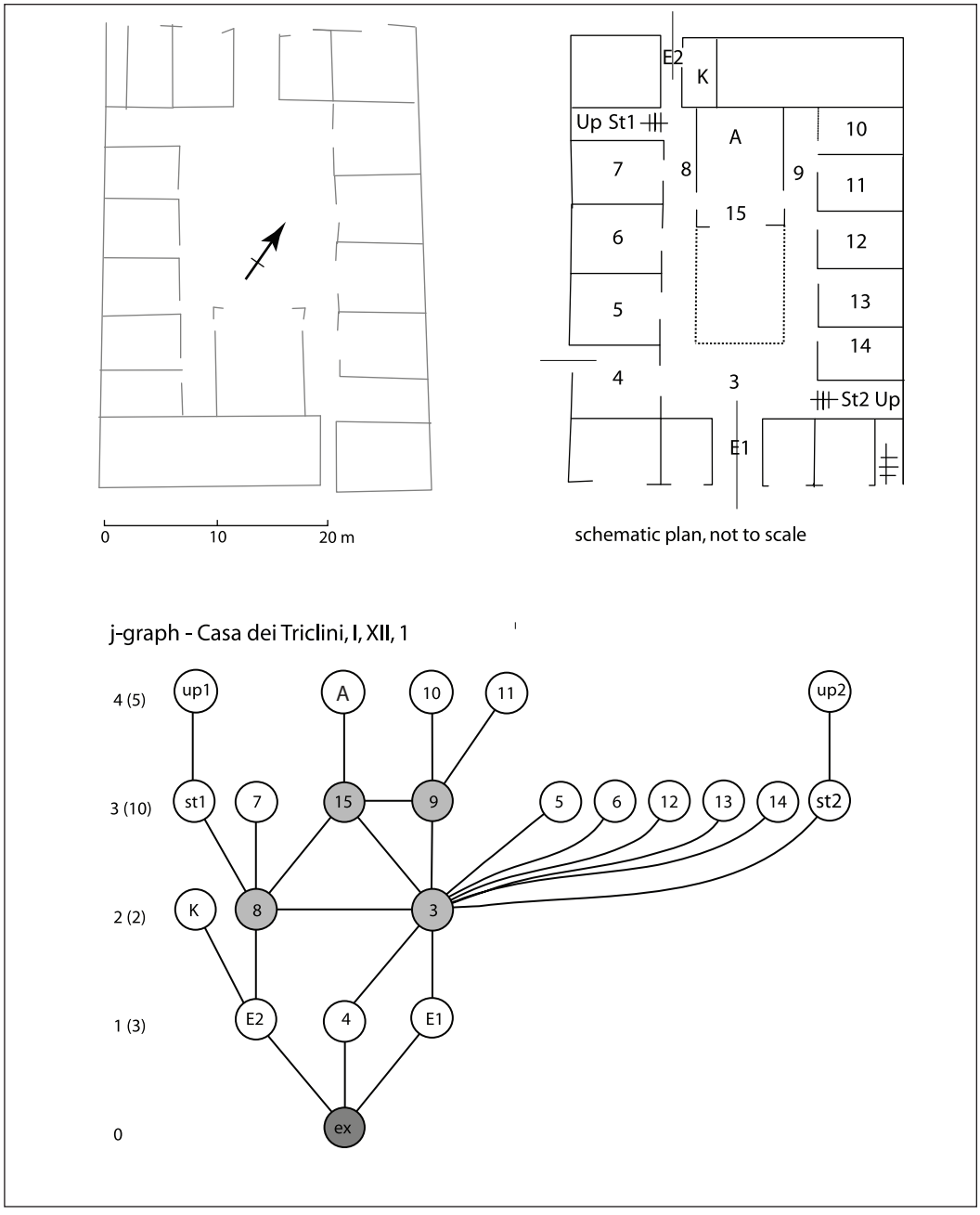


Fig. 8.12 – Casa dei Triclini (I xii 1) Access Analysis (corridor space 3 not strictly convex, extends to meet spaces 8 and 9)

the highest potential for presence availability. No space other than the porticoes had to be crossed to reach any room within the system. Furthermore none of the other rooms lined up along the porticoes were connected to any other room. Hence these rooms remained relatively segregated with moderate local and low global interaction potentials. The access diagram reflects a typical tree-like spatial structure (Fig. 8.8) branching out from centralizing spaces. In terms of their functionality such spatial configurations allow for a synchronous yet independent organisation of activities. Each room, possibly selected according to the degree of privacy required, could be used to hold smaller meetings, with none of the activities interfering with each other. This particular spatial formation seems well suited for any hierarchically structured organization where members have been divided into sub-groups, as it is evidenced by the collegium's album dated 198 AD (*CIL* XIV 4569), listing 331 members grouped into 16 *decuriae*.[60] One could think of many independent activities taking place within the *schola*, where the guild of the builders could wine and dine potential clients, negotiate contracts and carry out their devotional duties to the emperor and to their protective deities as well as enjoy the club-like atmosphere amongst members.

Complementary to its spatial origanisation, distinct material characteristics expressed in room size and choice of building materials augment the *schola*. Firstly, the foyer (3) offers the most generous spatial dimensions, providing ample room for encounter upon entering the building. Secondly, the choices of floor materials suggest a cautious structuring of space, creating a distinction between the rooms highly frequented as opposed to those less open to general use. The porticoed corridors, including the foyer (3), feature *opus spicatum* floors (terracotta tiles laid in herring bone pattern), a well-suited pavement for areas of high wear and tear. Here the choice of material underlines the intended dedication to intense use. *Opus spicatum* was also placed in all eastern rooms, later furnished with walled *triclinia*. In contrast, the rooms comprising the western range were paved with mosaic floors (Fig. 8.13) to further enhance the degree of privacy already maintained by their specific door arrangements (Fig. 8.14).

