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**DOMESTIC SPACE  
IN THE ROMAN WORLD:  
POMPEII AND BEYOND**

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**Ray Laurence and Andrew Wallace-Hadrill**

### Frequently cited works

- Wallace-Hadrill 1994 = A. Wallace-Hadrill, *Houses and society in Pompeii and Herculaneum* (Princeton 1994)  
PPP = I. Bragantini, M. de Vos, F. Parise-Badoni, *Pitture e Pavimenti di Pompei* (ICCD per il catalogo e la documentazione I-III) (1981- )

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# Urban transformation at Pompeii in the late 3rd and early 2nd c. B.C.<sup>1</sup>

Salvatore Ciro Nappo

Understanding of the urban development of Pompeii has long been hindered by the scarcity of stratigraphic controls on the many hypotheses proposed. In recent years, however, a growing body of new data has been emerging from two major projects.<sup>2</sup> One is the programme of restoration in the SE quarter of the city, involving the completion of Maiuri's excavations of the 1950s,<sup>3</sup> a comprehensive examination of the standing walls of the houses of the insulae fronting on the via di Nocera preparatory to their restoration,<sup>4</sup> and a series of stratigraphic tests in this area (in I.20, II.8, II.9). The second project, to supply services, including water and fibre-optic cable, throughout the city, has involved running trenches along the pavements of most of the major thoroughfares (fig. 1). It may be several years before the important results of the numerous stratigraphic interventions can be fully published. In the meantime, the present paper offers pointers to some of the important implications of this work for understanding the development of the city.

In particular, this paper draws attention to the striking new evidence that is accumulating for the transformation of the city in the 3rd and 2nd c. B.C. Much of the traditional picture of 'Samnite' Pompeii depends on datings that are more or less arbitrary, and particularly on the assumption that all construction in the local Sarno stone<sup>5</sup> belongs to an 'early' period, typically 4th to 3rd c. B.C. One result that has consistently emerged from over 80 separate soundings in the pavements at the foundations of façades is that the ceramic material reveals little or no building activity earlier than the 3rd c., when Campana A became the dominant form. The second important result is a picture of very rapid expansion of the city, with the simultaneous development of many insulae of houses, within a time-frame that must fall at the end of the 3rd and the beginning of the 2nd c. B.C. The evidence seems to be consistent with a major public initiative by the city, spurred, it would seem, by the influx of a considerable number of new

1 Earlier versions of this paper were presented at the *Domestic Space* conference at Reading, and subsequently at the Institute of Classical Archaeology at Munich. A somewhat different version of the paper in Italian focusing on house typology appears under the title "Alcuni esempi di tipologie di case popolari della fine III-inizio II sec a.C. a Pompei," *RStPomp* 6 (1993-94) 77-104.

2 The projects concerned, in which the author has been involved as consultant archaeologist, have been based on close interdisciplinary cooperation between archaeologists and specialists in construction and restoration. I wish to express warm thanks to B. Conticello, Soprintendente Archeologo di Pompei 1984-95, for consistent encouragement in pursuing these issues. Warm gratitude is owed to my colleague Professor Antonio De Simone of the University College of Suor Orsola Benincasa di Napoli, in close collaboration with whom the work of the project has been pursued, for many suggestions and discussions. A personal note of gratitude is owed to the specialists responsible for the execution of the project, U. Cioffi, Ing. E. Vozza and G. Longobardi.

3 Excavations were undertaken as part of the 'Progetto Pompei' begun in 1985 and still in progress. The following *insulae* have been completed: I.13 and I.14 (cf. S. C. Nappo, in *Archäologie und Seismologie* [Munich 1995] 49-51, with fig. 11); I.16 (cf. A. De Simone, in *Bellezza e lusso* [Rome 1992] 133-34); I.20 (cf. S. C. Nappo, *RStPomp* 2 [1988] 186-92); I.21, I.22 (cf. S. C. Nappo, *Hyria* 63 [1991] 16-18); II.8 (cf. A. De Simone, *RStPomp* 1 [1987] 156); II.9 (cf. A. Sodo, *RStPomp* 1 [1987] 156-59; *RStPomp* 2 [1988] 195-202).

4 On the campaign of restoration, see G. Gullini, *Il terzo millennio di Pompei e della zona vesuviana* (Rome 1987); B. Conticello in *Progetto Pompei* (Pompeii 1988) 27-31, 63-68; B. Conticello in *Restaurare Pompei* (Milan 1990) 13-24; A. De Simone, *ibid.* 111-20. For the situation preceding the campaign, A. Maiuri, "Sterro dei cumuli ed isolamento della cinta murale," *BdA* n.s. 1-2 (1960) 166-79.

5 Sarno stone is traditionally known as 'limestone' (calcare di Sarno); technically it is a travertine.

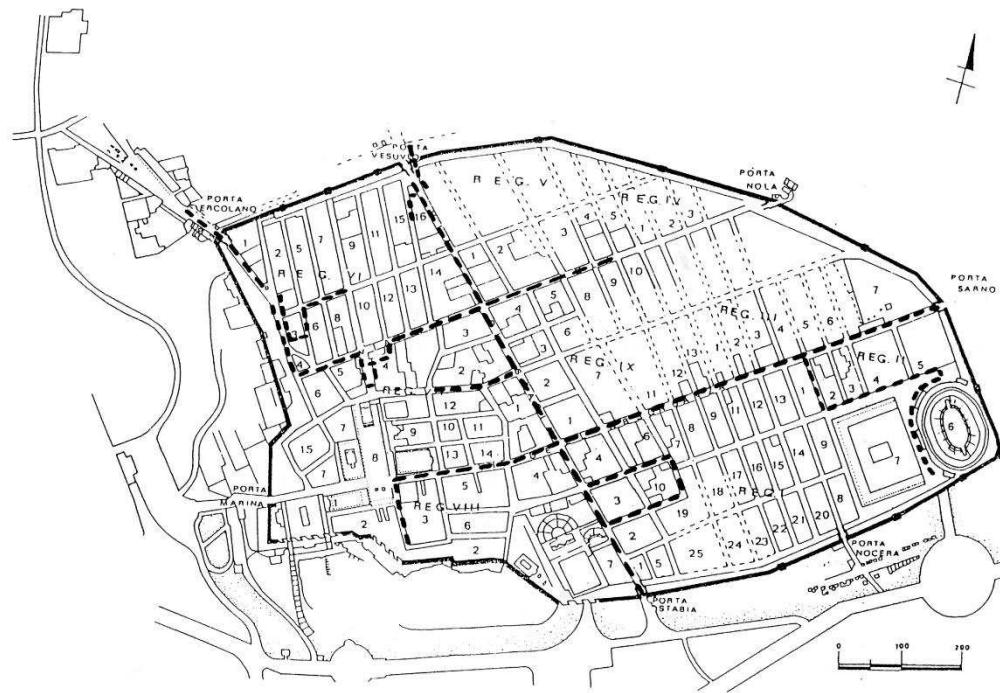


Fig.1. Plan of Pompeii showing trenches for services.



Fig.2. The axes of division in the southeast of Pompeii.

inhabitants, that made a permanent impact on the urban landscape, despite continuous modifications in succeeding centuries.

This transformation is visible at three levels. On the large scale, we see a division both of the urban landscape and, in all probability, of the surrounding territory, into plots on a rectilinear grid. On the medium scale, we see the urban plots or *insulae* subdivided, also on a regular rectilinear basis, into individual properties. On the small scale, we see those individual properties developed on a number of standard patterns that are repeated again and again; yet these have escaped close attention in studies of Pompeian housing that have recognised only the '*atrium* house' with a compluviate roof as the normative type. This paper will move from the large scale to the small, offering some general considerations about the former, and detailed observations about the latter.

### I. The division of the landscape (fig. 2)

Little is known about the condition and organisation of the land within the walls to the E of the via Stabia before the end of the 3rd c. B.C. In the absence of adequate archaeological data, hypotheses have been advanced based on insecure premises. By contrast, debate on the earlier urban development of Pompeii has broadened in recent years thanks to new evidence emerging from fairly extensive campaigns of stratigraphic exploration. For the archaic period (the 6th and first half of the 5th c. B.C.), new research and also re-examination of earlier work have led both to new conclusions and to redefining the terms of the debate.<sup>6</sup> We are moving to a new understanding of the use of space within the 66 hectares enclosed by a circuit of walls now known to go back to the 6th c. B.C.; rather than a densely inhabited urban settlement, it emerges as an enclosure around two sanctuaries with an associated exchange function. The use of the majority of the space within the enclosure at this early stage will have been agricultural.

Understanding of the development of the city in the 4th and 3rd c. remains limited. One suggestion by F. Zevi, however, seems particularly fruitful, of a relationship (an 'osmosis') between regular division of urban space in Regio VI and division of the countryside beyond the walls, that is to say of a correspondence between division of open space within the city into *insulae* and centuriation of the landscape.<sup>7</sup> This phenomenon, dated by Zevi to the second half of the 4th c. B.C., followed, in his view, the construction of the 'palaeoSamnite' walls;<sup>8</sup> the axis around which the division was coordinated was that of the via di Mercurio, which in that period continued beyond the walls through a gate where the Torre di Mercurio was later built.<sup>9</sup> The same 'osmosis' may, we suggest, be detected in the area of Regiones I and II (as well as III and IX) and the territory to the S and E of the city, with the co-ordinates of the grid provided, on the one hand, by the via dell'Abbondanza, together with the roads running exactly parallel to it, the via di Nola and the road from the Porta Nocera Necropolis, and, on the other, the via di Nocera, running at right-angles to those and continuing directly to the river Sarno. Bearing in mind that the Sarno must have passed fairly close to the walls, we may suppose

<sup>6</sup> On the early walls, see S. De Caro, "Nuovi indagini sulle fortificazioni di Pompei," *AION* 7 (1985) 75 ff.; B. Conticello in *Atti del XXXIV Convegno Internazionale di Studi sulla Magna Grecia* (forthcoming); on the sanctuary of the Triangular Forum, J. De Waele, "De 'Dorische' tempel od het Forum Triangulare te Pompeii," *Hermeneus* 54 (1982) 27 ff.; B. D'Agostino, "Il processo di strutturazione del politico nel mondo osculo-lucano. La protostoria," *AION* 9 (1987) 23 ff.; for the sanctuary of Apollo, S. De Caro, *Saggi nell'area del Tempio di Apollo a Pompei* (Naples 1986).

<sup>7</sup> F. Zevi, "Urbanistica di Pompei," in *La regione sotterranea dal Vesuvio* (Naples 1982) 354 ff.

<sup>8</sup> For the dating of the walls, see A. Maiuri, "Studi e ricerche sulle fortificazioni di Pompei," *MonAnt* 33 (1930) 218; S. De Caro 1985 (*supra* n.6) 106; C. Chiaramonte Treré, *Nuovi contributi sulle fortificazioni pompeiane* (Milan 1986) 48.

