

CHAPTER TWENTY-NINE

SHOPS AND INDUSTRIES

—♦—
Felix Pison

INTRODUCTION

A s first-time visitors walk through the ruins of Pompeii and Herculaneum, they are struck by the large number of shops, workshops and taverns, distinguished from the entrances of dwellings by their wide store fronts (Figure 29.1). Particularly on the busy main roads, it is easy to get the impression that the street fronts of the buildings consist almost entirely of small business establishments, which I will designate by the Latin term *tabernae*. In antiquity, *tabernae* described not only taverns or pubs, but also artisans' workshops, stores or simple dwellings (cf. DeFelice, Ch. 30).

It is clear that *tabernae* were not exclusively business concerns, but that they were also occupied. In the cities under Vesuvius, most shops had an upper story as well as back and side rooms that could be used by the shopkeeper as dwellings. Particularly in Pompeii, many *tabernae* and even larger factories have been documented inside domestic houses or within empty lots in less densely populated parts of town. The archaeological record gives us a great deal of information, not only about diversity in commerce and the processes of production, but also about the economic strategies of the inhabitants. The incorporation of a majority of *tabernae* into private houses and public buildings demonstrates the intensive exploitation of real estate. At the same time, it provides a glimpse of the social organization of small businesses. The third section of this chapter focusses on the latter two aspects. The first section gives a brief overview of the different kinds of businesses represented in the cities under Vesuvius, and the second section explores the dynamics of living and working in *tabernae*.

A DIVERSE BUSINESS ENVIRONMENT

The excavations at Pompeii and Herculaneum have brought to light evidence of a variety of branches of industry. Inscriptions, *dipinti* and *grafitti* mention various jobs performed at Pompeii and Herculaneum. Wall paintings and shop signs illustrate scenes of manufacturing and sales.¹ The most important sources of information, however, are the shops themselves, which have been preserved in great numbers, particularly in Pompeii.²

Sohn Dolhins, Adlan Foss (eds)
The World of Pompeii
London: Routledge 2005)

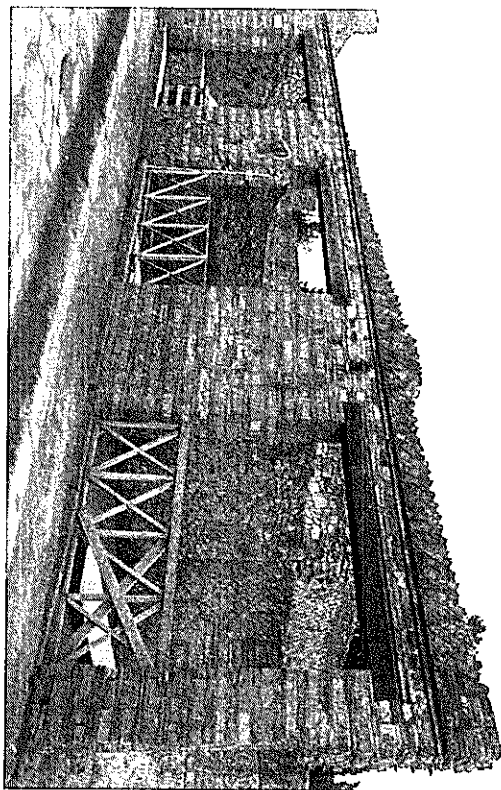


Figure 29.1 Pompeii. *Taberna* II.1.4-6 from the northwest.

The goods manufactured and sold there were intended primarily to meet the demands of the local market, namely Pompeii and its environs (cf. Jongman, Ch. 32; Moormann, Ch. 28).³ Of course, it cannot be ruled out that certain products were also exported.⁴ Likewise, both local and imported goods found a ready market in Pompeii and its surrounding area. The situation was probably similar in Herculaneum, where we are much less well informed about the business environment.⁵ For instance, we do not yet have evidence there for large-scale manufacturing similar to the textile industry at Pompeii. This may be due to the lack of an extensive agricultural hinterland that would have provided raw materials and a market.

The manufacture of goods took place in special workshops located in *tabernae* or in converted domestic houses. We also find evidence of workshop activity in normal dwellings. This is particularly true of weaving and baking, which mainly served the needs of the occupants. There is evidence, however, that some houses produced more than what was necessary to meet immediate needs. The large kitchen (22) of the House of the Postumii (VIII.4.4, 49) contains not only a stove, latrine, fireplace and worktable, but also one small and two large basins (Figure 29.2). A fourth basin in the peristyle colonnade is connected to the kitchen via an opening. The large number of basins increases the likelihood that the kitchen was used for productive activities beyond the needs of the household itself. The kind of production is hard to establish, but it is particularly remarkable that the existence of the basins can be traced back archaeologically to the time before the earthquake of AD 63, which hitherto has been regarded as the starting point for the introduction of production-frittings into private houses (confirmed also in Region VI.1; cf. Jones and Robinson, Ch. 25).⁶ Finally,

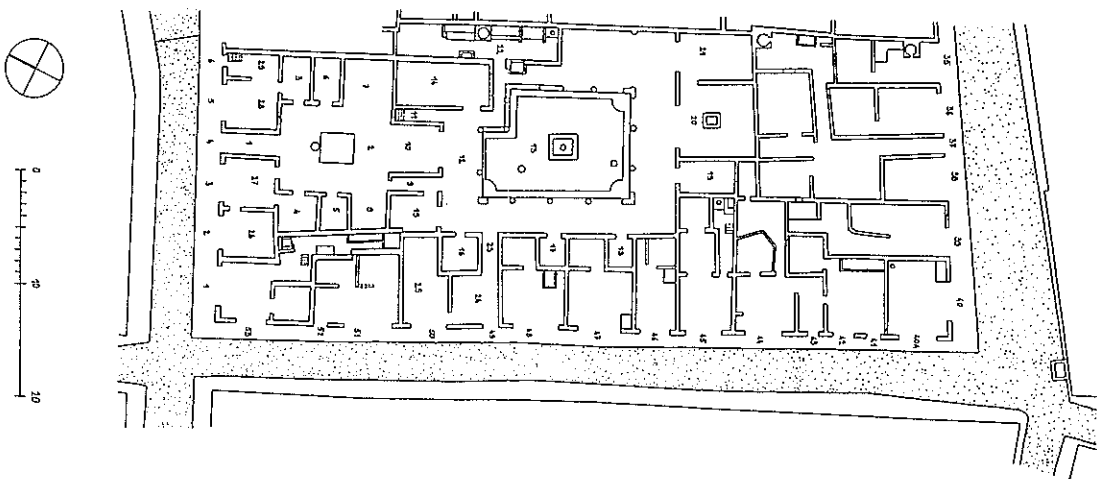


Figure 29.2 Pompeii. Western third of *insula* VIII.4 showing the House of the Postumii (VIII.4.4, 49); C. Bratscheuer, after J.-A. Dickmann and F. Pirson, "Repräsentatives Wohnen," modified from the RICA Pompeii—*insula* I.500 maps from H. B. Van der Pool (ed.), *Coryna Topographicum Pompeianum* Rome 1977–86, 5 vols, with the authorization of L. García y García.

observations from the House of the Posnunii make clear that (commercial) production could even happen inside or close to the reception areas⁷ of a luxurious private dwelling—a rather unusual solution, which points to the importance of economic factors in the layout of domestic housing.