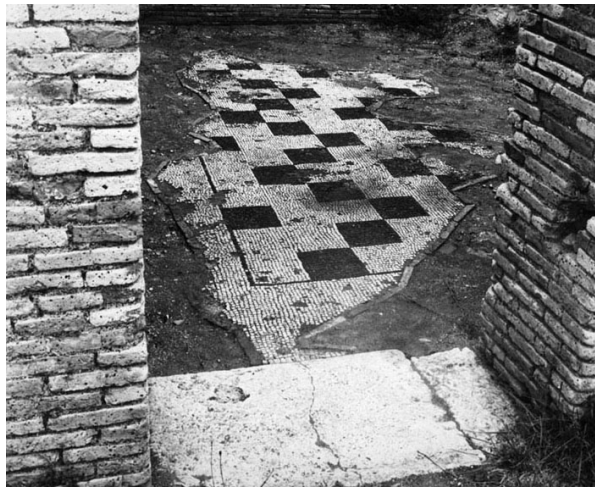


Fig. 8.13 – Casa dei Triclini: mosaic pavements in the western range of rooms (Fototeca Nazionale, scheda foto N15391)

Contrary to the coarse *opus spicatum*, the passage space (15) marking the transition zone between the inner courtyard and the cult room (A), was clearly set apart by the use of precious marble flooring. The white marble mosaic *tesserae* used within the inner courtyard space are more difficult to relate to a potential function of the space. It has been suggests that the inner courtyard served as meeting place for the entire congregation of guild members.[61] This seems to conflict with the choice of white mosaic flooring and the central water pipes. These materials imply an area dedicated to water catchment, ventilation and lighting. In fact, without any windows on the outer walls the central courtyard remains the only source of air and light. The reflecting quality of the white mosaic *tesserae* seems to enhance the latter function. The various floor materials used in the *Casa dei Triclini* have not been studied in depth; stratigraphic excavation data are lacking thus secure dates have not been established. Clearly some of the floor materials date to successive later phases, however, there is no reason to assume that these interventions reflect a change of use. They rather seem to provide evidence for continued use, during which consecutive

60. Bollmann (1998: 286, note 297); Egelhaaf-Gaiser (2002: 136).

61. Egelhaaf-Gaiser (2002: 136).

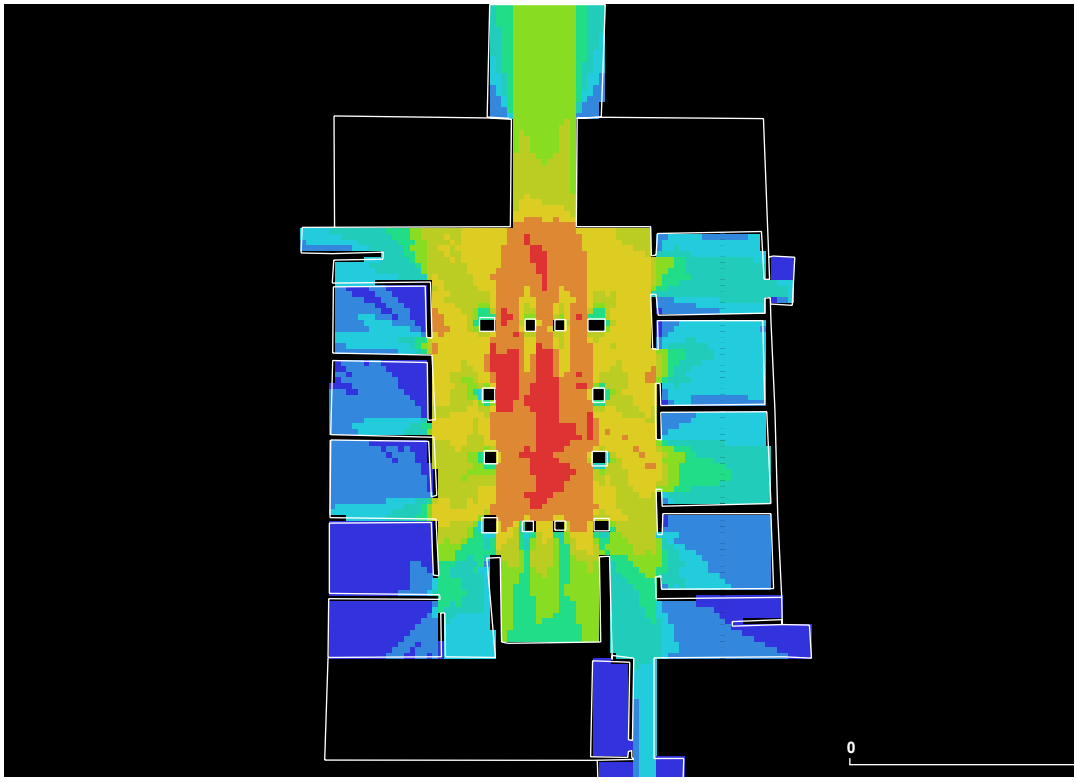


Fig. 8.14 – Casa dei Triclini (I xii 1) visibility graph analysis reveals structured visual access to the range of rooms arranged on the western and eastern side of the inner courtyard. Wide central doors on the eastern side allow for higher visual access, while the door arrangement at the western side prevent visibility and thus promotes more privacy (VGA, Depthmap, UCL).

changes emphasize the longevity of the *schola* and its activities as observable social practice.

Perhaps the fact that the guild of the builders selected *domus* architecture to establish their physical presence needs to be addressed briefly. As stated earlier, there is no evidence to ascertain that the building served as a guild seat before the Severan period. This does neither exclude that it could have been used as a guild seat earlier, nor does it exclude that it was purposely built as a guilt seat. It is equally possible that it was built as a private *domus* and was taken over by the guild at a later point. Notwithstanding these uncertainties, when the building was in use as a *schola*, it fully preserved and made use of its *domus* architecture. This brings to mind Wallace-Hadrill's definition of the *domus* as the 'power house' of the urban elite. In a similar way to the traditional *domus* owner, the guild of the *fabri tignuari* might have used the building to establish their claim to a position in society. By appropriating traditional *domus* architecture the guild could associate itself at least symbolically with the social system of patronage and clientele. This could be an interesting thought when considered within the context of Vitruvius' statements about the relationship between architect and patron.[62] Vitruvius is anxious to communicate that when it comes to private commissions the architect feels the need to avoid being put in the position of a social inferior, hence the patron will have to approach the architect, not the other way round.[63] The Casa dei Triclini

62. Vitruvius deliberates on the relationship between architect and patron in the preface to book 6 on private buildings; see Roland and Howe (1999: 75); see also Wallace-Hadrill (1994: 10).

63. Vitruvius writes (translation Roland and Howe (1999: 75-76) "…Other architects make the rounds and ask openly to work as architects, but my teachers passed on the tradition that one was asked to take on a responsibility, rather than

would certainly provide the ambience for socially adequate meetings between builders, architects and their prospective clients.