<sup>9</sup> For excavation in connection with the Torre di Mercurio, see Maiuri *ibid.* 151-68.

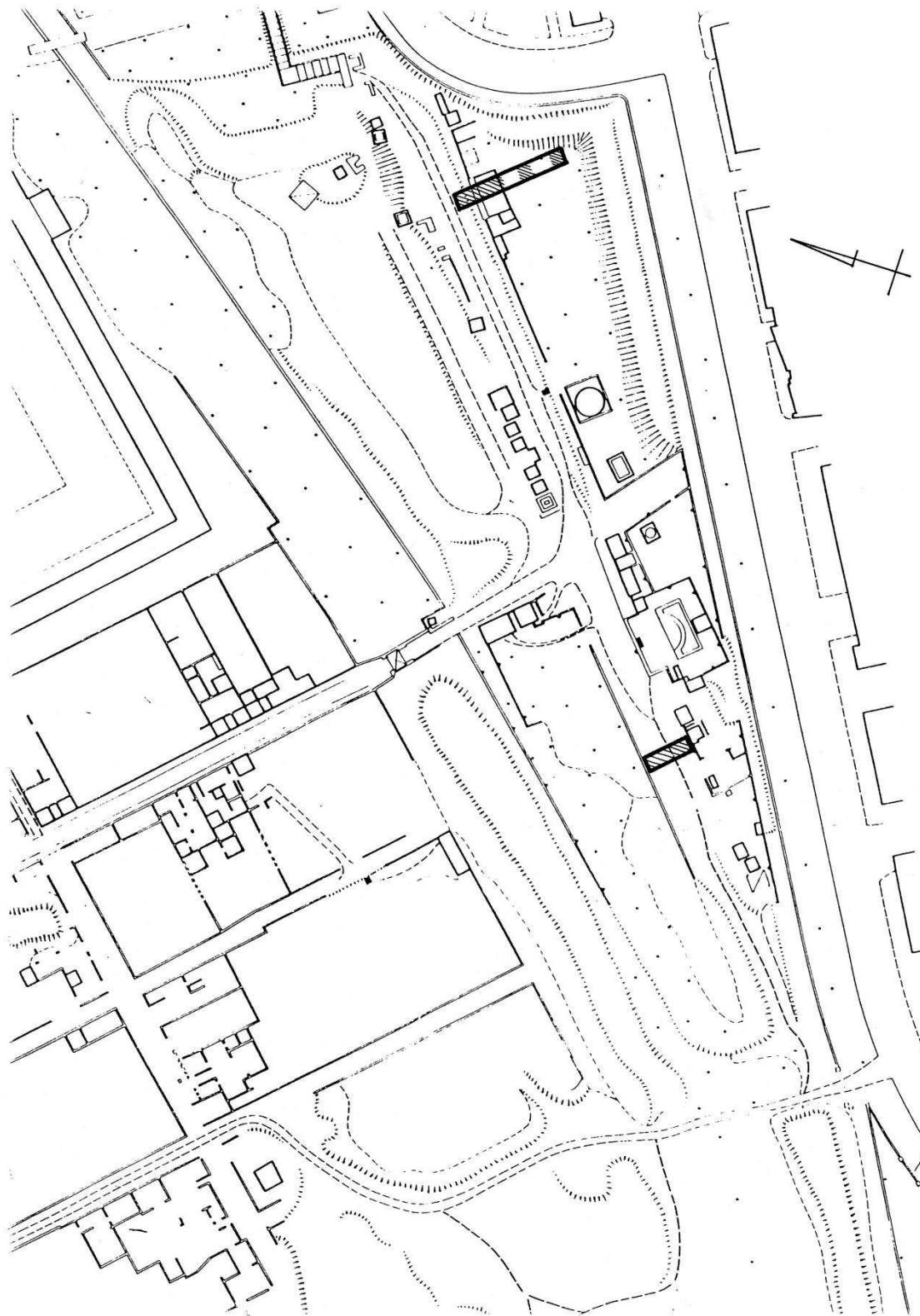


Fig.3. Location of trenches in the Via di Nocera cemetery.

that the centuriation system extended at least as far as the river.<sup>10</sup> That the roads that left the city could act as the co-ordinates of centuriation is confirmed by the recent identification by aerial photography of centuriation in the territory of the town of Sarno, organised on the axis of the road running between Sarno and Pompeii, the direct extension of the via di Nola.<sup>11</sup>

This division of the landscape in the SE will have taken place, according to the present hypothesis, in the same way and at the same date as that in the NW, that is between the end of the 4th and the first decades of the 3rd c. B.C.<sup>12</sup> The construction of the fortifications of the 'first Samnite period' will have been followed immediately both by the subdivision of the urban territory into regular plots, intended most probably for agriculture, and by the organisation of the territory beyond the walls up to the boundary of the river Sarno.

New evidence supports this hypothesis (fig. 3): a series of trenches excavated by the author and A. De Simone in the area around tomb 11 of the SE section of the Porta Nocera necropolis have revealed the existence of cultivated fields with a lane in beaten earth, including clear traces of much compacted wheel-ruts, running precisely along the boundary wall to the rear of the tomb and evidently continuing past all the tombs of the zone. This 'country lane' is exactly parallel to the road which runs between the tombs, and stands at a right-angle to the via di Nocera.

Four trenches were cut, running N-S: the first between the boundary wall of tomb 11 and the SE sector of the necropolis, the second to its S, behind the boundary wall, and the third below the modern embankment. A fourth trench was cut to the N of the tomb itself to explore the composition of the road: here, below the road surface of 79, was identified an earlier road surface of river pebbles and well-beaten earth, below which lies natural soil. An apparently analogous situation was found to the W, where a further trench was cut, sectioning the whole road by tomb 23 in the SW sector of the necropolis: below the road surface of 79 were identified at least two earlier pebbled road surfaces, the first showing two sets of cart tracks, the second made of rather larger stones. In both trenches, by both tombs 11 and 23, the infill between earlier pebbled surface and the level of 79 is datable to the 1st c. A.D., and probably is made up of rubble from the earthquake of 62. The second pebbled road is dated by the ceramic finds to the 1st c. B.C.; the earlier pebbled road (found only at tomb 23) seems, from a preliminary investigation of the ceramic material, to date to the 3rd c. B.C.

This earlier pebbled road surface is closely comparable to that found by Maiuri at the Porta Vesuvio, dated by him between the first and second 'Samnite' periods, i.e., to the late 3rd c. B.C.<sup>13</sup> A continuation of the same pebbled surface with features exactly corresponding to

<sup>10</sup> On the course of the river, the hypotheses of J. B. Ward-Perkins, "Noti di topografia ed urbanistica," in F. Zevi (ed.), *Pompeii* 79 (Naples 1984) 25 ff. are superseded by new research: A. Cinque and F. Russo, "La linea di costa del 79 d.C. fra Oplontis e Stabiae nel quadro dell'evoluzione olocenica della Piana del Sarno (Campania)," *Bollettino della Società Geologica Italiana* 105 (1986) 111-21; D. Barra *et al.*, "Evoluzione geologica olocenica della piana costiera del fiume Sarno (Campania)," *MemSocIt* 42 (1989) 255-67; M. De' Spagnolis Conticello, "Osservazioni sull'antico tracciato del Fiume Sarno alla luce dei nuovi scavi di Scafati," *Atti del Convegno di Ravello* 1993 (in press); E. Furnari, "Nuovi contributi all'identificazione del litorale antico di Pompei," *Neapolis* II. *Temi progettuali* (Rome 1994) 245-58.

<sup>11</sup> See G. Chouquer, M. Clavel, P. Lévéque and J. P. Vallat, *Structures agraires en Italie centro-méridionale* (ColleFIR 100, Rome 1987) 212, fig. 75; M. De' Spagnolis Conticello, "Il ritrovamento di località Tre Ponti di Scafati e la via extraurbana Pompei-Sarno," *RStPomp* 3 (1989) 41-52.

<sup>12</sup> For a recent and convincing account of the layout of the road network of Pompeii and its relationship to the territory, see S. De Caro, "Lo sviluppo urbanistico di Pompei," *Atti e Memorie della Società Magna Grecia* 3.1 (1992) 75-87, pl. V.2, repeated in "La città sannitica: urbanistica ed architettura," in F. Zevi (ed.), *Pompeii* I (Naples 1991) 23-46. See further L. Richardson, *Pompeii. An architectural history* (London 1988) 43 ff.

<sup>13</sup> Maiuri (*supra* n.8) 185-86.

Maiuri's pebbled surface<sup>14</sup> have been found in a recent sounding (1994) some 30 m to the S outside house V.6.5, underneath the pavement, some 80 cm below the level of the road surface. The pebbled road at Porta Nocera would appear to be part of an extensive road-laying programme dating to the late 3rd c. B.C. In the 3rd c. B.C., the Porta Nocera necropolis road existed only in the western sector, perhaps serving to link this gate with the Porta Stabia; it was extended to the E only in the 1st c. B.C. when the tombs were constructed. On the other hand, the 'country lane' in beaten earth below the enclosure of tomb 11 already served a regularly-divided, cultivated territory.<sup>15</sup>

The evidence at this stage is fragmentary: much further stratigraphic testing is required. But the hints available suggest rectilinear divisions of the terrain that associate the urban and extra-urban landscape both to the NW and to the SE of the city. And though the divisions in these two areas are on different alignments, determined doubtless by pre-existing features, their contemporaneous design is suggested both by the similarity of conception, and by the constructional similarities of the cobbled road surfaces recoverable at isolated points. It was the grid established by this land-division that provided the basis for the layout of building development within the city, though this development may well have been several decades later than the establishment of the grid (see below).

## II. The subdivision of insulae

On the basis of numerous stratigraphic tests conducted in a series of trenches dug along the pavements of the main streets,<sup>16</sup> we can now say that the whole SE area of the city had at the end of the 3rd c. B.C. been laid out on a scheme that took the via dell'Abbondanza and the via di Nocera as its axes.<sup>17</sup>

There are various indications that the division of the urban landscape into insulae need not necessarily have been contemporary with the subdivision of the insulae into lots. One sign that the layout in insulae of Regiones I and II served agricultural purposes before its full use for building lots is the presence of numerous wells predating the houses and not serving them. Recent investigations have revealed 5 such wells, all with the same features, a shaft lined in *opus incertum*, a depth to the water table of some 9 m, and a cap of two or more republican amphorae, with the interstices sealed with stone and mortar, that blocked them at the time of abandonment.<sup>18</sup>

From analysis of the insulae in Regiones I and II further observations can be made. The insulae in this sector have certain common characteristics (fig. 4).<sup>19</sup> The insulae stretching

<sup>14</sup> Marked on Maiuri's (*ibid.*) plan VI as (P).