Textile workshops and bakeries are especially prominent among the known commercial establishments in Pompeii, because of their numbers, their identifiable facilities, and their preservation.⁸ Because of their evident importance in the economic life of the city, these two industries are discussed first, and in greater depth.

Bakeries

The functioning of a Pompeian bakery can be explained particularly well on the basis of *pinnum* (VI.3.3, 27–28), which was uncovered at the beginning of the nineteenth century (Figure 29.3a).⁹ The bakery is located in the rear part of the domicile. It is

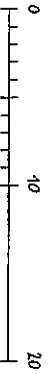
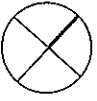
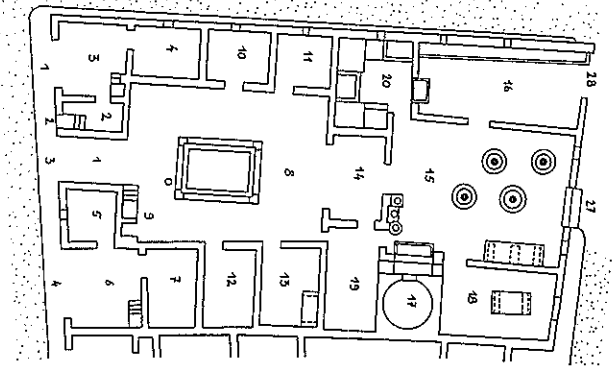


Figure 29.3a Pompeii: House of the Oven (VI.3.3, 27–28); C. Brückener, after Van der Poel, *CTP*, vol. III.1; Overbeck and Mau, *Pompeji in seinen Gebäuden*, Figure 189.

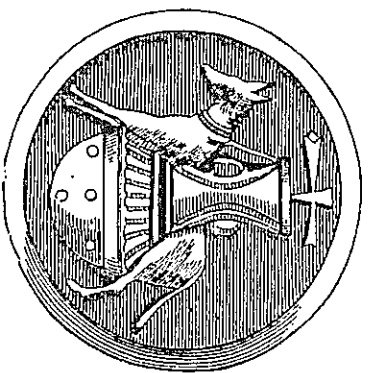


Figure 29.3b Shop sign from Pompeii; Overbeck and Mau, *Pompeji in seinen Gebäuden*, Figure 186.

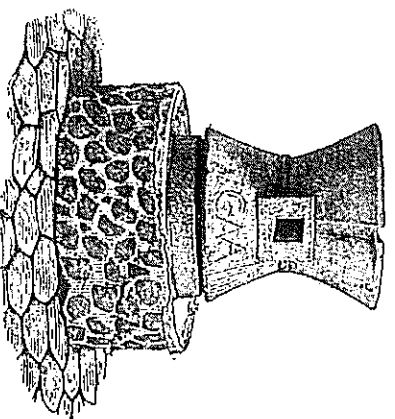


Figure 29.3c Mill from Pompeii; Mau, *Pompeji*, Abb. 237.

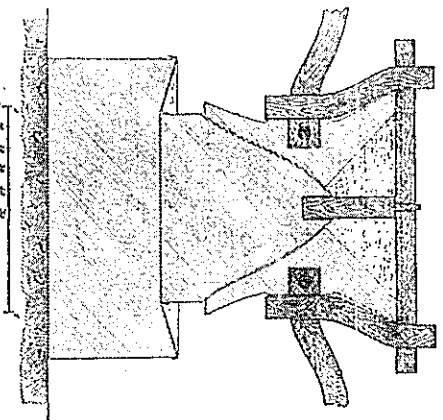


Figure 29.3d Mill from Pompeii, restored cross-section; Mau, *Pompeji*, Abb. 238.

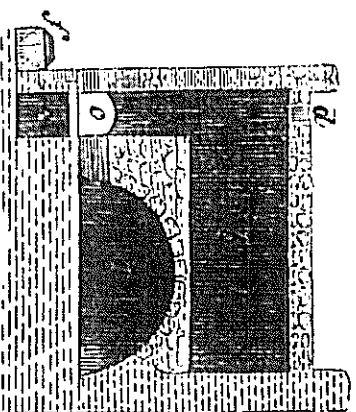


Figure 29.3e Oven in the House of the Oven (VI.3.27–28), cross-section; Mau, *Pompeji*, Abb. 240.

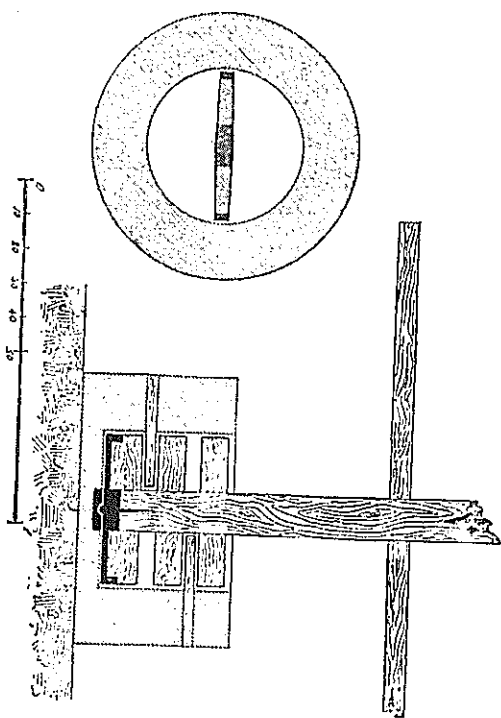


Figure 29.3f Kneading machine: plan and cross-section from bakery at the rear of the House of Laocoon (VI.14.30-32, large room south of the oven); Mau, *Pompeii*, Abb. 241.

not connected to a shop, but has its own entrance to the street, which was used for the movement of goods in and out. The center of the establishment is mill room (15), which has four millstones. This combination of bakery and mill is fairly common in the Vesuvian cities. The four millstones are arranged so as to make the best possible use of space. The floor is paved, indicating the use of mules or donkeys to turn the mills, as depicted on a shop sign from Pompeii (Figure 29.3b). The millstones are made of the usual basalt lava.¹⁶ They consist of a conical *meta* on top of which sits the *catillus* in the shape of a double hollow cone (hourglass) (Figures 29.3c-d). Grain is poured into the upper funnel of the *catillus* and is then ground between the two stones. They are turned by means of two shafts inserted into the *catillus* and attached freely. For this purpose, there was a point on the tip of the *meta* for the positioning of a wooden structure which suspended the *catillus*. Milled grain then fell into a groove carved into the substructure of the mill.