The *Aula e Tempio dei Mensores* (see schematic plan Fig. 8.15) also shows high presence availability for passage (2) and courtyard (1), as well as the outside space (ex). These high levels of local and global control imposed by the outside space are indicative of a shallow spatial structure linking almost half its spaces directly to the outside carrier. Unexpectedly, the so-called aula (A) only accounts for moderate global and local interaction potentials. Judging from appearance only, the aula's direct link to the street promotes it as the prime space destined for social encounter; still with only one further link to the courtyard (1) the aula remains relatively segregated within the overall arrangement. Equally surprising is the high degree of segregation that the temple (7) shows in comparison to the rest of the configuration. In order to access the temple from any space within the building, the outside space has to be crossed. In fact, it remains the only space that is not connected to the spatial system via a second entrance.

The stairs (6) leading up to the temple (7) physically emphasize this spatial phenomenon. These were literally pushed out into the road space, linking the temple clearly to the public domain. Calza considers temple and *schola* as built contemporaneously with the *Horrea dei Mensores*.[64] The spatial analysis seems to suggest a different pattern, where the temple appears independent of all other *schola* spaces. Surprisingly, this particular spatial arrangement has not received much attention. Egelhaaf-Gaiser sees in the unique way of placing temple and aula alongside each other an expression of competition between two "prestige" buildings.[65] She argues that the *aula* alludes to sacred architecture by means of its wide entrance and the use of columns and pillars. According to Egelhaaf-Gaiser, this signals to passers-by not only a connection between temple and aula but also invokes a comparison of quality between these buildings, whereby the temple emerges as the most important building, marked by its central position and stern rectangular layout. Although being the earliest *schola* of Ostia dating to 112 AD, this particular layout remains singular; no later Ostian *scholae* hitherto identified show similar configurations. Egelhaaf-Gaiser's interpretation, even though overtly concerned with making sense of this configuration, does not fully convince; most of all she does not account for the difference in height between courtyard and aula. It seems more plausible that we are dealing with a configuration that seemed to have developed piecemeal. In fact, Calza provides brick-stamp dates only for the party walls shared between *horrea* and *schola*.[66] An alternative explanation could be that the spatial phenomenon is rooted in earlier construction dates for the temple, around which the *schola* might have been arranged later, when the *horrea* were constructed. The temple's strict north-south alignment, its structural predominance and apparent inability to correspond to any other space might point to the temple's pre-existence.

Concerning the *Domus di Marte* (Fig. 8.15), the access diagram and spatial data identify the passage (1) and the central courtyard (2) as those spaces with consistency between local and global integration. Furthermore the exterior carrier (ex) engenders high presence availability. Space (3) remains relatively segregated with moderate local and low global control and would therefore provide for most privacy in relation to the other rooms. Similar to the *Aula e Tempio dei Mensores,* as many entrances as possible are present, with every room located along the street front having its own door to the outside space. Again this accounts for a shallow configuration, where the exterior space has high local and global integration potential: hence Hillier's shop model introduced earlier on, fits well as a spatial model for this *schola*.

Conversely, in the case of the *Domus accanto al Serapeo* (Fig. 8.11) the exterior carrier diverges

asking for it oneself. An honest person will blush from the shame of seeking something questionable, and it is those who grant a favor, not those who receive it, who are courted. For what are we to think about someone who is asked to make an expenditure from his patrimony for the gratification of a petitioner, other than that it is all to be done for the sake of the other man's profit and gain?"