<sup>15</sup> On the necropolis, see AA.VV. *Un impegno per Pompei. Fotopiano e documentazione della Necropoli di Porta Nocera* (Rome 1983); cf. now M. De' Spagnolis Conticello, *Il "pons Sarni" di Scafati e la via Nuceria-Pompeios* (Rome 1994).

<sup>16</sup> For preliminary reports on these excavations, see B. Conticello in *Atti del Convegno Studi sulla Magna Grecia* 27.5-6 (1992) 20-21, and in the proceedings of the 31st and 32nd meetings (in press). Full reports by S. C. Nappo and A. De Simone are in preparation. For different conclusions and dating, see A. Gallo, "Saggi di scavo nella Domus I.13,1," *RStPomp* 2 (1988) 154-84.

<sup>17</sup> Cf. De Caro 1992 (*supra* n.12) 88.

<sup>18</sup> The wells have been found in the middle of the western walkway at the rear of the large Palaestra; in II.8.6 room (9), SW corner (De Simone, *RStPomp* 1988) 185; and in I.20.5 room (5), SE corner; in I.11.5, external façade at the angle with house 6. On the presence of wells preceding the city of the 3rd-2nd c. B.C., cf. Ward-Perkins (*supra* n.10) 31, fig. 7 and n.16.

<sup>19</sup> For the topography of Pompeii, in addition to the 'RICA' maps in H. B. Van der Poel, *Corpus Topographicum Pompeianum [= CTP]* IIIA (Rome 1986), a photo-plan with the aerial photogrammetry of the city and its territory at 1:500 is now available in *Neapolis III. Planimetria della città antica di Pompei* (Rome 1994).

southwards from the via dell'Abbondanza to the city walls are laid out in three bands of plots of more or less the same dimensions: 87 x 33 m in the band along the via dell'Abbondanza, 82 x 33 m in the middle, and 79 x 34 m in the blocks backing on the southern walls of the city.<sup>20</sup> Yet if these plots were laid out to serve a scheme of housing development, why were they not laid out on a standard measure? The difference in lengths can be explained as follows: if the area was divided into agricultural plots at the time of the fortifications of the 'first Samnite period', it will not have required two substantial E-W roads, while the 'palaeoSamnite' walls, featuring a double skin and earth rampart, required less space than later modifications of the circuit. The plots could therefore originally have been of the same dimensions. When, however, the plots were made over for the construction of new houses, roads became necessary, and the middle band had to cede a strip at the N end for what became the via di Castricio, while the southern band not only ceded a strip at the N for the road but also a strip at the S to make way for the new system of fortifications. The only band of insulae not to lose ground was the northernmost, since the via dell'Abbondanza to its N was already in existence. If one adds to the middle band the width of the via di Castricio, and to the southern band the street to its N and a strip of the extended rampart, all three bands are found to be of the same length.<sup>21</sup>

The hypothesis of a territorial division within the walls preceding urban development<sup>22</sup> may also help to explain the presence of occasional houses constructed in ashlar Sarno stone in *opus quadratum*, arranged within the scheme of building lots. Traditionally this construction technique has been seen as one of the earliest in the city. The best known example, the *Casa del Chirurgo*, was dated by Maiuri to the mid 4th c. B.C.<sup>23</sup> Recently there have been attempts to date this house to the 3rd or even the 2nd c. B.C.<sup>24</sup> The presence of houses of the same construction in Regiones I and II seems to me a strong argument for abandoning the early dating of this technique. In terms of relative chronology, these houses appear slightly earlier than the houses around them, but not by much; on the basis of the data gathered, the chronological horizon appears to be around the mid 3rd c. B.C., a date which seems plausible also for the *Casa del Chirurgo*.<sup>25</sup>

If this is right, the second stage of urban development in Regiones I and II involved the subdivision of the already-divided insulae into building lots, but it respected the presence of scattered buildings on those lots.

Be that as it may, these insulae were in turn subdivided into parcels 8-10 m broad by 32-34 m deep, in one of two patterns depending on the importance (commercial or otherwise) of the roads on which the short sides fronted. In the first pattern (fig. 4a), the parcels, numbering 9, all ran E-W across the width of the insula, as in II.8 and 9.<sup>26</sup> In the second (fig. 4b), the parcels run both N-S along the short sides, almost always in groups of 3 or 4, and crosswise along the

<sup>20</sup> Variations in the dimensions in A.D. 79 are caused by extensions and contractions in relation to the pavement and roads; thus original corners in Sarno limestone incorporated in later extensions are visible at the SE corners of insulae I.9, 14 and 16, and the NW corner of I.21.

<sup>21</sup> On the size of the insulae E of the via Stabia, see also S. Sakai, "Some consideration of the urbanism in the so-called Neustadt of Pompeii," *Opuscula Pompeiana* 1 (1991) 35 ff.

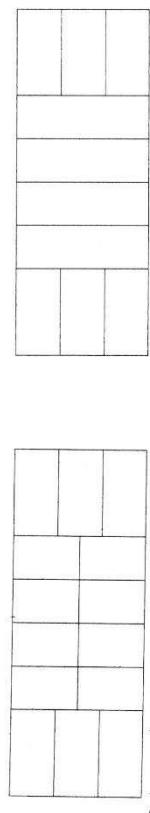
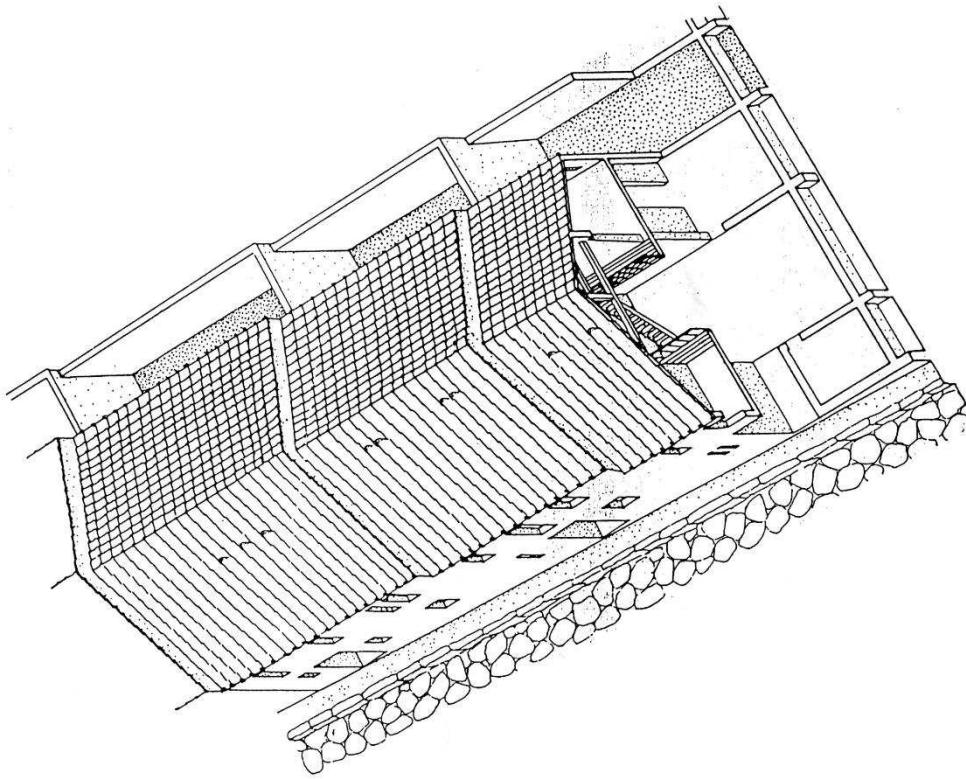
<sup>22</sup> On the modular organisation of the insulae, see recently G. Ioppolo, "Pompeii, un contributo per lo studio modulare dell'impianto urbano," *RStPomp* 5 (1991/92) 147-68.

<sup>23</sup> A. Maiuri, "Saggi nella 'casa del Chirurgo,'" *NSc* (1930) 381-95.

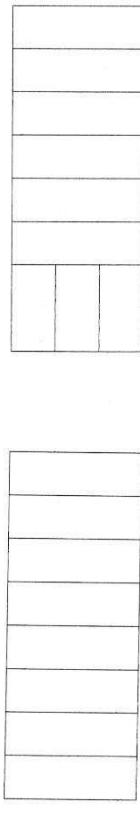
<sup>24</sup> See C. Chiaramonte Treré, "Sull'origine e lo sviluppo dell'architettura residenziale di Pompei sannitica," *Acme* 43.3 (1990) 31 ff.; F. Zevi, "La città sannitica. L'edilizia privata e la Casa del Fauno," in *Pompei I* (supra n.12) 52 ff.

<sup>25</sup> The houses in question in the area of the via di Nocera are: I.9.12; I.14.2; I.16.7; II.9.4. Other examples elsewhere of isolated houses of similar structure elsewhere are: I.4.2; I.6.13; I.19.M.

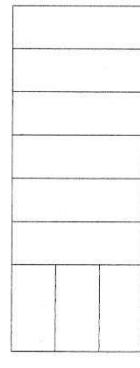
<sup>26</sup> For a preliminary plan of II.8, see De Simone in Conticello (supra n.4) 119-20, fig. 115; for II.9 and its initial layout, see Sodo (supra n.3) 196, fig. 46.



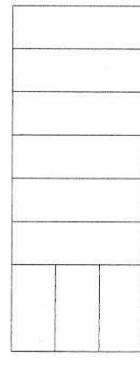
Schema insula secondo Hoffmann



Schema n.1



Schema n.2



Schema n.3

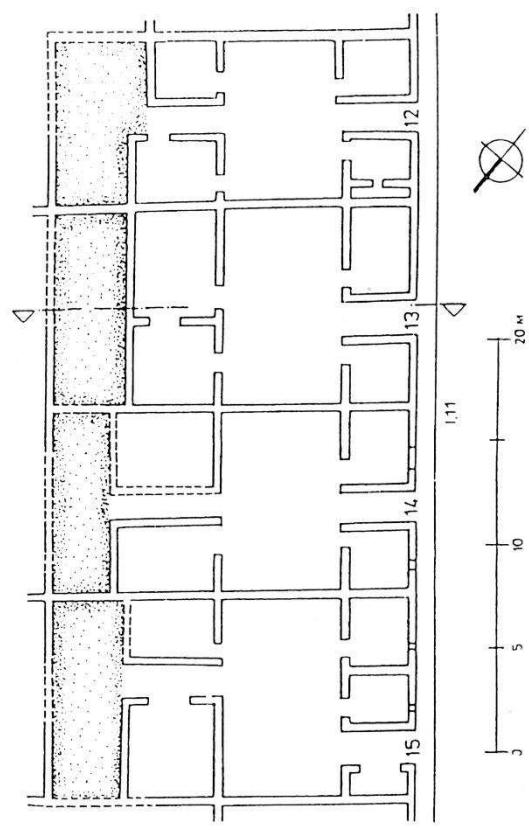


Fig.4 (above). The division of insulae.  
Fig. 5a (below). Hoffmann's reconstruction in plan.