The oven (17) of the bakery is located in its own baking room (Figure 29.3e). Smoke escapes through openings in the ceiling (d). The bakery is connected to adjacent rooms by two hatches: loaves of bread are shaped on a large table in room (18), while finished goods are stored in room (19). Stall (16), where animals are housed, is located on the opposite side of the mill courtyard. In several bakeries there was even found a special machine for kneading dough, which was wound around by a horizontal iron shaft at the bottom of the stone basin and then pressed through the spaces between fixed wooden slats reaching out from the sides of the basin and revolving arms on the central axis of the contraption (Figure 29.3f).

It is worth considering the distribution of *pistrina* inside Pompeii.¹¹ Bakeries are distributed in a more regular fashion throughout the city than other shops, in accordance with their importance as public utilities. However, concentrations of *pistrina* can be observed in several places. Those bakeries that are attached to mills are located for the most part along the main thoroughfares in the northern half of the city, along the via Consolare, via di Nola and strada Stabiana (Maps 2 and 3). The proximity of the northern part of the city to the agricultural hinterland whence the grain was delivered may explain this phenomenon. Several bakeries without mills but with shops are located in the so-called *Atriate* (see Figure 7.1), where there was sure to be great demand because of its central location and population density.

The textile industry

The textile industry also played an important role in the economic life of Pompeii.¹² A controversial question—whether the large number of textile mills can be explained solely by the pressures of local demands, or whether Pompeii was a regional center of wool processing—cannot be discussed here. Instead, we are interested in the workshops themselves. Theoretically we can distinguish five types, although the archaeological record often does not allow a clear differentiation between the different types.¹³ Raw wool was washed and combed in the *officina lanificaria*, and then dyed in the *officina tinctoria*. Spinning and weaving took place in the *textoria*. Wool was felted in the *officina coactilaria*. The *fullonicae* were fullers' establishments where the finishing of woollen clothes took place, but which also took on the functions of a laundry service.¹⁴

Despite a great number of shops and the strong presence of textile workers in voting inscriptions, the distribution of work among different small workshops and their concentration in different areas of the city does not support the hypothesis for an organized textile industry (cf. Jongman, Ch. 32).¹⁵ The *offinae lanificariae* are concentrated to the east of the forum in the *Atriate*, which was a center of small-scale industry in Pompeii.¹⁶ On the other hand, *fullonicae* are distributed throughout the city, which may have something to do with their role as laundries, service establishments that would need to be represented throughout the city. Like most businesses, they seek the proximity of major thoroughfares, e.g. the strada Stabiana, via di Nola and via dell'Abbondanza. They are not represented in the interior *insulae* of Regions VI and VIII, which mainly consist of domestic dwellings; the powerful odors produced by fullers may be to blame. The distribution of *offinae tinctoriae* corresponds approximately to that of *fullonicae*.¹⁷

Fullonica (VI.8.2, 20-21) exemplifies the arrangement and furnishing of a Pompeian fullers' establishment. The house in which it is located was once a dwelling. It is the largest fullery excavated in Pompeii thus far (Figure 29.4a).¹⁸ Well-known depictions of a textile press and *fullonica* work scenes were found on the southeast corner post of the inner courtyard. They give us important information about the production sequence (Figures 29.4b-d). The fullery was entered via corridor (8) past room (7), which may have been used to accept incoming orders. The courtyard is colonnaded on three sides; it is abutted on the south side by living quarters and the commercial wing of the complex. Room (19), containing a kitchen and home bakery, lies at the center. A flight of stairs leads from corridor (20) into an upper story.

Manufacturing equipment is located in the western and northern colonnades of the courtyard. A row of basins (26) is located in the western and northern colonnades of the courtyard. A row of basins (26) was apparently used to rinse the fabrics (as in *fullonica* I.6.7); see Figure 35.2. The basins are connected to one another by small openings, and are constructed to allow the water to flow from one to the next. The water supply came through a pipe in the southernmost basin, at the highest level. Beside the group of basins, there is a group of six narrow cells (21), which held tubs in which the fabrics were pounded (Figure 29.4b). Urine, essential to the fuller's process, was probably gathered in the opening in the floor to the west of the two southernmost

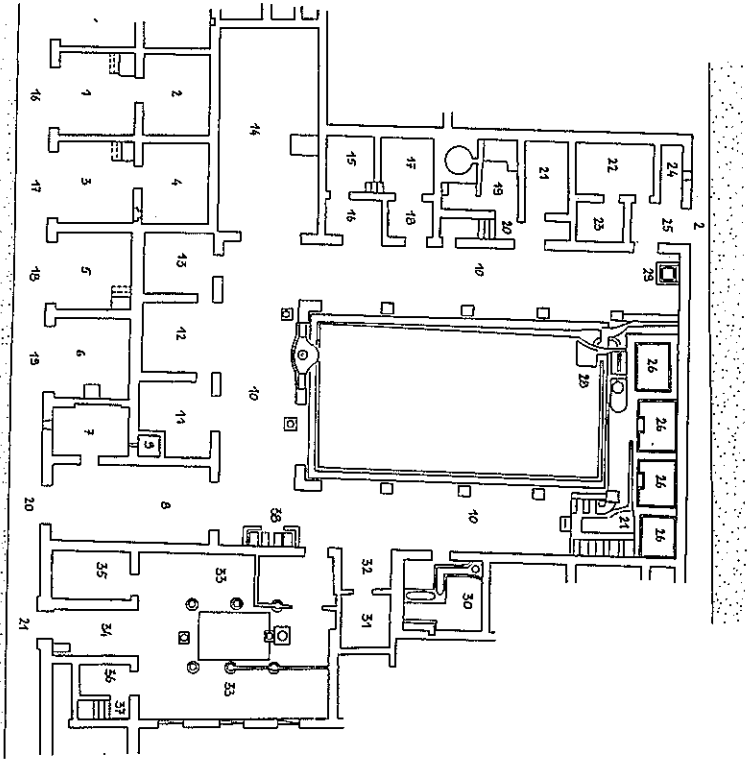


Figure 29.4a Pompeii, *Fullonica* (VI.8.2, 20-21); C. Brückner, after Overbeck and Mau, *Pompeii in seinen Gebäuden*, Figure 193.