64. Calza (1953: 125, 219, 235).

65. Egelhaaf-Gaiser (2002: 138-139).

66. Calza (1953: 219).

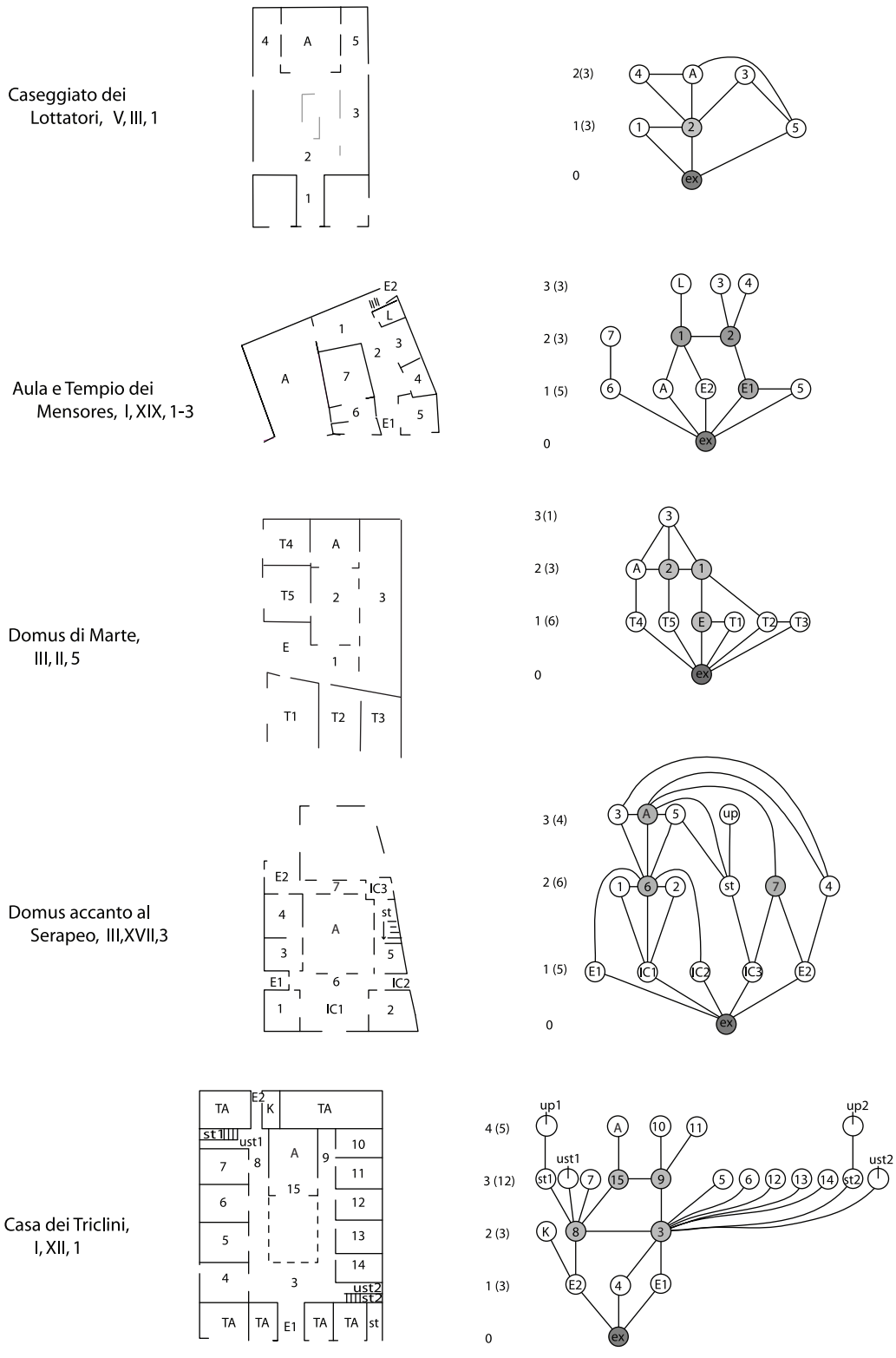


Fig. 8.15 – Schematic plans and access graphs for five Ostian *scholae*

from other *scholae* and is far more differentiated than the schematic plan and the resulting access map are capable to represent. Since the *domus* is part of a larger complex, the entrances IC1, IC2 and IC3 are interconnecting spaces linking *domus* and sanctuary. Only entrance E1 connects to the carrier space outside the complex. Access analysis does not distinguish between different qualities of exterior space; it recognizes only one boundary thus linking all entrances to one carrier space. The consistent spaces with high local and global interaction potentials within the configuration of the *Domus accanto al Serapeo* are the spaces (6) and (A), as well as the stairs (st). Furthermore the exterior space (ex) accounts for high presence availability. Space (A) the most central room of the plan controls six neighbouring spaces and has the second highest global interaction potential. According to its floor mosaics, room (A) was used as a *triclinium*, with the areas marking the reclining benches rendered in simpler mosaics than the visible area in the centre of the room (Fig. 8.6).[67]

This room does not offer any privacy; instead it is directly accessible from almost every room within the *domus*. Seclusion was certainly no planning consideration when this room was designed. Surprisingly, the most segregated rooms within the entire arrangement are rooms (1) and (2). As part of the *schola* configuration they appear tucked away behind entrance IC1, while they are only two topological steps away from the sanctuary. Potentially they could have fulfilled a pivotal role mediating between the sanctuary and the *domus*.

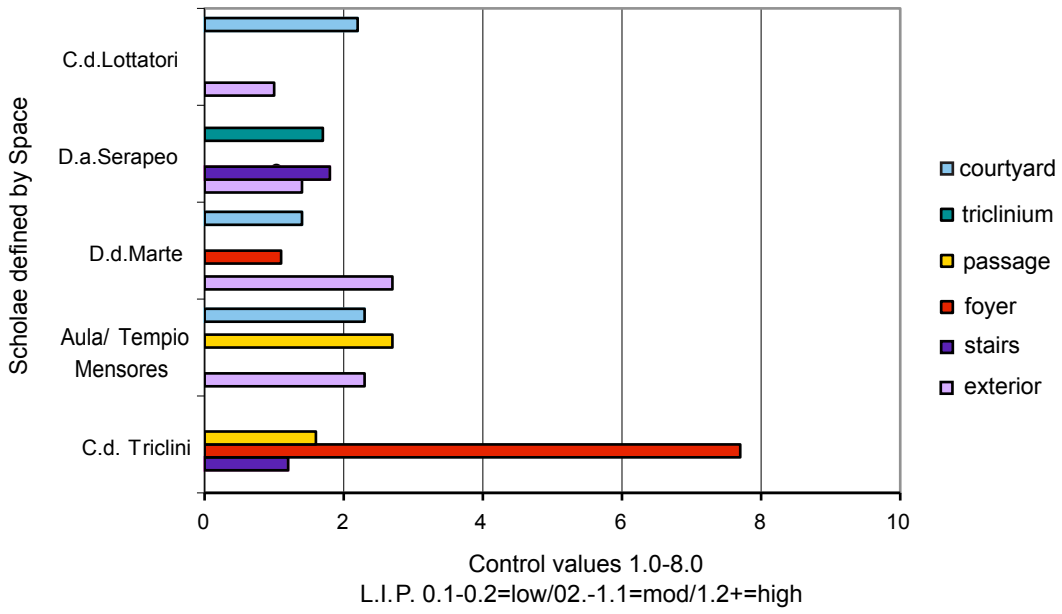
The *Caseggiato dei Lottatori* (Fig. 8.15) features only one space (2) with consistency between local and global control. All other spaces show moderate to low presence availability, including room (3), which could have served for banqueting. Similar to the *Domus di Marte*, also this *schola* has high levels of control attached to the outside space (ex). It is connected to the outside carrier by three entrances, relating to a high level of permeability while allowing for differentiated access to the building.