Fig.5b. Hoffmann's reconstruction in axonometry.

long sides, in groups of 3, 4 or 5, depending on the length of the gardens of the N-S plots and on the length of the insula. Above all this pattern is met in proximity to the more important streets, as in I.9, 11, 12, 13, 14 and 16.<sup>27</sup> The principle is borne out by the variant pattern of II.1 (fig. 4c): the N end adjoining the via dell'Abbondanza, a major thoroughfare, is divided into N-S parcels, while at the S end, which backs on a lane that had no importance before it came to feed the Palaestra Grande and the amphitheatre, the parcels follow an E-W disposition.

Analysis of the house plots in this area of the city suggests that in all likelihood each insula plot was parcelled up as a whole at a single point in time, and that the parcels were assigned directly to individual holders for development as houses. The subsequent construction of buildings may have happened on an individual basis through each proprietor, though proprietors must always have borne in mind the need for the boundary-wall to serve in common as party wall; or plots may have been developed in groups — precisely the circumstance under which the characteristics of the row house could have arisen. It is more convenient, quicker and more economical to construct houses in series with the same articulation of architectonic volumes than individually. Variations in the materials employed (Sarno stone and lava) and in construction technique may reflect not so much chronological differences but uneven supply of materials and uneven levels of skill among the teams of craftsmen, which are liable to have been numerous and not all equally experienced during the period when these insulae were constructed. The reason for the general uniformity of plan among these houses is fairly clear, bearing in mind the uniformity of plot size and the likelihood that plots served the needs of roughly similar family units.

### III. Patterns of row housing

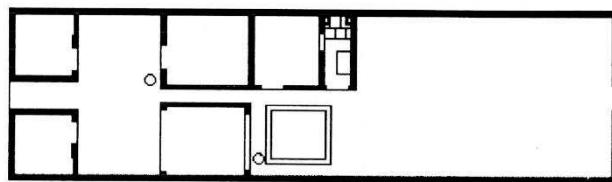
The regular lots produced by the subdivision of insulae were rapidly developed by the construction of houses. Their characteristics were architectural simplicity and ease of construction. Often we can still see that they were built in series on standard patterns, analogous to modern 'row houses' or 'terraced houses' (*case a schiera, Reihenhäuse*), following an architectural conception significantly different from that of the *atrium* house. This phenomenon was first observed by A. Hoffmann.<sup>28</sup> He identified this pattern in Regio I, ins. 11, especially houses 12-15 (fig. 5). Assuming that the insulae had been parcelled into regular plots that respected a central N-S axis, to allow exploitation of the street frontages on each of the long sides,<sup>29</sup> he reconstructed houses as occupying a rectangular space of a variable breadth on the street of 8.5-10 m, and a depth of 16 m. Their main characteristics were a central entrance passage (*fauces*) dividing two rooms, each about 3 m wide, and a central space c.5.5 m deep extending across the full breadth; beyond this came a second series of rooms of uncertain plan, and finally a small garden plot. Hoffmann was inclined to believe that the houses had two floors,<sup>30</sup> with the upper storey adopting a virtually identical plan to that below, and that the central space was roofed over, although he admits that there are no clear traces. As for the

<sup>27</sup> See fig. 21 for a plan of I.14; CTP IIIA (supra n.19) 16-17, 20-25; also L. Eschebach and J. Müller-Trollius (edd.), *Gebäudeverzeichnis und Stadtplan der antiken Stadt Pompeji* (Vienna 1993) 48-51, 57-74.

<sup>28</sup> A. Hoffmann, "L'architettura," in *Pompeii* 79, 111-15; id., "Ein Beitrag zum Wohnen in vorrömischen Pompeji," *Architectura* 10 (1980) 1-14. Various house types, including row houses, are listed in A. Mau and F. Drexel, *Pompeji in Leben und Kunst* (Leipzig 1913) 41 ff. (Anhang zur 2. Auflage); cf. also J. Overbeck and A. Mau, *Pompeji in seinen Gebäuden. Alterthümen und Kunstwerken* (Leipzig 1884) 270-73. A. Maiuri, *Lezioni sulla casa romana e pompeiana* (Naples 1946) 96-98, summarily notes non-atrium house types. See also J. Packer, "Middle and lower class housing in Pompeii and Herculaneum: a preliminary survey," in B. Andreae and H. Kyrieleis (edd.), *Neue Forschungen in Pompeji* (Recklinghausen 1975) 133-46.

<sup>29</sup> Hoffmann in *Pompeii* 79, fig. 7.

<sup>30</sup> Ibid. 114, fig. 52.



tipo n.1

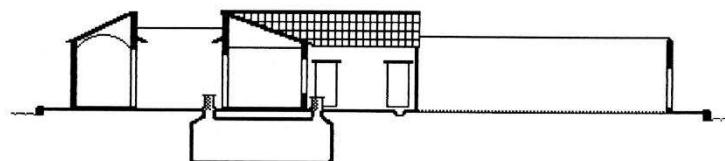


Fig.6. Type 1.

social level of the proprietors of such houses, he envisaged 'a middle class that was in position to construct their own properties, however modest'. Dating the construction to the 2nd c. B.C. at latest, he saw it as satisfying 'the needs generated by a denser growth of population in the city'.<sup>31</sup> This model has influenced studies of the Pompeian house for the last decade and has been accepted without modification by the latest discussions.<sup>32</sup>

The results of the recent work in the insulae of the SE quarter greatly increase the available information about such row houses, and allow us to revise Hoffmann's picture in significant respects. In particular, it has become clear that the houses must originally have stretched the full width of the insula, rather than being set back to back to a central dividing line, as he imagined; that in their original state at least they must have had open courtyards; and that they were built on one level only. The upper floors and smaller plot sizes that he observed were the result of later modifications. We believe that it is possible to distinguish at least four basic layouts among the houses built over the same period and on plots of similar sizes; further study of the material will, in all likelihood, throw up further variants. We shall examine in detail some examples of each of these four types, and then return to the issue of the social level of the inhabitants and the likely historical context in which this development took place.

#### Type 1 (fig. 6)

The commonest type has the following standard features. The entrance passage (*fauces*) divides two small rooms (generally labelled *cubicula*), which open onto a reasonably sized rectangular courtyard (*atrium*), which was unroofed and ran parallel to the road, and where the only fitments were a cistern head and in some cases a small place for cooking food. On the same axis as the *fauces* runs a narrower corridor on the far side of the courtyard dividing two

<sup>31</sup> Ibid. 113.

<sup>32</sup> Richardson (supra n.12) 383-85; Zevi (supra n.24) 52-54; F. Miele, "La casa a schiera I,11,16, un esempio di edilizia privata a Pompei," *RStPomp* 3 (1991) 165-84; P. Sommella, *Urbanistica pompeiana. Nuovi momenti di studio* (Rome 1994) 30-31. Of especial interest is the review of work on housing of the Samnite period by Chiaramonte Treré (supra n.24); also "Un contributo di antichità italiche dai recenti scavi," in *Ercolano 1738-1988, 250 anni di ricerca archeologica* (Rome 1993) 543-50.

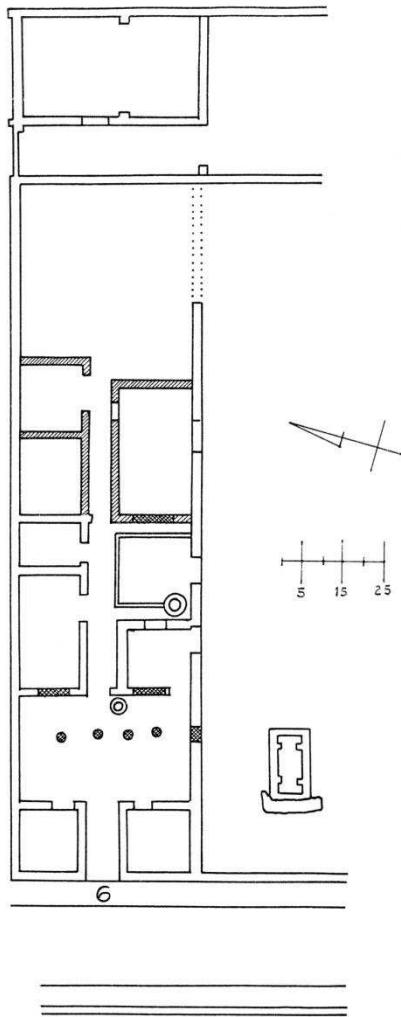


Fig.7.House II.8.6.

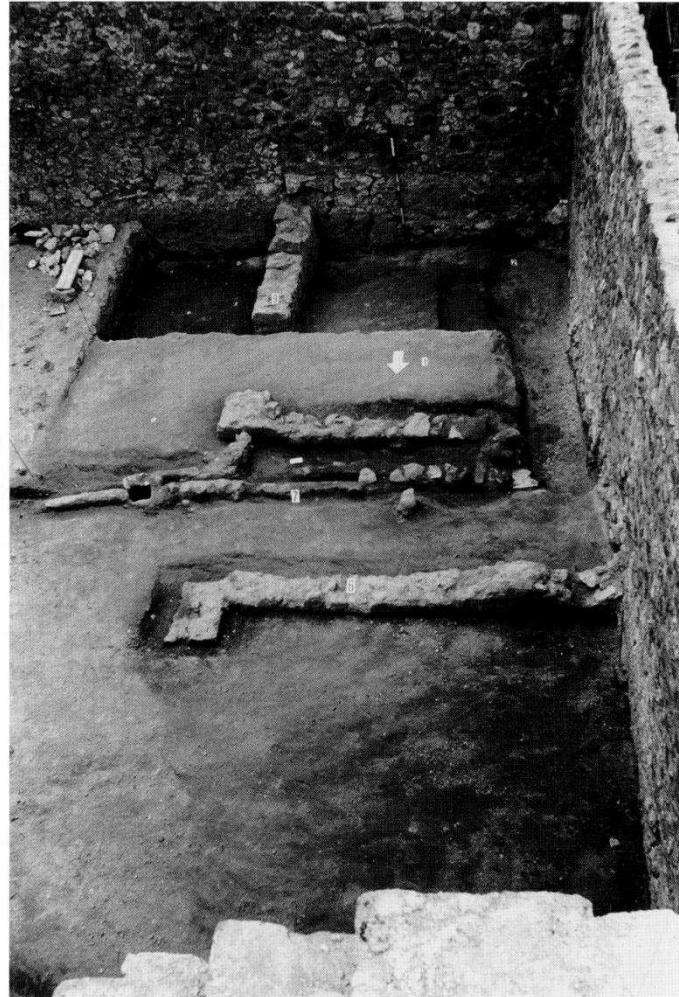


Fig.8. Excavation of the southwest of the garden of II.8.1.

series of rooms: to the right a *tablinum* with the usual broad opening on the courtyard and a wide window looking to the rear over a back yard, which functioned more to gather water than to provide illumination; to the left, in sequence, a broad room opening on the courtyard, a third small room (*cubiculum*) opening on the back yard, and finally a little room functioning as both kitchen and latrine. Beyond opens the garden. The rooms adjacent to the street were covered with a single slope of roofing which shed rainwater towards the road. The courtyard was in all likelihood provided with small roofs over the entrances to the rooms, which in some cases articulated as a small-scale portico. The scant water that collected in the court drained out through the *fauces* into the street. The water that provided for the needs of the household was collected in the back yard from the two roof slopes which met at right-angles and covered the rooms in this area. Here too extending eaves or sheltered walkways corresponded to the doorways of the rooms. This type is the most frequently encountered, and seems to have been especially favoured for construction in series as a row. Two examples may be examined in detail.<sup>33</sup>

<sup>33</sup> Further examples are discussed in *RStPomp*; 6 (1993-94) 80-82; they include houses II.8.5; II.9.1 and I.21.5.