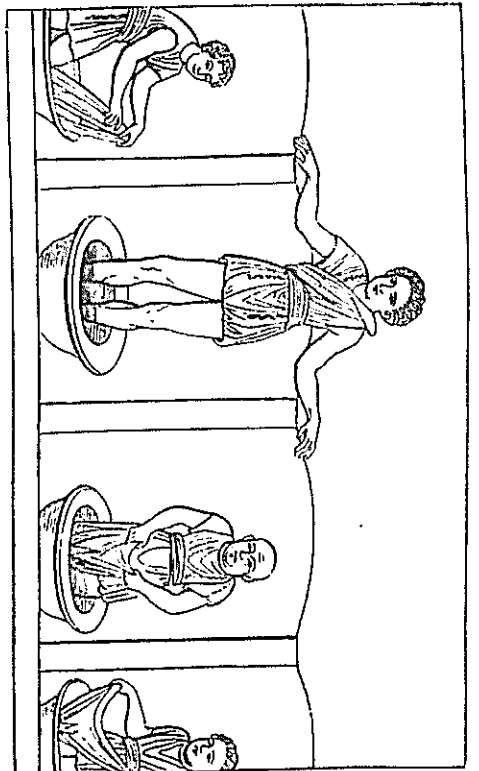


Figure 29.4b Wall painting from *Fullonica* (VI.8.2, 20-21); Mau, *Pompeii*, Abb. 242.

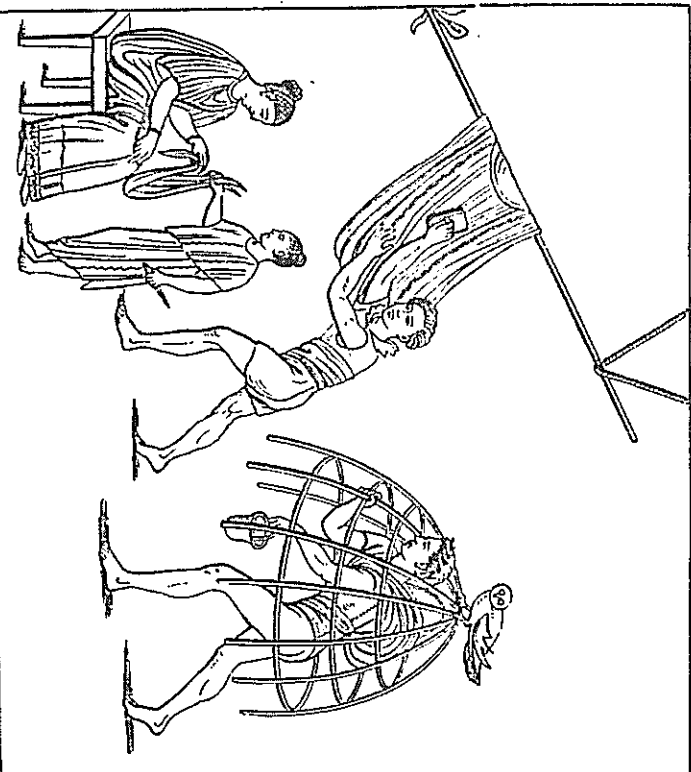


Figure 29.4c Wall painting from *Fullonica* (VI.8.2, 20-21); a customer inspecting the cloth; brushing the fabric; a rack for bleaching with sulfur; Mau, *Pompeii*, Abb. 243.

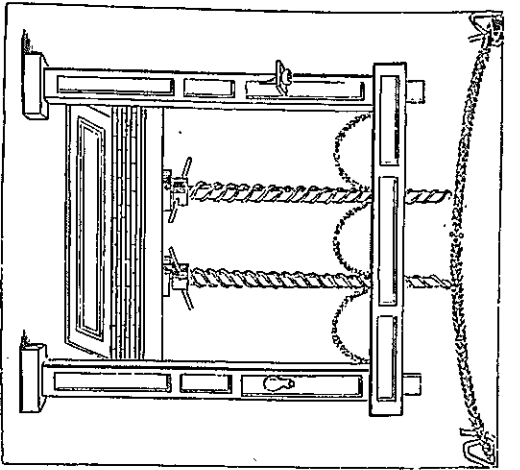


Figure 29.4d Wall painting from *Fulonica* (VI.8.2, 20–21); fuller's press; Man, Pompeii, Abb. 244.

cells. Room (30) is vaulted and contains a large stone table, a shallow basin and a cistern. The discovery of a pot filled with fuller's earth (*creta fulonica*) shows that the fabrics were treated with bleaching substances here. After drying the fabrics, which presumably took place in the courtyard, they were combed or milled with a brush-like instrument, the *aza* (Figure 29.4c). Then the cloths were treated with sulfur on a hemispherical frame, which bleached them even more. Figure 29.4c depicts a worker, crowned with an olive wreath, carrying such a frame. In his left hand he holds a bucket of sulfur. The owl of Minerva, protective deity of fullers, perches on the rack. In the foreground of the picture, a richly dressed lady is seated. She appears to be placing an order with the girl standing in front of her. The final step in the manufacturing process was pressing. A wooden clothes press is shown in yet another wall painting (Figure 29.4d) from this *fulonica*, and an actual example was even preserved at Herculaneum (shop III.10).

The *offinae laniflavitiae, tinctoriae* and *coartiliariae* also contained specialized equipment, which cannot be discussed in detail here. A feature of all three trades is the presence either of basins that can be heated, or of ovens; this distinguishes them from the *fulonicae*.

Other industries

Metalworking trades can be divided into two categories: the workers of non-ferrous metals (*fabri avari*) and the ironsmiths (*fabri ferarii*).¹⁹ It is not always possible to differentiate between iron and bronze smithies on the basis of furnishings and material

recovered from workshops, but we know of some forges where different kinds of metals were worked. For example, a shop was excavated outside the Porta Vesuvio at the end of the nineteenth century. This shop contained a rich assortment of finds, both in terms of raw materials (bronze, iron, lead) and tools (various anvils and hammers).²⁰ In addition, a plaster sculptor's model of a man's bust was found here, as well as diverse metal objects, the majority of which were probably made on-site. The most remarkable find is an under-life-size bronze statue of an *ephebe* that once functioned as a lamp stand and was apparently brought to the workshop to be repaired. There are also bronze vessels, furniture fittings, hinges and door-hinges as well as water faucets. In other workshops were found keys, surgical instruments, horse harness fittings and various other special instruments, such as a *grana*—used for land surveying. Some of the *fabri avari* were also metal sculptors who specialized in the manufacture of bronze statuettes (*fabri statuarii*). In contrast, ironsmiths were mainly occupied with making tools. Metalworking shops, like fulleries, avoided the proximity of residential quarters with little commercial activity. Larger forges, in particular, were probably situated outside the city walls because of fire danger. On the other hand, recent archaeological finds from the House of the Postumii (VIII.4.4, 49) located in the city center show that small-scale metalworking could even take place in half-ruined buildings or on building-sites.²¹ This points to a concept of handicraft outside the well-established workshops that attract the interest of archaeologists and modern visitors. It also gives an idea of the range of productive (and perhaps commercial) activities that can no longer be traced in the excavated architectural remains of Pompeii, and hence shows how limited our insight is concerning the full range of economic life.