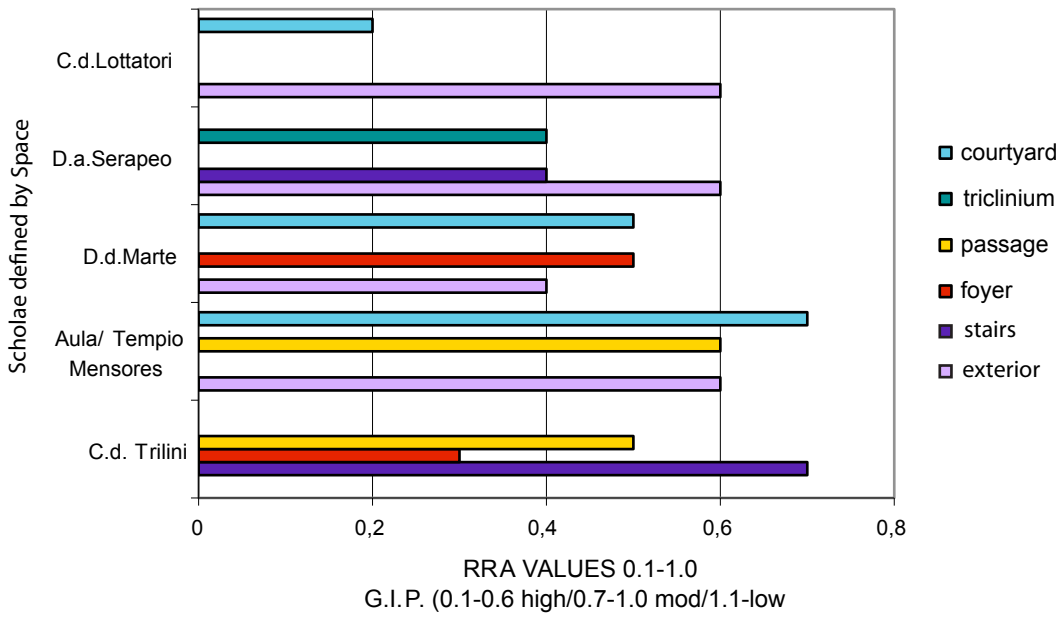
Name	Potential Function	Nr.	RRA*[1]	C.V. *[2]	Nb.*[3]	L.I.P. *[4]	G.I.P. *[5]	Pr. Av. *[6]
Casa dei Triclini	Foyer	3	0.27	7.7	11	high	high	high
I xii 1	Passage	15	0.46	1.55	4	high	high	high
	Portico	8	0.49	2.25	5	high	high	high
Aula e Tempio dei	Outside	ex	0.571	2.33	5	high	high	high
Mensores	Courtyard	1	0.701	2.25	4	high	high	high
I xix 1-3	Passage	2	0.631	2.66	4	high	high	high
Domus di Marte	Outside	ex	0.377	2.666	6	high	high	high
III ii 5	Courtyard	2	0.527	1.416	4	high	high	high
	Foyer	1	0.527	1.083	3	high	high	high
Domus accanto al	Stairs	st	0.382	1.83	4	high	high	high
Serapeo	Outside	ex	0.594	1.41	4	high	high	high
III xvii 3	Triclinium	A	0.382	1.712	6	high	high	high
Caseggiato dei	Courtyard	2	0.196	2.166	5	high	high	high
Lottatori	Outside	ex	0.588	1.033	3	mod	high	M/h
V iii 1	Undefined	5	0.588	1.166	3	high	mod	M/h

*[1] real relative asymmetry; *[2] control value; *[3] number of neighbours; *[4] local integration potential; *[5] global integration potential; *[6] presence availability

Table 8.2 – Access data for spaces with high local and global integration potential – high presence availability potential

67. Becatti (1961: 144).





Figs. 8.16 (top) and 8.17 (below): Correlation between spaces with high control values (C.V.) and low RRA values; the spaces selected show consistency between high local and global control potential

8.3.2 Correlation between Control Values and Real Relative Asymmetry (RRA)

By correlating the *scholae*'s controlling spaces, identified by control values in excess of 1, with those spaces with very low RRA values, interesting insights have been gained on those locales where most interaction took place. As DeLaine's study of Ostia's *medianum* houses has already shown, the area in which we would expect the highest consistency between local and global interaction potential might point to those spaces by which buildings are functionally defined.[68] Within the guild buildings these spaces are most notably movement related spaces, such as passages, foyers, courtyards and corridors, and above all the exterior carrier space, the city's street network (Table 8.2 and Figs. 8.16 - 8.17).

Access data reveal that four of the studied *scholae* attribute high local and high global integration potential to the outside carrier – hence their spatial structure is to a large extent defined by the exterior, the public street space.[69] These buildings take full advantage of their location by maximizing their street fronts and making their buildings as permeable as possible, thus promoting social encounter at the interface between *scholae* and public domain. Next to the exterior space, other spaces indicative of high presence availability might offer further insights into the buildings' attitude towards visitors and outsiders. In this regard it is interesting to note that despite their obvious outward direction, the *scholae* rarely link their internal spaces of high presence availability (courtyards, porticoes, passages etc.) directly to the outside. Instead, entrance corridors intercept between the outside and the internal spaces, keeping the building's internal movement at a flow and at the same time at least one topological step away from the public space. This seems to signify a slight tension between the internal system and the exterior, which required constant renegotiation with the public space.[70] This slight spatial incongruence present within *schola* architecture has been ascribed to their semi-public and ambivalent nature,[71] allowing visual access on the one hand and restricting physical access on the other.

Concrete examples of this somewhat conflicting spatial relationship can be observed in most guild buildings. The *Casa di Lottatori* provides an interesting deviation from this rule. From the main street, the so-called *Via della Fortuna Annonaria*, so as to keep up appearances, a well-pronounced central entrance corridor leads into the courtyard offering full visual access to the axially located *tablinum*-space at the other end of the building. At the same time the formal exclusivity of the main entrance appears to be negated by several secondary entrances directly connecting the *schola*'s courtyard to the back streets along the eastern and western side of the *schola.* Within the spatial configuration of the *schola*, the different entrances agree to structured access and might point to specific use relating to different groups of people accessing different parts of the *schola*. One possible explanation for these direct links between streets and central *schola* space (courtyard) could be the *collegium*'s property relations resulting in different responses between *schola* and street space. This would be in line with Hermansen's suggestion that the whole complex of buildings (V iii 1-5) between the Via della Casa del Pozzo and the Via delle Ermette belonged to one *collegium.*[72] Surely such a hold on a considerable part of urban space by a single group would influence the relative accessibility of certain urban areas, adding to segregation by bringing the back streets closer into the private sphere of the *collegium,* while the main street still makes for a public front.

68. Cf. DeLaine (2004: 158).

69.A further level of analysis, gauging the interior-exterior relationship has been included into the spatial assessment of the guild buildings: Hanson's difference factor to quantify the degree of configurational differentiation among a building's integration values (Hanson 1998: 32). Since the sample is not large enough, the difference factor did not seem to add a significant new dimension to the already calculated spatial values; see Stöger (2009: 108.6).

70. Hillier and Hanson (1984: 20).

71. Steuernagel (2005: 80).

72. Hermansen (1982: 114).

8.4 THE ROLE OF SPECIFIC ROOMS

Additional to the analysis of individual *scholae* configurations, a comparison between particular spaces common to all *scholae* should be informative in terms of their specific role related to *scholae* activities. One particular room, although present in slight variations, can be found in all *scholae* under discussion: a tablinum. This room is reminiscent of domestic architecture, where it held a prominent position opposite the building's main entrance, serving as the main reception room. The access data listed in Table 8.3 provide indication about the room's degree of accessibility from the exterior, as well as its integration within the *schola*. The *Casa dei Triclini* and the *Caseggiato di Lottatori* follow most closely traditional *domus* architecture, with both tablinum-style rooms characterised by moderate local and low global integration potential thus low to moderate presence availability. This allows for the possibility of segregation, which predestines these rooms for specific use, potentially of a cultic or ritual nature, reserving access to specific people. Then again, the *Domus accanto al Serapeo* and the *Domus di Marte* imply a centralising function for their variation of the tablinum-style room. These rooms privilege interaction between *collegia* members and visitors, while allowing the possibility of segregation in the surrounding rooms. The *aula* of the *schola* of the *mensores* remains singular; with moderate levels of global and local integration this space neither privileges interaction nor segregation, but might lend itself to multi-purpose use. Already this limited comparison of only five different *scholae* produces a more varied pattern of use than realised in previous descriptions of *scholae* spaces.[73]