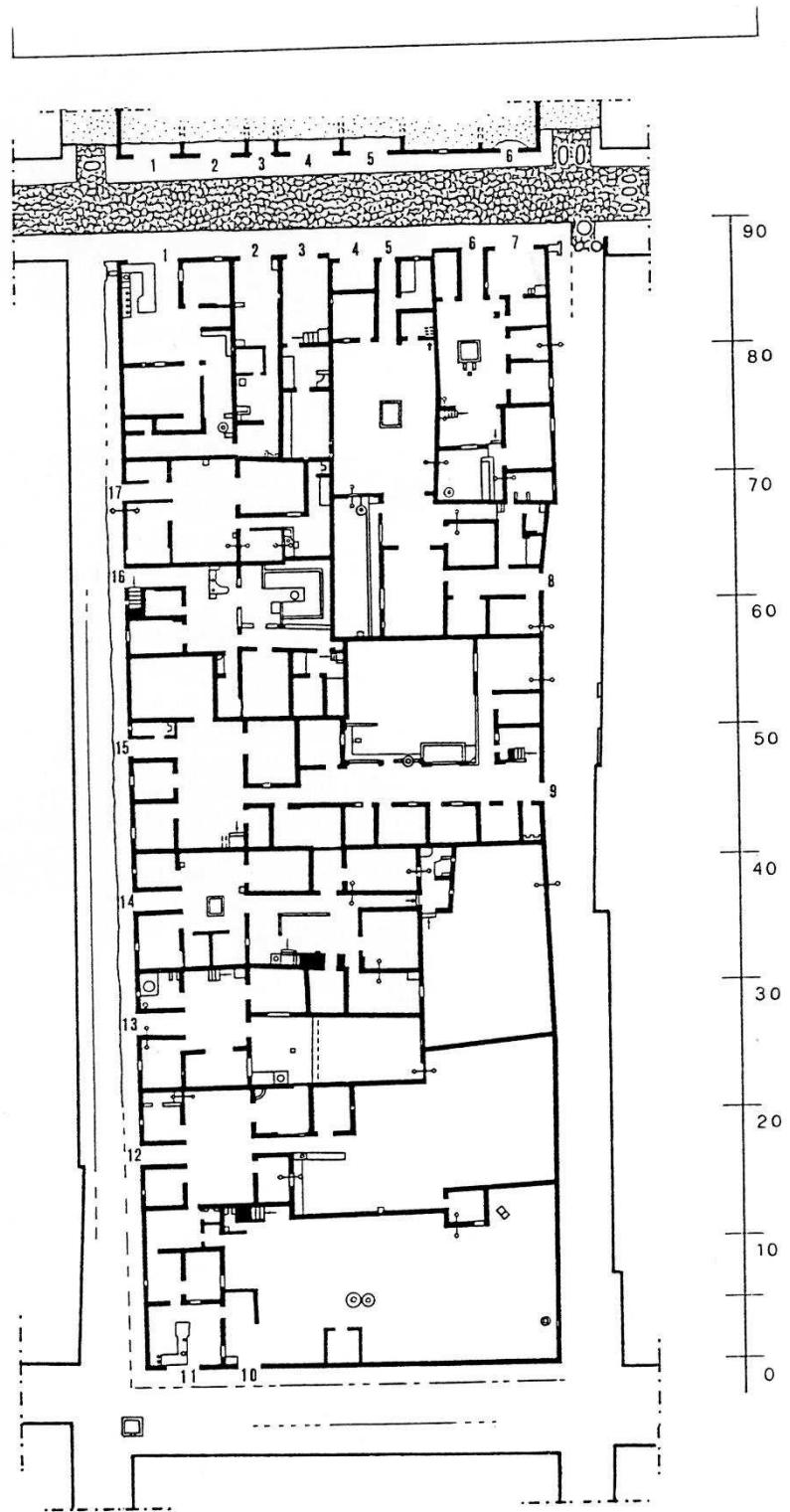


Fig.9. Insula I.11.

0 10 20 30 R.P.

Regio II, ins. 8, door 6 (fig. 7)<sup>34</sup>

Known as 'the house of the Garden of Hercules', it still preserves traces of the original plan. The *atrium* 2 still survived in 79 in its original state as an unroofed court, apart from the fact that the final owner covered the E side with a small portico with 4 slight columns in brick and block.<sup>35</sup> The broad opening of the *tablinum* 2 is still recognisable, despite its blocking to make room for a small door shifted towards the left-hand side. In the same way a blocked opening on the courtyard to room 7 can be distinguished. In this case too the back yard has a well-head in the SW corner, and another corresponding to the N door jamb of the *tablinum*.

Conclusive evidence emerged from the stratigraphic tests conducted along the western frontage of the broad garden; it confirmed the traces of four other previous houses, virtually identical both to each other and to the house described above and to its neighbour II.8.5. A house following the same plan (fig. 8) was also revealed by trenches in the garden of house 1 in the same insula, while the standing structures of houses 1 and 2 preserve the same standard features, however much modified by later changes. The houses all opened on the via di Nocera, and had back doors in the centre of the E wall of the garden, where subsequent blockings are clearly visible. It becomes clear that the whole insula was developed at the same time according to a standard unit.<sup>36</sup>

Regio I, ins. 11, door 12 (fig. 9)

This insula distributes the house plots both along the short sides, running N-S, and along one long side, running E-W with the main door to the W in all cases (as fig. 4b). Despite multiple changes of boundaries and structural modifications, the houses still preserve the traces that allow us to map the original layout. The houses along the long side (12 to 16) all have virtually the same features; *exempli gratia* house 12 is chosen for analysis.<sup>37</sup> In plan this house conforms to the canonical model: all the rooms that open on the unroofed courtyard and around the back yard preserve their original architectonic volumes unchanged. Room e was certainly originally a *tablinum*, as is clear from traces of modifications of the opening on the courtyard, and from the replacement by a window of the broader opening in the wall opposite. In this case too the rainwater that gathered in the back yard could be drawn from a well-head placed opposite the left door jamb of the *tablinum*. On top of the walls are remarkably preserved the impressions of the beams and the remains of tiles that indicate with absolute clarity the arrangement of the woodwork and the direction of the roof slopes (fig. 10) and show Hoffmann's reconstruction to be wrong. It was only in its final period that the house acquired an upper floor — and that only above the front rooms along the street, not above the courtyard. Even if this was eventually roofed, it was probably with a single fall sloping towards the back yard; indeed, the raising of the front elevation and the addition of an upper floor made it scarcely possible to direct a fall towards the road. In any case, a balcony was constructed over-

<sup>34</sup> The house was excavated at various periods: the front part and much of the garden in 1953-54 (Della Corte, "Iscrizioni scoperte nel quinquennio 1951-56," *NSc* [1958] 94, 133); exploration of the garden was completed in 1971-72 (W. Jaschinski, *The gardens of Pompeii, Herculaneum and the villas destroyed by Vesuvius* [New Rochelle 1979] App. 94-95); finally, in 1986, the rooms to the E of the *viridarium* (De Simone 1987 [supra n.3] 156; De Simone 1988 [supra n.3] 184-87; cf. Kockel, "Funde und Forschungen in den Vesuvstädten," *AA* [1986] 487; *PPM* III, 325-28; Eschebach and Müller-Trollius [supra n.27] 97).

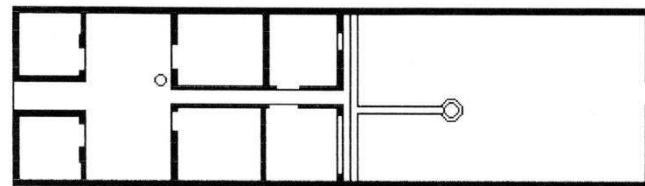
<sup>35</sup> Cf. the photograph AFSP D3531 in the Photographic Archive of the Superintendency.

<sup>36</sup> De Simone in Conticello 1990 (supra n.4) 119-20, fig. 115.

<sup>37</sup> The house was excavated in several stages in the years 1953, 1958, 1960 and 1964 (cf. Della Corte [supra n.34] 83) and restored in 1993. Cf. M. De Vos, "Scavi nuovi sconosciuti (I.11.14 e I.11.12)," *Meded* (1975) 47-85; Jaschinski (supra n.34) App. 52; A. Hoffmann, *Wohnungsbau im Altertum* (1979) 162 ff.; id. (supra n.28) 1 ff.; *CTP* IIIA, 38; *PPM* II, 582-92; Eschebach and Müller-Trollius (supra n.27) 59-60.



Fig.10. The central section of I. 11.12; note tiles in their original position.



**tipo n.2**

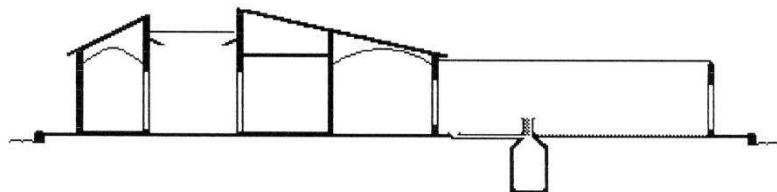


Fig.11.Type 2.

hanging the S end of the courtyard, as a series of holes in the walls of narrow diameter indicates.

Further evidence that, in the majority of these houses, wherever a roof was eventually installed in a phase subsequent to the original construction, it was normally of a single slope

and directed the rainwater inside and not towards the street, comes from room b of house 14 in the same insula. Here the room preserves in its centre a small *impluvium* of grey Nocera tuff, placed in correspondence with a roof-light or *opaeon* of the same type as in II.9.1 room 4, and I.10.16 room 41. Other terracotta roof-lights of this nature, which cut into a single slope instead of acting as convergence points for several slopes, have been found in I.14.15 room 14 and II.9.2 room 6.