In the case of potteries in the urban region of Pompeii, we also cannot count on large factories,²² which were more likely located outside the city. An inscription mentions a pottery that belonged to the imperial house somewhere in the environs of Pompeii.²³ To date, two potteries have been found inside the city walls, and a third was discovered outside the Porta di Ercolano.²⁴ All three workshops were small businesses rather than large factories. A lamp maker's workshop (I.20.3), furnished with two kilns, is particularly well preserved.²⁵ Located quite close by is another workshop (II.3.9), the façade of which was decorated with a well-known wall painting of a potter working at his wheel.²⁶ Evidence for the presence of two potteries in the southeastern area of Pompeii, near the amphitheater, emphasizes the productive character of this part of town, which contains not only numerous workshops but also gardens and vineyards (see below).

Inscriptions speak of many other trades and businesses in the cities under Vesuvius for which we have not yet been able to discover evidence in the archaeological record.²⁷ Barbers, dealers in ornaments, booksellers, goldsmiths, greengrocers, onion sellers and tailors are mentioned. We have archaeological evidence for a cobbler's (VII.1.41–42), a tannery (I.5.2) and a mat weaver's (III.3.4).²⁸ Food was also sold in numerous *tabernae*, as shown by storage vessels sunk into the ground (*bolinae*); cf. DeFelicis, Ch. 30. Olive presses were found in *tabernae* (VII.4.24–25) and (VII.14.14), which suggests that oil was sold in these shops. However, it is difficult in many cases to distinguish between grocery stores and taverns or restaurants. Thus, nuts were also sold in *taberna* (IV.17–18) at Herculaneum, which has been interpreted as a snack bar (*popina*).²⁹

We conclude this short overview of business concerns in Pompeii and Herculaneum with a look at food production in the city. The preparation of fish sauce (*garum*) has received much of the attention of scholars, although we know of only one *garum* shop in Pompeii to date (I.12.8; cf. also Jones and Robinson, Ch. 25).³⁰ Scill, Pliny the Elder tells us that Pompeii was famous for its fish sauce (*HN* 3.1.94). It is most remarkable, concerning relations between local elites and small-scale businesses, that one of the most influential families in Pompeii, the Umbricii, participated in the production of *garum*.³¹

Extensive agricultural areas for growing fruit, vegetables and grapes are concentrated mainly in the southeastern quadrant of the city (cf. Jaschinski, Ch. 3.1).³² This area is considerably less densely developed, so land was open for cultivation. In addition, the topography, sloping to the southward in regions I and II, created favorable conditions for viticulture and gardening. In the largest vineyard examined to date in Pompeii, covering the entire area of *insula* (II.5), more than 2,000 vines were discovered in the excavated area alone.³³ The vineyard includes a wine pressing installation and ten *dolia* to store the wine. The wine was presumably sold in the vineyard's *taberna* that opened onto via dell'Abbondanza. The occupants of the House of the Ship Europa (I.15.2-4, 6) worked an extensive fruit and vegetable garden.³⁴ More than 400 roots of fruit trees, olive trees and grapevines, among others, were found here. Burnt remains of plants offer evidence for the cultivation of figs, almonds, beans and hazelnuts. Grapes, fruit and vegetables were grown, as were flowers. The latter were used in garlands and for the distillation of perfumes.³⁵ In all, kitchen gardens take up around 10 percent of the total area excavated so far at Pompeii.

TABERNAE AND "SHOP-HOUSES": COMBINING LIVING AND WORKING

The stores and workshops described in the previous section were mainly housed in *tabernae* that are considered to be typical commercial establishments because of their wide store fronts (Figure 29.1).³⁶ Accordingly, archaeological research has focussed almost exclusively on the commercial functions of the *tabernae*. Their use as living quarters has received marginal consideration at best. This situation reflects our modern conception of separate living and work-spaces which does not apply to ancient Roman life. Especially in the case of *tabernae*, which usually had access only to a limited amount of space, we should think of the boundaries between living and work areas as quite fluid. A comparison with living conditions in modern cities in southern Europe shows that shopkeepers may occupy even small shops without a back area. We can assume that *tabernae* were occupied especially in those cases where there are one or more back or side rooms adjacent to the shop itself. Most *tabernae* were also provided with mezzanines (*pergulae*) accessible by stairs or ladders (see Figure 8.14). Ventilation and light advantages connected with an upper-story location predestined the *pergulae* for use as living spaces. The significance of *tabernae* within the settlement structure of the cities of Vesuvius is underlined by their numerical strength. At Pompeii *tabernae* make up more than 40 per cent of housing units, while in Herculaneum they make up just over 30 per cent.³⁷

Written sources confirm that *tabernae* were occupied as dwellings. The term *tabernae*, as defined by the jurist Ulpian, is used for every building that is suitable for

occupation.³⁸ Archaeological evidence for residential use of shops includes latrines, niches for beds and the remains of colorful wall decoration in back or side rooms off the retail space. Usually the wall painting consists of a simple decorative scheme without complicated ornamentation or figural scenes. Numerous (usually arcuated) niches in the walls point to the existence of self-sufficient households. Paintings preserved in several of these niches indicate that they were used for household cult.³⁹ Wells and hearths, on the other hand, may relate either to residential occupation or commercial activity.

During business hours *tabernae* were entered by the open storefront, which was closed after hours using a system of boards and a single door. The door secured the board construction and, at the same time, permitted uncomplicated access to the shop after closing time—an essential amenity if the shop was also used as a dwelling. Compared with *domus* architecture in the Vesuvian cities, *tabernae* provided a minimal standard of living, reduced progressively by greater occupation density. Colorful wall paintings in several *tabernae*, however, demonstrate that even small businessmen tried to participate in the generally accepted taste in interior decoration as they saw it in homes of the well-to-do.⁴⁰

The size and layout of many *tabernae* are determined by their incorporation into a greater architectural complex, usually a private house. We can often observe that shops occupy several rooms of a main house as their back rooms (e.g., *tabernae* VIII.4.3, 5 in Figure 29.2). *Tabernae* may also appear in connected rows of shops, which either take up the street fronts of private houses or public buildings, or are conceived as independent structures. Especially in the latter two cases, it is appropriate to speak of *taberna* or "shop-house" complexes.⁴¹ These complexes, usually several stories high, represent a particularly dense form of city living, since upper stories were often used as separate apartments with their own stairs and entrances. In addition to shops integrated into a larger complex, there are also freestanding *tabernae*.⁴² With their expansive back wings, they often achieve the size of a small *domus*.