As discussed above, access data (see Table 8.2 above) reveal that four of the studied *scholae* attribute high local and high global integration potential to the outside carrier space – this leads us to suggest that these buildings were to a large extent defined by their relationship with the exterior. By making their buildings as open as possible they strove to maximize their street fronts in order to take full advantage of their location. This brings us to questions on how well the guild buildings are integrated within the street network. But before matching the guild seats to Ostia's street network, perhaps the most straightforward aspect of the *scholae* under study, their overall size, needs to be briefly discussed.

Table 8.4 provides an overview of the total ground floor space and the extent of the street fronts of the *scholae* under discussion. As stated before, the small sample size does not allow for a strictly comparative approach or quantitative assessment, yet some observations can be made. As the numbers indicate, the extent of street fronts does not simply increase in proportion to the overall plot size; instead it reflects the inherent land divisions, and above all situational responses to the specific setting of the guild buildings, as the corner position of the *Domus di Marte* demonstrates.

Name	Reference	Nr.	RRA*[1]	C.V. *[2]	Nb.*[3]	L.I.P. *[4]	G.I.P. *[5]	Pr. Av. *[6]
C. dei Triclini	I, xii, 1	A	0.91	0.25	1	mod	low	mod/low
Aula e Tempio dei Mensores	I, xix, 1-3	A	0.96	0.53	2	mod	mod	mod
Domus di Marte	III, ii, 5	A	0.75	1.08	3	high	mod	High/mod/
Domus accanto al Serapeo	III, xvii, 3	A	0.38	1.71	6	high	high	high
Caseggiato d. Lottatori	V, iii, 1	A	0.78	0.53	3	mod	low	mod/low
*[1] real relative asymmetry; *[2] control value; *[3] number of neighbouring spaces; *[4] local integration potential; *[5] global integration potential; *[6] presence availability								

Table 8.3 – Access data for the *tablinum*-type space

73. Steuernagel (2005).

Guild Buildings	Street front on major roads in metres	Ground floor area in sq m	*Tabernae* in total, and on major roads in sq m
Casa dei Triclini, I xii 1	28.3	1,239.00	275.00 / 159.00[b]
A/Temp. Mens, I xix 1-3	24.8	540.70	30.10
Domus di Marte, III ii 5	37.7[a]	356.00	145.00
D.ac.al Serapeo, III xvii 3	-	407.60	-
Cas. dei Lottatori, V iii 1	15.9	455.80	67.40

Unit size calculations are based on a digital map of Ostia, scaled and rectified; all calculations made in MapInfo

[a] Total 37.7 m divided into 14.2 m on the western *decumanus* and 23.5 m on the *Cardo degli Aurighi*

[b] Total of *tabernae* space 275.00 sq m; 159.00 sq m of *tabernae* are located along the eastern *decumanus*/ *forum*

Table 8.4 – Overall size of ground plan space, including *tabernae*

Scholae dedicate their street fronts largely to *tabernae* (commercial outlets like shops and bars). The table lists the unit sizes inclusive of *tabernae* as far as they are part of the bounded space of the *scholae*, even if these are not accessed directly from within the *schola*. Wherever *tabernae* remain strictly independent of the internal *scholae* spaces, these were not included in the Space Syntax analysis when access values were calculated. Nevertheless, in terms of the total overall size of the unit, these independent *tabernae* constitute a considerable part, therefore they should help to throw light on how *scholae* relate to the street space in general. Again, the numbers in Table 8.4 show that there is no proportional relationship between the total unit size and the area covered by *tabernae*. Instead, the presence or absence of *tabernae* reflects a direct response to how well the street is integrated on which the *scholae* are located. In other words, guild buildings do not seem inclined to dedicate space to *tabernae*, unless these can be located along busy streets. Similar to any movement seeking business, the *collegia* studied tend to locate those spaces destined for transactions along the most accessible roads, while back roads are less likely to be attractive locations for *tabernae*.

8.5 THE GUILDS AND THE MOVEMENT ECONOMY OF OSTIA

Ostia's guilds and the location of their buildings are well-documented in Ostian studies.[74] The citywide distribution pattern of the guild buildings makes it apparent that there was no clustering (see Fig. 8.1). This might have been expected from the comparable functions these buildings fulfill. One only needs to think of today's banking districts, where functionally similar buildings are clustered to reinforce each other in an additive way, while single landmarks are likely to be weak references by themselves.[75] Their preferred location along Ostia's major thoroughfares and access roads has been interpreted as alluding to status and striving for association with the public buildings of the *forum* area.[76] Following Lynch's concept of place legibility, the image strength of a building rises when it coincides with a concentration of associations. Hence creating public associations could have been a powerful motif for several *collegia*, successfully put into effect by those *scholae* seeking the vicinity of the *forum.* Still, the location of choice might have been moderated by the realities of available urban space, as well as the guild's financial standing. In other cases the locality of certain guild seats appears dictated by proximity

74. Meiggs (1973: 324-7); Hermansen (1983); Zanker (1992: 273); Bollmann (1998); Steuernagel (2005: 79).
75. Lynch (1960).
76. Bollmann (1998: 195-199).

to their professional field, e.g. *Aula e Tempio dei Mensores,* located next to storage facilities possibly used to store grain. Others again opted for closeness to their particular temple of worship, e.g. *Domus accanto al Serapeo*.