*Type 2 (fig. 11)*

The second model of row house, even if at first sight appearing fairly similar to the first, rests on a different conception of space, above all in its approach to the collection of rainwater. In this case the water necessary for domestic and garden use is collected from a single roof slope that covers all the rooms of the rear part. This point is confirmed by the fact that in this back area, behind the second row of rooms, is regularly found a drainage channel connecting to a cistern, in contrast to houses of type 1 in which, at least in the examples on the via di Nocera, there is no case of a drainage channel in the unroofed *atrium*. The entrance passage again divides two *cubicula* which open on the courtyard. Normally, though not always, axially aligned with the entrance passage, on the far side of an unroofed courtyard, is a corridor leading to the garden and dividing two rows of rooms; the first row open on the courtyard, the second on the corridor, but with no access to the garden, on which broad windows opened. In the examples examined so far, there is no trace of a room with the features of a *tablinum*. In other respects, this scheme of construction, even if the distribution of space it offers is no improvement, was easier and less costly to build. The long fall of the roof-line from courtyard to garden was broken up by internal partitions, thereby allowing the use of standardised lengths of timber, and had no need of corner tiles, which are both expensive and relatively complicated to install. It is likely that houses with this arrangement of space exploited as attics the area above the ceilings of the rooms on the far side of the courtyard. Again two examples follow:<sup>38</sup>

*Regio I, ins. 9, door 8 (fig. 12)<sup>39</sup>*

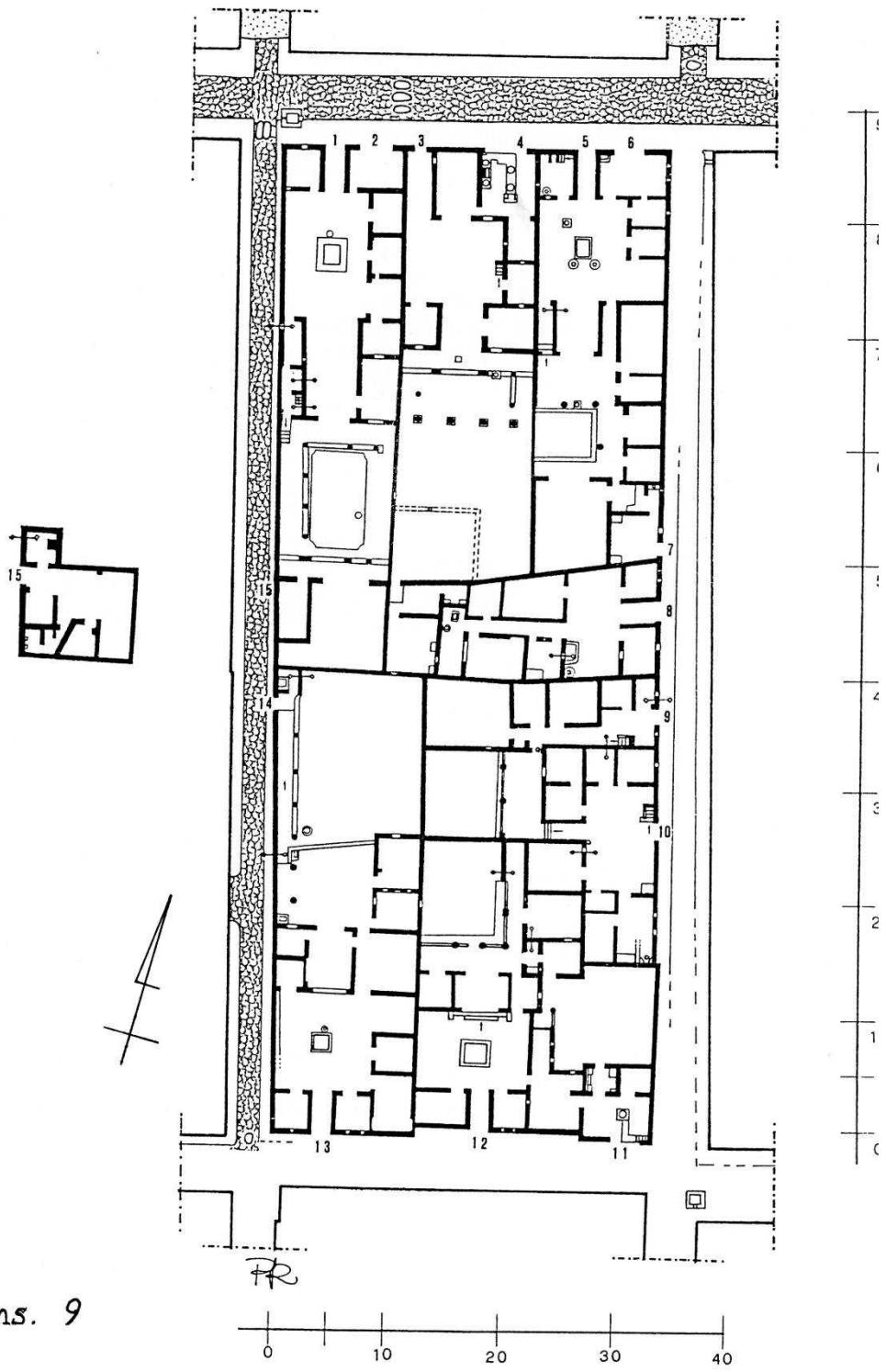
The N wall of the house follows a gradual curve, determined by a drop in contour of 2 m at the rear of houses 3 and 5 to the N. (A similar drop in contour affects all the insulae S of the via dell'Abbondanza; in some, as I.11, the contour is overcome by extending the gardens of the row of houses to the N beyond the standard plot-size. In I.9 the division runs along the contour and the wall lines are adapted to the consequent curves.) Most of the walls are constructed in *opus africanum*, with large rectangular blocks of Sarno stone acting as a framework, placed in alternation horizontally and vertically.<sup>40</sup> At the moment of the initial layout a garden surely stretched across to the W wall of the insula; this garden was subsequently ceded to houses 1 and 3. Of this open space only a small back yard (room 10) remains, which continued to collect the rainwater from the roof that discharged there. On the courtyard 2 still face two *cubicula* 3, 4, flanking the entrance passage 1. The two rooms W of the courtyard 5 and 7 originally opened on it; the blocked door of room 7 is clearly visible, against which subsequently a basin was constructed with a *cocciopesto* floor and a lining of polychrome marble tiles.<sup>41</sup> Clear traces of

<sup>38</sup> See *RStPomp* 6 (1993-94) 82-87 for further discussion, including house I.14.7.

<sup>39</sup> The house was excavated in the course of 1952. See Della Corte, *Cose ed abitanti di Pompei* (Napoli 1965) 340; Jashemski (supra n.34) App. 44; CTP IIIA, 16; PPM II, 138-41; Eschebach and Müller-Trollius (supra n.27) 49-50; J. Berry, *Insula 9. Regio I: Domestic behaviour in Pompeii and its significance* (unpublished MA thesis, Reading University 1993).

<sup>40</sup> On the technique see J. P. Adam, "Le tecniche costruttive a Pompei: una documentazione a cura del CNRS," in *Pompeii 1748-1980. I tempi della documentazione* (Rome 1981) 96-97; id. *Roman building. Techniques and Materials* (Bloomington 1994).

<sup>41</sup> See PPM II, 140 fig. 3.



## Urban transformation at Pompeii, late 3rd and early 2nd c. B.C. 107

beam-holes indicate the presence of a usable upper floor above the corridor and rooms 5, 7; by contrast, the presence of roof-tiles still in their original position in the SW corner of room 9 suggests that above rooms 8-9 there was only room beneath the roof for lathwork carrying a reed and plaster ceiling. Rooms 8-9 were approached from the corridor 6; the first, a *cubiculum*, still carries traces of First Style decoration,<sup>42</sup> while the second with a broad window, modified several times, looking over the back yard, is configured as a *triclinium*, with recesses in the walls for the couches, and decorated in the Second Style.

Regio I, ins. 14, door 3 (fig. 13)<sup>43</sup>

In 79 the house was still under restoration, probably because of damage sustained during the seismic activity of the final years. Indeed, a large pile of white lime was found in the NW corner of room 6, while in the NE corner of the garden was heaped an enormous quantity of *spolia*, broken amphorae, tiles, bits of mortar and grouting. Even so, the house mostly preserves its original structure: the front part is almost completely constructed in Sarno stone with the jambs and load-bearing elements composed of large rectangular blocks. A test trench cut the full length of the entrance passage 1, sloping up to the courtyard 2, revealed that all the rooms had been raised in level compared to the original layout; traces of decoration in white ground with panels outlined in black ('schematic Second Style') were partly covered by the raised pavement level. Excavation also revealed that at the top of a gentle slope was a small step, decorated in the same style as the walls, leading up to the courtyard. Two *cubicula* 3 and 7 are separated by this entrance passage, just as on the opposite side of the courtyard two rooms 4 and 6 flank a corridor 5, leading to a garden 8. Room 6 was originally divided into two and had a floor at a lower level; a test trench confirmed the presence of the footings of a dividing wall down the centre. The room so revealed had its entrance on the corridor and had a large window in the W wall overlooking the garden. It is likely that room 4 was similarly divided. The original layout is also indicated by the fact that the garden originally extended to the W wall of the insula: the southern boundary wall is structurally homogeneous for its whole length, while the end wall of the present garden abuts this southern wall and is constructed of re-used material. In the SW corner of the garden had been installed a latrine, while in the S wall is still preserved a *lararium* covered in white plaster with a cornice and projecting shelf reminiscent of First-Style decoration. Moreover, the disposition of large blocks in Sarno stone in the W wall of the insula indicate the original subdivision. Still excellently preserved in the garden is the drainage channel close behind the W walls of the rooms, and a branch at right-angles that collected water in a cistern. No cistern has yet been discovered in the courtyard, though in the SW corner is a place for cooking. Along the S wall of the courtyard was installed a stairway leading to upper rooms along the façade, though this arrangement is subsequent to the original layout.

Type 3 (fig. 14)

A further type, encountered above all on the short sides of the insulae, provides an ample central courtyard, in some cases longer than it is broad; here it was only in a subsequent stage, in our view, that an *impluvium* was installed with corresponding roof. Centred axially on the *fauces* of the entrance is a large *tablinum*, flanked by two rooms, one of which functions as a corridor to the garden, while the other is occupied by a *cubiculum* facing the courtyard, with a kitchen/latrine behind it. To the sides of the entrance passage are the customary *cubicula* opening on to the courtyard. Certainly, the habitable rooms are modest, and the *tablinum* disproportionately large, unless one hypothesises an upper floor over both the front and back rooms. Such upper floors are found, but appear always to be a later modification. In fact the roof lines, des-

<sup>42</sup> Ibid. 141 fig. 5.