REAL ESTATE AND ECONOMIC STRATEGIES

In Pompeii and Herculaneum, similarly to modern cities, most stores are incorporated into larger structures: residences, public buildings or *taberna* complexes. Only about 30 percent of the Pompeian *tabernae* cannot be connected with a larger complex and were presumably independently owned properties. Approximately 25 percent of *tabernae* are incorporated into residential houses, while almost half (45 percent) are part of a larger complex, though not connected spatially.⁴³ It is particularly likely in the latter cases that the *tabernae* were not run by the owners themselves, but were, rather, allocated to others. The modalities of *taberna* use legible in the archaeological record reveal various economic strategies that determined the organization of small-scale commerce.

The importance of possessing real estate as a source of income for the upper classes has repeatedly been emphasized (cf. Jongman, Ch. 32).⁴⁴ Particularly, landed elites were dependent upon capital income from rental properties or participation in business ventures. Liquid assets were needed to assure them of the leeway required for financing their political activities. Their own residences were not accepted, as numerous commercial establishments—particularly in the larger houses—attest.⁴⁵ The most

minimal form of participation in a lucrative small business was the rental of *tabernae*, known to us at Pompeii from two rental notices.⁴⁶ In these cases, there was probably no relationship between the landlord and tenant above and beyond the rental contract. However, it is conceivable that rentals also took place in the context of patron-client relationships or, rather, at the beginning of such dependencies. In any case, possession of real estate was a means of binding clients more tightly to their patron and thus elevating the latter's social standing. The institution of the *institorium* played an important role in this dynamic. One *institor*, in the capacity of a business manager, ran a commercial establishment belonging to his patron, who decided the type and scope of the business.⁴⁷ In this way the property owner was in a position to skim off profits made in his *taberna* without having to be involved in the actual running of the business.

There are other possibilities for the allocation of residential and commercial spaces besides rental and *institorium*. The archaeological record cannot, unfortunately, provide us with such information in any particular case. Architecture, however, clearly reflects the interweaving of local elites with small businesses and reveals glimpses into the social organization of the commercial establishments located in *tabernae*.⁴⁸ An oft-cited example is the *Insula Arriana Pulliana* (VI.6) in Pompeii, where one of the two rental notices mentioned above was found.⁴⁹ The center of the block is occupied by a manorial *atrium*-peristyle house, the so-called House of Paris (VI.6.1.13), which is probably where the owner of the entire property lived. Three sides of the *domus* are surrounded by smaller units that were for rent, as the advertisement indicates. Facing the street to the south, the lively *via delle Terme*, is a row of six *tabernae*, only one of which is connected to the interior of the house (see above). The other shops, all of which had mezzanine floors, can be equated with the *tabernae cum pergulis* *in* named in the advertisement. A carefully articulated facade, consisting of ashlar masonry in *clau*, helps accentuate optically the continuity between *domus* and *tabernae*. The owner of the house can have had no reason to hide his participation in small business concerns. Instead, he displays his ownership of real estate, including the shops, as a symbol of economic power. For the role of shops in urban planning and design, see Westfall, Ch. 10.

The different ways in which *tabernae* were incorporated in larger pieces of property can be examined in the House of the Postumii (VIII.4.4, 49), already mentioned above. Because of its location at the intersection of two major thoroughfares, shops surround it on the west and north (Figure 29.2).⁵⁰ The *tabernae* to the right and left of the main entrance are connected to the *atrium* via their back rooms. Presumably, the shopkeepers were residents of the central *domus* and directly under the control of the head of the house. The shops on the west side (with the exception of *taberna* (50)), however, are independent units lacking any connection with the interior. It is most probable that they, too, belonged to the same owners, as observations of the buildings' remains suggest. For example, it is striking that *tabernae* (47) and (48) dovetail in a regular manner with the floor plan of the *domus*. This and other evidence leads to the conclusion that they were planned as a unit. We could consider the isolation of the western *taberna* an indication that they were rented out, on the analogy of the *Insula Arriana Pulliana* (VI.6). However, there is also the possibility that they were managed by *institores* under contract to the master of the house. In the end, it is impossible to come to a definitive conclusion in favor of one or the other of the models. What is

important to keep in mind is the potential variety of economic strategies available for a complex such as the House of the Postumii. This helps explain the attraction of urban real estate, which opened up numerous different ways for owners to participate in lucrative small business opportunities.