Despite their broad distribution within the city, certain areas were almost devoid of *scholae,* in particular those located north of the *decumanus,*[77] where disintegration into smaller plot-size was apparently prevented by the prevailing large-scale development consisting of public buildings and warehouses. In fact, those few *scholae* found north of the *decumanus* and its continuation the Via della Foce, never reached the depth of the urban plot that conventionally characterizes the *domus.*[78] Instead their layout is shallow, often not extending further into the *insulae* than the front row of *tabernae* would permit (e.g. *Aula e Tempio dei Mensores and Mitreo Sacello*, close to the Porta Romana). A different picture is presented by those *scholae* located south of the *decumanus*. Here they appear to conform to the ideal of the plot size laid down by the original property divisions, when the land outside Ostia's *castrum* was divided into fairly regular land parcels.[79] In exceptional cases, property parcels could be joined back to back and alongside each other, allowing the creation of large *scholae* like the *schola del Traiano*, along the western *decumanus.* This in itself is an unconcealed statement of good financial standing. Similar assumptions can be made for other *scholae* which managed to secure a prime location along Ostia's major access routes. Since accessibility within the city's street network seemed to have been a decisive factor for the location of *scholae*, Space Syntax might add some insights beyond the generally held attractor functions attributed to the *forum* and the major access roads, even more so when these spatial characteristics give the impression of being self-evident and obvious.

To take these observations a little further, the result of the full analysis of the street network presented in chapter seven, has to be taken in consideration. From the street configuration analysed, the main access roads, the eastern and western *decumanus*, as well as the *Via della Foce,* leading from the *forum* to the river harbour, clearly emerged as the most integrated streets, serving the east-west/west-east movement within the city (see Fig. 7.8 above). These results are confirmed by the preliminary analysis of the complete street network; using 476 street-units (see Fig. 7.9 above). The extended Ostia street system confirms the eastern and western *decumanus* as the most integrated streets.

Value	Integration	Selection				
	all streets (n=150)	Decumanus/ Forum	Via della Foce	Decumanus (west)	Via del Serapide	Via Fortuna Annonaria
		Casa dei Triclini	*Aula e Tempio dei Mensores*	*Domus di Marte*	*Domus accanto al Serapeo*	*Caseggiato dei Lottatori*
Average	1.42907	2.98062	2.44057	2.46635	1.6894	1.4324
Minimum	0.8107	2.98062	2.44057	2.46635	1.6894	1.4324
Maximum	2.98062	2.98062	2.44057	2.46635	1.6894	1.4324
Stand. D.	0.374281	0	0	0	0	0
Count	150	1	1	1	1	1

Table 8.5 – Global integration values for all streets [n-150] (2nd column) within the excavated areas only; selections of streets where guild buildings were located. These streets show integration values higher than average

77. Bollmann (1998: 196).
78. See Mar (1991) on land division in Ostia during the Republican period.
79. Mar (1991).

Value	Integration	Selection				
	all streets (n=467)	Decumanus/ Forum	Via della Foce	Decumanus (west)	Via del Serapide	Via Fortuna Annonaria
		Casa dei Triclini	*Aula e Tempio dei Mensores*	*Domus di Marte*	*Domus accanto al Serapeo*	*Caseggiato dei Lottatori*
Average	1.01881	1.84646	1.63297	1.67106	1.12384	1.24956
Minimum	0.532099	1.84646	1.63297	1.67106	1.12384	1.24956
Maximum	1.84646	1.84646	1.63297	1.67106	1.12384	1.24956
Stand. D.	0.227051	0	0	0	0	0
Count	467	1	1	1	1	1

Table 8.6 – Global integration values for all streets [n-467] (2nd column) including the unexcavated areas; selections of streets where guild buildings have been located. These streets show integration values higher than average

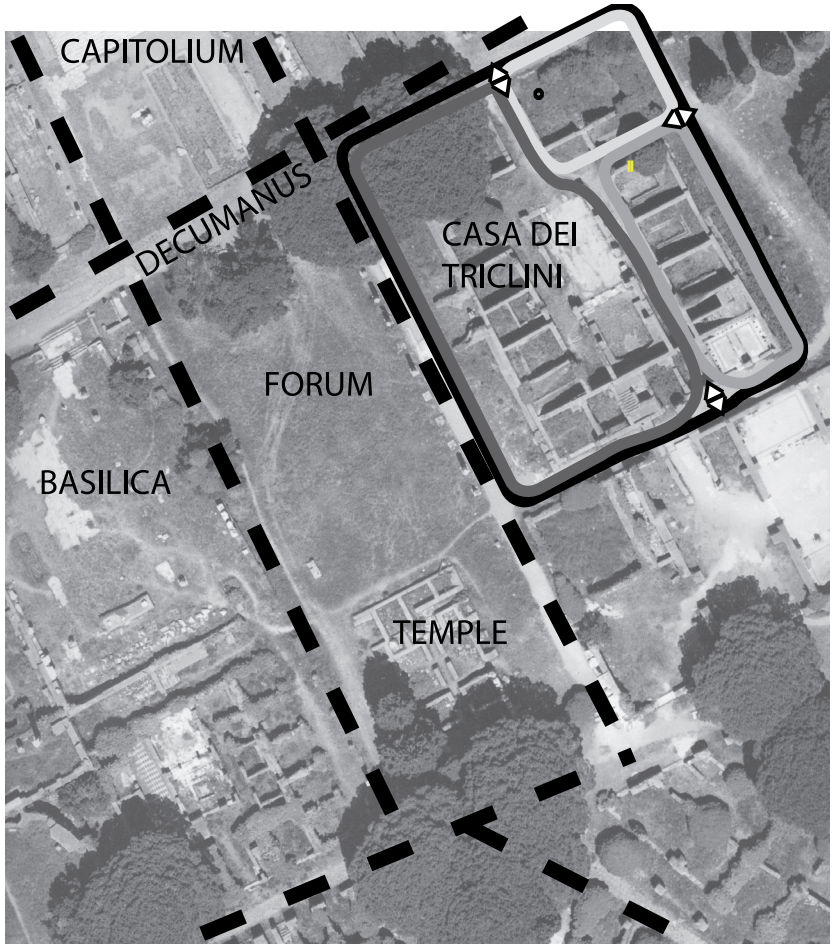


Fig. 8.18 - The Casa dei Triclini and its external circulations space

The most integrated streets emerge as the ones on which the guilds chose to locate their buildings (Tables 8.5 and 8.6). While some guild buildings are situated along less integrated streets, still they are never more than two streets away from the main road. In this sense the guilds prove to be movement seeking, some more than others. Foremost is the *Casa dei Triclini*, the guild seat of the builders, the *fabri tignuari*. This *schola* is located along the eastern *decumanus* in close proximity to the *forum*. It is fully embedded into the public space of the wider *forum* area; and, through the way the building's entrances have been structured, actively incorporates large portions of public space within its own external circulation space (Fig. 8.18). Again, other guild buildings enjoy corner locations at the intersections between main and side streets (e.g. *Domus di Marte*). This brings to mind Hillier and Hanson's traditional corner shop model,[80] which exploits the basic potential of its location and adapts its structure to maximize chance encounter at the interface with public space. Apart from the traditional corner-shop model, to which some of Ostia's *scholae* seem to conform, there are also cognitive reasons for such choice locations: pedestrians are known to heighten attention at corners; there, decisions are prompted about which direction to take, thus associations are likely made with buildings at corners.[81]