<sup>43</sup> The house was largely cleared of lapilli in 1954, and the excavation was completed in 1992. Cf. Eschebach and Müller-Trollius (supra n.27) 72.

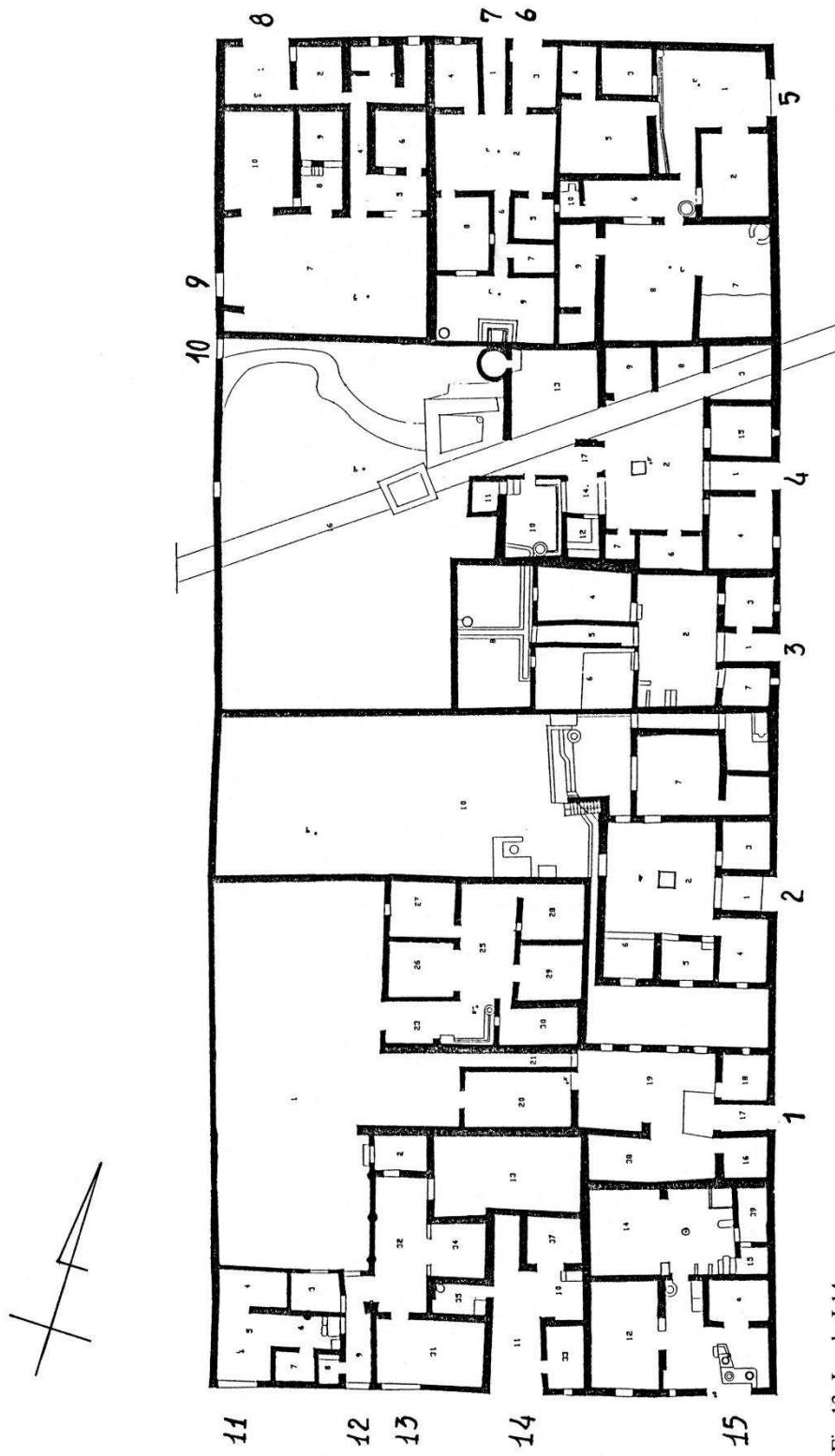
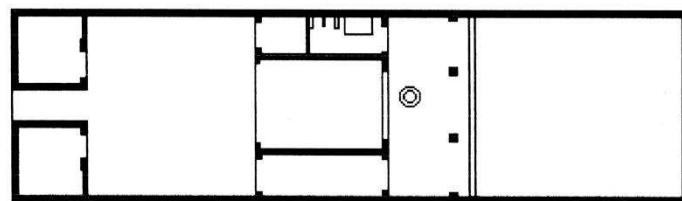


Fig.13. Insula I.14.



**tipo n.3**

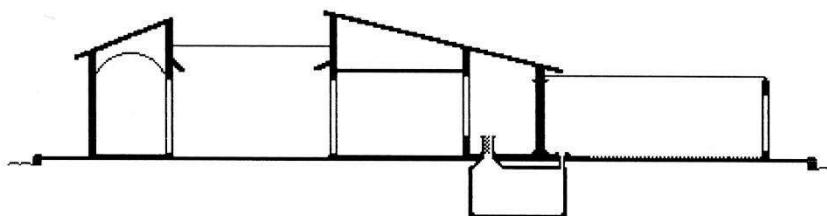


Fig.14. Type 3.

pite the different arrangements of the rooms below, are very similar to those of the previous model, with one fall in front discharging on the street, a much larger fall at the back, discharging on the garden. The type is well attested on the via dell'Abbondanza, but the examples will be drawn from the new work on the Via di Castricio:

Regio I, ins. 15, door 1 (fig. 15)<sup>44</sup>

M. Aoyagi's stratigraphic tests made a substantial contribution to our knowledge of the building history of the northern sector of the insula.<sup>45</sup> While we may question his absolute dating of the first phase, on the basis of limited ceramic evidence, to the mid 3rd c.<sup>46</sup> and prefer a date at the end of the 3rd or beginning of the 2nd c. B.C., his relative chronology allows us to follow the various stages of architectural transformation, and helps clarify the aspect of the house at the moment of its original occupation. In its first phase the house at door 1 occupied only the strip going back from the two rooms flanking the entrance passage and probably terminated at the point of the 1.5 m contour drop,<sup>47</sup> where traces of the parcelling of the insula are still visible on the walls. Remains of First-Style painting are preserved in the front rooms and doubtless characterised the whole house in its first phase.<sup>48</sup> Aoyagi's stratigraphic investigations<sup>49</sup> revealed the absence of a cistern in the *atrium*. He noted that the plaster of

<sup>44</sup> The house was excavated between 1954 and 1956 (then numbered as I.17); palaeobotanic tests were conducted between 1972 and 1975; the excavation of the rooms in the SE corner of the insula and the complete restoration of the architecture was completed only in 1993. See Maiuri, *RendNap* n.s. 33 (1958) 19-20; id., *NSc* (1958) 136 (there numbered as II.15); W. Jashemski, "The discovery of a market garden at Pompeii: the garden of the House of the Ship Europa," *AJA* 78 (1974) 391-404, figs. 80-82; Jashemski (supra n.34) App. 61-63; *CTP* IIIA, 28; Kockel (supra n.34) 479; *PPM* II, 954-62.

<sup>45</sup> M. Aoyagi, *La Casa della Nave Europa a Pompei* (Tokyo 1977).

<sup>46</sup> Ibid. 133.

<sup>47</sup> A similar drop occurs in the other insulae in the middle strip, and it frequently defines house boundaries: so at I.14.4; I.16.7; II.9.4, 5.

<sup>48</sup> Cf. Aoyagi (supra n.45) 110-11, figs. 5, 38, 40, 42-43; A. Laidlaw, *The First Style in Pompeii: painting and architecture* (Roma 1985) 85-99; *PPM* V. 11 figs. 1-5.

<sup>49</sup> Aoyagi (supra n.45) 111-12; 123; 130; 133; figs. 108-10.

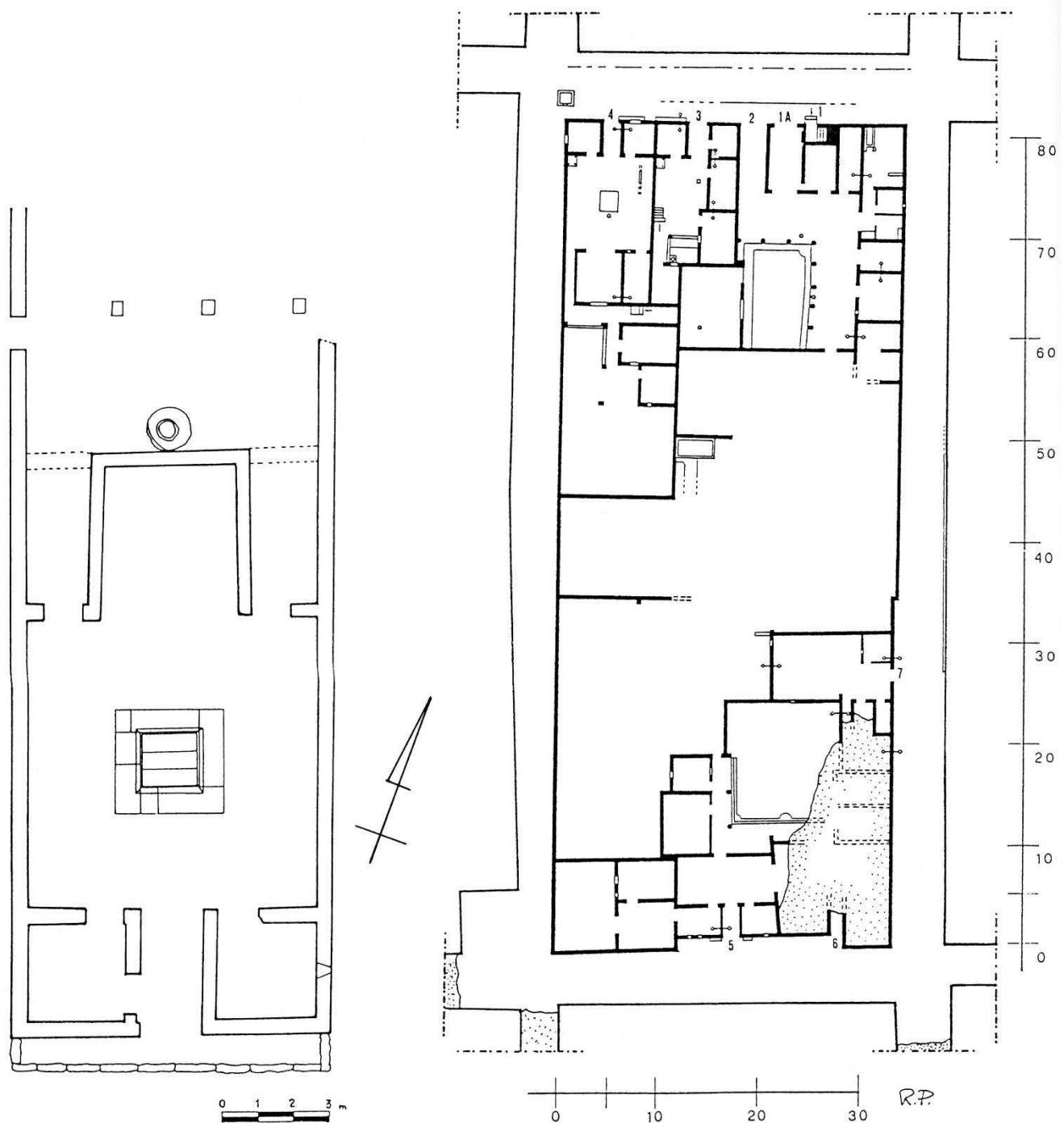


Fig.15. House I.15.1.