NOTES

- Constance Witt translated the German text. This article represents the state of research in 1998 when it was first submitted for publication. Since then, several important contributions have been made on the topic and are cited in the footnotes, but generally not referred to in the text. For the paintings, see T. Fröhlich, *Latvian und Faischbilder in den Vasenmalereien. Untersuchungen zur 'volkstümlichen' pompejanischen Malerei*, RM-BH, 32, Mainz, 1991, pp. 169–88, 236–41.
- The text does not contain concrete numerical values, since the numbers in the literature often deviate widely from one another. The main cause for the discrepancies is the difficulty of differentiating between stores, workshops and pubs. In addition, many *tabernae* functioned as both workshops and sales areas, which has often led to their being counted twice. See V. Gaumnitz, *Die Kaufleute in Pompeii*, Dissertation der Universität Wien, 178, Wien, 1986, p. V; 377 shops (not counting bakeries or the textile or hospitality industries); *Pompeii. L'informazione al servizio di una città antica*, Rome, 1988, p. 63; 890 "impianti commerciali", 207 "officine"; L. Eschebach, *Gebäudeverzeichnis und Stadtplan der antiken Stadt Pompeii*, Köln, 1993, pp. 453, 466; 584 stores, 301 workshops.
- Most recently on the economic conditions in Pompeii: R. Laurence, *Roman Pompeii. Space and society*, London, 1994, pp. 51–69 with references. See also W. M. Jongman, *The Economy and Society of Pompeii*, Amsterdam, 1988.
- Jongman, *Pompeii*, pp. 124–8, 136.
- See E. Lepore, "Sul carattere economico-sociale di Ercolano," pp. 1955, vol. 10, pp. 423–39.
- J.-A. Dickmann and F. Pirson, "Die Casa dei Postumii VIII 4, 44–49 und ihre *insula*. Bericht über die 3. Kampagne 1999," RM, 2000, pp. 454–5, figs 3–4; J.-A. Dickmann and F. Pirson, "Die Casa dei Postumii VIII 4, 44–49 und ihre *insula*. Einführ. Vorkbericht," RM, 2002, vol. 109, pp. 264, 312, fig. 17. On the importance of the AD 62 earthquake as an alleged turning point in the social and economic history of Pompeii, see A. Wallace-Hadrill, *Houses and Society in Pompeii and Herculaneum*, Princeton, NJ, 1994, pp. 122–3; F. Pirson, *Mitwohnungen in Pompeii und Herculaneum. Untersuchungen zur Architekt., zum Wohnen und zur Sozial- und Wirtschaftsgeschichte der Vesuvialstädte*, Studien zur Antiken Stadt no. 5, Munich, 1999, pp. 137, 167.
- J.-A. Dickmann and F. Pirson, "Repräsentatives Wohnen und kommerzielle Nutzung innerhalb eines Architekturkomplexes in Pompeii: die Casa dei Postumii VIII 4, 44–49 und ihre *insula*. Bericht über die 1. Kampagne 1997," RM, 1998, vol. 105, pp. 409–24.
- La Torre, "Gli impianti commerciali," pp. 82 (nn. 67–70), 84 (n. 85) lists forty-seven businesses involved in the textile industry (the identifications are not without controversy) and thirty-four bakeries.
- On the bakeries in Pompeii see B.-J. Mayeske, *Bakeries, Bakers and Bread at Pompeii: a study in social and economic history*, Ph.D. thesis, University of Maryland 1972; La Torre, "Gli impianti commerciali," p. 84; Laurence, *Roman Pompeii*, pp. 55–7; *On *piturnum** (VI.3.3, 27–28); Johannes Overbeck and August Mau, *Pompeii in seinen Gebäuden, Alterthümern und Kunstwerken*, 4th edn, Leipzig, 1884, pp. 385–90; August Mau, *Pompeii in Leben und Kunst*, rev. edn, Leipzig, 1908, pp. 407–10; Mayeske, *Bakeries*, pp. 95–7; G. P. Carratelli and I. Balassare (eds), *Pompeii, pitture e mosaici*, Rome, 1993, vol. 4, pp. 271–5; Eschebach, *Gebäudeverzeichnis*, p. 162.
- D. P. S. Peacock, "The mills of Pompeii," *Antiquity*, 1989, vol. 63, pp. 205–14.
- See distribution maps in R. Laurence, *Roman Pompeii*, maps 4.1–2.
- On textile-working and its respective businesses in Pompeii see W. O. Moeller, *The Wool Trade of Ancient Pompeii*, Leiden, 1976; Jongman, *Pompeii*, pp. 155–86; La Torre, "Gli impianti commerciali," pp. 82–4; Laurence, *Roman Pompeii*, pp. 57–64; M. R. Borriello et al. (eds),