8.6 CONCLUSIONS

The spatial assessment of Ostia's guild buildings, using Space Syntax methods, has allowed us to examine the guild buildings at the micro-scale of the individual buildings and their specific location, as well as at the scale of the entire town plan, through their distribution along Ostia's streets. The two scales of assessment and their results have to be considered together since they represent interdependent spatial factors which inevitably influence each other. Firstly, the study of the spatial logic of the individual ground plans (access analysis) of the *scholae* was able to capture the spatial organisation of the buildings and recognise them as largely defined by the outside space, the public domain of Ostia's streets. Their outward focus seems to suggest that the guild buildings had a high potential for promoting contact and communication at the interface with public space. Secondly, from the assessment of the overall size of the buildings and the way they related to their local settings, several key observations were made. It emerged that the buildings strove to exploit their street fronts to the best effect and utilized them in response to their specific location. This affected the way the buildings structured their entrances and defined those street fronts best suited for the location of the *tabernae,* which were integrated into the guild buildings. Such *tabernae* were preferably placed along busy main streets and well-integrated side-streets, responding to peak pedestrian flows ('movement-seeking' behaviour). Thirdly, the guild buildings' pronounced outward orientation is complemented by their location of choice: the guilds preferred to locate their buildings along the most easily accessible ('integrated') streets within Ostia's street network. Their exposed location not only gave the guild buildings a high public profile, but also enhanced their capacity to benefit from the concentration of movement that occurred along the main streets. While some *scholae* are found on side-street locations, these are still well integrated streets when considered within the whole system and at the same time always in close proximity to the main streets. Street corners seemed desired locations for guild buildings; movement seeking as well as cognitive factors seem to account for these patterns.

One of the stated intentions of the analyses presented here was to test whether the concept of the movement economy could offer a suitable model for the explanation of the citywide distribution of guild seats in Ostia. This proved to be even more challenging since some of the *scholae*'s spatial characteristics give the impression of being readily apparent, and this implies that they can be understood intuitively, as would be suggested by the guild buildings' preferred location along the main streets (the eastern and western *decumanus* and the *Via della Foce*). Furthermore these patterns of distribution seem to confirm already established principles of Roman spatial organisation. Other Roman cities like

80. Hillier and Hanson (1984: 176-177).
81. Lynch (1960).

Pompeii and Empúries[82] show similar concentrations of movement-seeking land-use (commercial, public and religious) located along streets that are easily accessible from outside and inside the city. For Pompeii factors such as ambulatory traffic and the forces of economic rationality have long been identified as accounting for distribution patterns of retail outlets in areas of greatest social activity.[83] When taking a critical stance one might rightly ask what makes Ostia and its guild buildings different; or more to the point what can a Space Syntax analysis of these selected buildings and their settings add to our understanding of the spatial organisation of the Roman city that we do not already know?

The approach offered here adds a different theoretical perspective to the current discussion on the spatial organisation of Roman towns, and above all it produces the statistical values to place these spatial nexuses on solid impartial grounds. The movement from intuition to testable theory is justified through the importance of recognising the fundamental relationship between the urban grid structure (Ostia's street system) and human movement, as defined by the principles of the movement economy.[84] This allows a broader understanding of movement, away from attractor-driven and purposive directed movement with their emphasis on direction and location. In fact, when we look at cities as movement economies, our attention shifts to the so-called movement by-product that occurs along the passage between origin and destination, from more or less everywhere to everywhere within the city. By definition, such approaches take account of the city's whole street system or large portions of it. This not only has implications for alternative, existing theories of the city, but will essentially determine the method of analysis. Hence, the decisive strategy emerges from the Space Syntax analysis of Ostia's total street system, creating integration values for each street to all other streets; based on this, the most integrated streets have been identified as the ones which would have encouraged the greatest amount of circulation. However, to attain unbiased explanatory strength, it is crucial that the analysis of the street network is carried out completely independent of any specific land-use attached to a street. In the study of Ostia's streets and their buildings we must prioritise purely spatial measures, in this case through calculating the significance of each street within the hierarchical access network of the entire city street system. Once the relative integration of each street has been established, the next step is the evaluation of its associated land-use. At this point we can objectively match the guild buildings to the movement value of their associated streets.[85] In other words, the presence of the guild buildings can in itself attract people, but it cannot counteract the influence of the street's relative position in defining high and low flows of people. In this way we avoid the circularity of explaining the position of a building by describing its specific location in the city without further underlying explanation.

Within the framework of Ostia as a movement economy the following scenario can be presented concerning guild buildings. Placed along the most integrated streets the *scholae* were easily accessible to people directly aiming for them; hence these buildings attracted direct purposive movement. However by virtue of their highly advantageous location within the urban grid, the guilds benefited from intense general circulation, which included accidental interactions between people heading for different destinations. In this way the guild buildings contributed to the 'urban buzz' that occurs where a larger number of different activities coincide, involving people going about their business in different ways, but still prioritizing the same space.[86] Ostia's *decumanus* and the immediately adjacent streets would have been such an area of 'urban buzz', where movement was channelled and activities converged.

Clearly, Space Syntax tools have helped us to identify spatial configurations which would not have been visible to merely qualitative or intuitive scanning of street plans. However, having answered one set

82. Cf. Raper (1977); see Laurence (2007), Kaiser (2000), and Ellis (2004).
83. Ellis (2004).
84. Hillier (1996a; 1996b; 2007).
85. Cf. Kaiser (2000: 48-56) for selected Space Syntax approaches applied to Roman Empúries, Spain.
86. Hillier (1996a: 53).

of questions cannot distract from the fact that this spatial enquiry left many questions unanswered and raised a number of new ones. These unanswered and new questions encourage future research and allow us to develop new research directions. A new round of analysis should certainly take into account a larger sample size, possibly including all identified types of guild seats, to test whether the pattern identified by this analysis would be strengthened or require some different interpretation. The analysis of the guild buildings would also benefit from a comparative analysis of buildings with pure domestic use. This would allow us to examine how the scholae's access diagram's and spatial values relate to graphs of domestic buildings, and would help to explore further why the guild buildings show such different patterns of access.