- Homo faber. Natura, scienza e tecnica nell'antica Pompei*. Milan, 1999, pp. 92–4; M. Bradley, "It all comes out in the wash: looking harder at the Roman fullonica," *JRA*, 2002, vol. 15, pp. 20–44; A. Wilson, "The archaeology of the Roman fullonica," *JRA*, 2003, vol. 16, pp. 442–6; M. Plokh, "Fullones and the Roman society," *JRA*, 2003, vol. 16, pp. 447–50.
- 13 This distinction and the following remarks on the distribution of the diverse workshops are largely based on Moeller, *Wool Trade*, although his method of defining and locating the workshops in the archaeological record has been criticized recently by Bradley, "It all comes out in the wash," pp. 25–7.
- 14 Laurence, *Roman Pompeii*, map 4-4.
- 15 Jongman, *Pompeii*, pp. 184–6.
- 16 Laurence, *Roman Pompeii*, map 4-3.
- 17 Laurence, *Roman Pompeii*, map 4-5.
- 18 Overbeck and Mau, *Pompeii in seinen Gebäuden*, pp. 390–5; Mau, *Pompeii*, pp. 412–14; Moeller, *Wool Trade*, pp. 44–6; Carratelli and Baldassarre, *Pompeii, pitture e mosaici*, 1993, vol. 4, pp. 604–10; Eschbach, *Gebäudeverzeichnis*, pp. 186ff.
- 19 On the metalworking production facilities in Pompeii see B. Gralls, *Metallverarbeitende commerciali*, pp. 84ff.; Laurence, *Roman Pompeii*, pp. 64; Bortello, *Homo faber*, pp. 104–7. Gralls lists six *fabri aerearii*, two *fabri ferarii* and three mixed workshops.
- 20 Gralls, *Metallverarbeitende Produktionsstätten*, pp. 12–48, 149–86; Bortello, *Homo faber*, p. 191 (cat. nos. 231–9).
- 21 Dieckman and Pirson, "Casa dei Postumii, fünfter Vorbericht," pp. 271–2, figs 23–6.
- 22 On pottery and the respective workshops in Pompeii see M. Anecchino, "Supplittile fritte da cucina di Pompeii," in M. Anecchino (ed.), *L'Insurrezione Domiziana di Ercolano e Pompeii nella prima età imperiale*, Rome, 1977, pp. 106–8; Bortello, *Homo faber*, pp. 100–3.
- 23 V. Arangio-Ruiz and G. Pugliese Carratelli, "Tabula Herculanensis, IV," *PP*, 1934, vol. 9, p. 53 (no. LXI); see also Anecchino, *L'Insurrezione Domiziana*, p. 106 with n. 7.
- 24 G. Cerulli Irelli, "Una officina di lucerne fritte a Pompeii," in Anecchino, *L'Insurrezione Domiziana*, pp. 53–72; Carratelli and Baldassarre, *Pompeii, pitture e mosaici*, 1990, vol. 2, pp. 1066–77; Eschbach, *Gebäudeverzeichnis*, pp. 80ff.
- 25 Carratelli and Baldassarre, *Pompeii, pitture e mosaici*, 1991, vol. 3, pp. 181–3; Eschbach, *Gebäudeverzeichnis*, pp. 91ff.
- 26 On the image of the potter, see T. Frühlich, *Latvian und Farsiadbilder in den Vannutachten. Untersuchungen zur 'volkstümlicher pompejanischen' Melchrei*, RM-EH, 32, Mainz, 1991, p. 313, fig. 16.1.
- 27 For an overview of the businesses in the cities under Vesuvius see Overbeck and Mau, *Pompeii in seinen Gebäuden*, pp. 376–96; Mau, *Pompeii*, pp. 403–18; Lepore, "Sul carattere"; Gassner, *Die Kaufleute*, pp. 17–26; La Torre, "Gli impianti commerciali."
- 28 On the three workshops see, respectively, Carratelli and Baldassarre, *Pompeii, pitture e mosaici*, 1996, vol. 6, pp. 459ff.; 1990, vol. 1, pp. 185–92; 1990, vol. 2, pp. 760–83; Eschbach, *Gebäudeverzeichnis*, pp. 250ff., 31, 103ff.
- 29 A. Mainuri, *Ercolano: i nuovi scavi (1927–1938)*, Rome, 1958, pp. 436–40.
- 30 R. I. Curtis, "The garment shop of Pompeii (1.12.8)," *CompPomp*, 1979, vol. 5, pp. 5–23; Carratelli and Baldassarre, *Pompeii, pitture e mosaici*, 1990, vol. 2, pp. 760–83; Eschbach, *Gebäudeverzeichnis*, pp. 64ff. For the garden of the *garum*-shop, see Jashemski, Ch. 31.
- 31 R. I. Curtis, "A personalized floor mosaic from Pompeii," *AJA*, 1984, vol. 88, pp. 557–66; H. Mouritsen, "Mobility and social change in Italian towns during the principate," in H. M. Baldassarre, *Pompeii, pitture e mosaici*, 1997, vol. 7, pp. 884ff., pls. 4–8; Pirson, *Mitteilungen*, pp. 168–9, fig. 158. See also Clarke, Ch. 21 and Tybout, Ch. 26.
- 32 On kitchen gardens in Pompeii, see W. F. Jashemski, *The Gardens of Pompeii*, New Rochelle, NY, 1979, vol. 1; Laurence, *Roman Pompeii*, pp. 64–7; G. W. Dimbleby, in W. F. Jashemski and F. G. Meyer (eds), *The Natural History of Pompeii*, Cambridge, 2002, pp. 181–9.
- 33 Jashemski, *Gardens*, vol. 1, pp. 200–18, 226ff.; W. F. Jashemski, *The Gardens of Pompeii, Hortulanum and the Villas Destroyed by Vesuvius: Appendix*, New Rochelle, NY, 1993, vol. 2, pp. 89ff. See also P. Mastrobattino, in J. Reau and G. Cassagnetti (eds), *Homo Faber: studies on nature, technology, and science at the time of Pompeii*, Rome, 2002, pp. 57–62.
- 34 Jashemski, *Gardens*, vol. 1, pp. 233–42; vol. 2, pp. 61–3.
- 35 E.g., in kitchen garden (II.8.6); Jashemski, *Gardens*, vol. 1, pp. 279–88; vol. 2, pp. 94–6.
- 36 On the structure, furnishing and architectural integration of *fabrianae*, see Gassner, *Die Kaufleute*, p. 101; Pirson, "Rented accommodation at Pompeii: the evidence of the *insula Atriana Polliana VI* and beyond," *JRA Suppl.* Ser. no. 22, 1997, pp. 165–81; Pirson, *Mitteilungen*, pp. 85–99.
- 37 These numbers refer to *tabernae* in completely excavated *insulae* that have at least a back room or a mezzanine storey and are not connected to a larger tenement house. See Pirson, *Mitteilungen*, pp. 101–4.
- 38 *tabernae appellatione declarat omne vitae ad habitandum adificium* (Dig. 50.16.183); see Pirson, *Mitteilungen*, pp. 19, 53–5.
- 39 Pirson, *Mitteilungen*, pp. 53–5, figs 42–3.
- 40 Pirson, *Mitteilungen*, pp. 91–5, figs 90–3.
- 41 The term "shop-house" goes back to A. Boethius, "Remarks on the development of domestic architecture in Rome," *AJA*, 1934, vol. 38, pp. 158–70; see also Pirson, *Mitteilungen*, pp. 144–52, 159–60. See, e.g., the rows of shops along the street fronts of the Forum Baths in Pompeii or the *palaestra* in Herculaneum. Freestanding complexes of *tabernae* can be found, e.g., at the southern tip of (VI.1) or along the north front of (II.1) (Figure 29.1).
- 42 See, e.g., the House of the Doctor (VIII.3.10–12), the upper storey of which is accessed via a separate outdoor staircase (no. 10).
- 43 These numbers refer only to *tabernae* in completely excavated *insulae* (cf. n. 2); see Pirson, *Mitteilungen*, p. 139.
- 44 P. Garnsey, "Urban property investment," in M. I. Finley (ed.), *Studies in Roman Property*, Cambridge, 1976, pp. 123–36; H. M. Parfitts, "The 'consumer city' domesticated? The Roman city in light economic strategies," in Parfitts, *Roman Urbanism*, pp. 83–111.
- 45 Wallace-Hadrill, *Houses and Society*, p. 118–42; Pirson, *Mitteilungen*, p. 139.
- 46 CIL IV, 1136 (cf. Bernstein, Ch. 34 for the text and translation); CIL IV, 138: *INSULA ATRIANA / POLLIANA [CN ALIENI NIGIDI MAI / LOCANTUR EX [K(ALENDIS)] IULIS PRIMIS TABERNAE / CUM PERGULIS SUIS ET CIENACULA / EQUESTRIA ET DOMUS CONDUCTOR / CONVENTIO PRIMUM [CN ALIENI] / NIGIDI MAI SER(V)UM*, "In the *Insula Atriana Polliana* of Cn. Alletius Nigidius Maius, *tabernae* with their separate *Pergulae* and *conculca equestria* and *domus* will be let out from July 1st onward. For letting consult *Permus*, slave of Cn. Alletius Nigidius Maius." See Pirson, "Rented accommodation," *Mitteilungen*, pp. 15–22.
- 47 S. M. Treggiari, "Urban labour in Rome: *meretrarii* and *tabernarii*," in P. Garnsey (ed.), *Non-slave Labour in the Graeco-Roman World*, Cambridge, 1980, pp. 48–64; J.-J. Aubert, "Workshop managers," in W. V. Harris (ed.), *The Inherited Economy*, *JRA Suppl.* Ser. no. 6, 1993, pp. 171–81; H. Mouritsen, "Roman freedmen and the urban economy: Pompeii in the first century AD," in F. Senatore (ed.), *Pompeii tra Sorrento e Salerno*, Rome, 2001, pp. 1–27.
- 48 Pirson, *Mitteilungen*, pp. 165–73.
- 49 Pirson, "Rented accommodation"; Pirson, *Mitteilungen*, pp. 23–46.
- 50 Pirson, *Mitteilungen*, pp. 153–8. See a more complete treatment in Dieckman and Pirson, "Casa dei Postumii, fünfter Vorbericht," pp. 243–316 and the earlier reports in RM, 1998–2001, vols 105–8.