Fig.16. Insula I.16.

the E wall of the *atrium* had the same characteristics as that of the façade; this and the observation that the material of the handsome *impluvium*, in grey Nocera tuff, is different from and subsequent in use to the material employed in the first phase of the house, and that below this *impluvium* there are no traces of an earlier one, lead to the inference that originally there was an uncovered central area. If that is right, it explains the positioning of the well-cistern not at the centre of the *atrium* but rather at the rear of the *tablinum*, where it would correspond to a broad slope of roof above this band of rooms, sloping down towards the garden.<sup>50</sup> Behind the *tablinum* a portico ran the whole breadth of the house; the three supporting pilasters constructed of large Sarno stone blocks are still visible.<sup>51</sup>

The construction tends to create an illusion of spatial extension: from the street the view passes to the bottom of the garden through the entrance passage, the courtyard, the *tablinum* and the portico; two of the three pilasters of the portico are aligned with the window at the bottom of the *tablinum*, resulting in an irregular intercolumniation. Analogous situations are encountered, for example, in houses 1, 3 and 5 of insula I.9, all of which have a single porticoed area at the back of the *tablinum*, only subsequently incorporated into true peristyles by the addition of porticos on the other sides.

Regio I, ins. 16, door 4 (fig. 16)<sup>52</sup>

This house is on virtually the same plan as the last, and must have seen its open courtyard transformed into a compluviate *atrium* not long after the initial construction, given the early date of the *impluvium*, finished in *cocciopesto* decorated with white marble tesserae.<sup>53</sup> One (room 4) of the two *cubicula* that open on the courtyard and flank the entrance-passage still has traces of cornices in stucco relief of the original First Style decoration.<sup>54</sup> A further *cubiculum* 5, also opening on the *atrium*, flanks the *tablinum* 6, itself axially aligned with the entrance-passage. This *tablinum* too, which has a *cocciopesto* pavement decorated with white tesserae,<sup>55</sup> has a broad window on the area behind. Notable is the presence of a cistern mouth opposite the right door jamb of the *tablinum*. How the area at the back was organised in the very first phase is unknown because of the subsequent transformations, but the model of house I.15.1 suggests that it too had a portico.

The N and W boundary walls preserve unchanged the original construction in Sarno stone, in irregular but well-keyed work with scant mortar, employing large squared blocks on the corners and beneath load-bearing points, while the E and S walls show evidence of a series of modifi-

<sup>50</sup> Ibid. 115, 129, 133; figs. 26, 105, 150.

<sup>51</sup> Ibid. 116; 129-30; figs. 9, 28, 34, 112; cf. also Nappo 1995 (supra n.3) 47-49.

<sup>52</sup> The façade and fountain outside were excavated in 1917; the inside was freed of volcanic material in 1954; in 1974 a palaeobotanic exploration was made of the garden; in 1993 the NE part of the garden and room 13 (kitchen/latrine) were excavated; the house is currently (1995) under restoration. See NSc (1958) 99; Jashemski (supra n.34) App. 65; Kockel (supra n.34) 480; CTP IIIA, 30; PPM II, 998-1023; Eschbach and Müller-Trollius (supra n.27) 76.

<sup>53</sup> The profile of the moulded edges is of Fadda's type A (N. Fadda, "Gli impluvi modanati delle case di Pompei," in *Neue Forschungen* [supra n.28] 161-66); the borders are decorated with a broad stripe of white tesserae arranged neatly in rows; the bottom has a frame of meanders alternating with squares (*Repertoire graphique du décor géométrique dans la mosaïque antique* [AIEMA 1975] 264; *Le décor géométrique de la mosaïque romaine* [Paris 1985] pl. 38c), which in turn surrounds a rosette of rhombi (*Repertoire* 541). The decoration is in an advanced state of disintegration; cf. M. De Vos in *Pompeii* 79, 162-63, dating the *impluvium* (erroneously recorded as in I.16.1) as pre-Sullan; PPM II, 999, figs. 1-2.

<sup>54</sup> The dentilled cornice in high quality plaster, dividing the central from the upper zone, is preserved on the N and E walls; cf. Laidlaw (supra n.48) 96; PPM II, 1013-14, figs. 24-26.

<sup>55</sup> The pavement has a threshold decorated with scales (*Repertoire* 448; *Décor Géométrique* [supra n.53] pl. 217a), a field with regular dotting in white tesserae, and at the centre a carpet with a net of meanders and squares (*Repertoire* 490; DG pl. 190c).

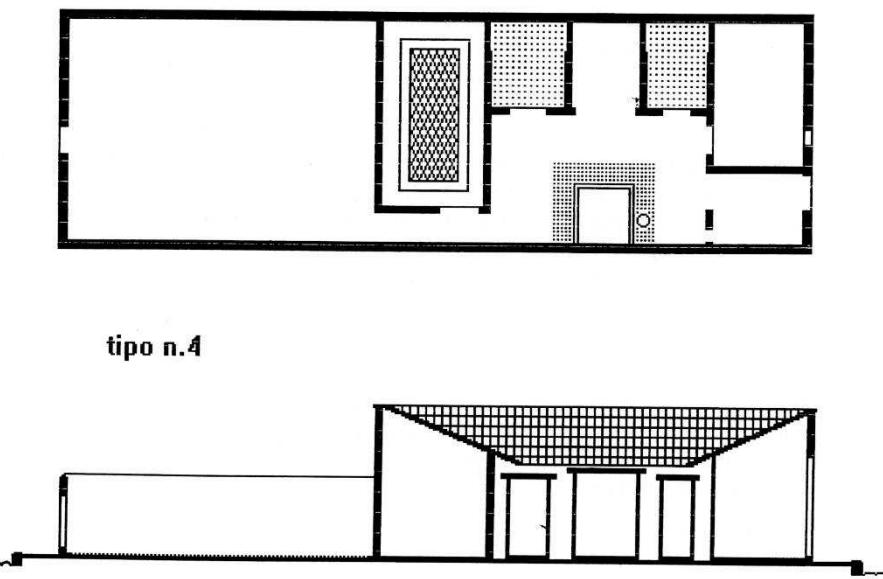


Fig.17. Type 4.

cations. In all likelihood, between the end of the 2nd and the beginning of the 1st c. B.C., the house had grown to occupy the whole N part of the insula and was organised around two cores, to the W around the impluviate *atrium*, to the E around the peristyle featuring large columns of grey Nocera tuff at door 2. The earthquake of 62 threw this large house into confusion, and it was divided into separate properties, to the point that between the *atrium* area and the peristyle an independent house was inserted at door 3.

The state of the house at the time of the eruption can be better understood thanks to the excavations of 1993. The rear part of the house hinged on the back yard 8, defined to the N and E by a small portico of disparate construction, traces of which can be read in the W front of room 10 and at the back of the *tablinum*. The E wing of the portico used for its southernmost beam a pilaster of unusual construction, made of two blocks of Sarno stone topped by a fragment of a column in grey Nocera tuff, complete with an Ionic capital with four faces.<sup>56</sup> Room 9, apart from functioning as a store, contained the staircase which led to the upper floor, extending over the rooms N and E of the portico. The roof had a double inclination, shedding water towards the back yard. At the time of the eruption, the house was under restoration, as can be judged from the heaps of building materials found in the portico and garden.

Other houses that can be attributed to the same typology include I.7.1, I.8.5, I.11.5, and I.13.1. The distinguishing characteristic of this type of house is the unroofed central space, its shape much elongated along the *fauces-tablinum* axis, as if intentionally to allow the possibility of a subsequent insertion of a compluviate *atrium*. It is beyond doubt that the form of the compluviate *atrium* was already known by the end of the 3rd c. B.C.; even so, stratigraphic explorations have shown that there is an ever-growing number of cases where a compluviate *atrium* appears to be a secondary feature within an architecture that seems to prefigure it. They include the *Casa del Chirurgo* (VI.1.10),<sup>57</sup> the *Casa delle Forme di Creta* (VII.4.62),<sup>58</sup>

<sup>56</sup> PPM II, 1023, fig. 40.

<sup>57</sup> See A. Maiuri, "Saggi nella 'Casa del Chirurgo,'" *NSc* (1930) 381-95, and Wallace-Hadrill, below.

<sup>58</sup> See A. D'Ambrosio and S. De Caro, "Un contributo all'architettura e all'urbanistica di Pompei in età ellenistica. I saggi nella casa VII-4-62," *AION* 11 (1989) 178 ff.; note that the authors assume the presence of an *impluvium* in the first phase despite finding no traces.

and the *Casa di Francesco Giuseppe* (VIII.2.39).<sup>59</sup> All of these houses feature grey tuff *impluvia* levelled on chips of Sarno stone, as is the case in I.15.1.

#### Type 4 (fig. 17)

The previous three types are all symmetrical around an axis centred on the entrance passage; by contrast the fourth has its principal entrance off-centre, and the symmetrical axis on which the *tablinum* stands is at a right-angle to the axis running from entrance to garden. The *tablinum* is flanked by two *cubicula*, flanked in turn by two large rooms (one along the façade, the other beside the garden) used as dining or living rooms. The roofs in this case are arranged on the model of the hellenistic *pastas*, and discharge rainwater into an unroofed courtyard, to collect in an *impluvium* with a cistern to one side. At the rear stretches the garden. Two examples follow:<sup>60</sup>

#### Regio I, ins. 20, door 4 (fig. 18)<sup>61</sup>

With its ample remains of First-Style decoration belonging to the first phase, this is the best preserved example of the type. The high door, giving access to a broad entrance passage 1, still has its architrave resting on two capitals of grey Nocera tuff of the 'a sofa' type,<sup>62</sup> with a cornice of astragals and palmettes, decorated both on the external faces towards the street and on the internal faces on the entrance passage. The *atrium* 2 preserves the original *impluvium*, set against the S wall (fig. 19); it is square in plan, has moulded edges with socle and *kyma reversa* (Fadda's type A),<sup>63</sup> and a *coccopesto* floor decorated with swasticas and squares traced by a simple line of white marble chips,<sup>64</sup> while the surrounding pavement was enlivened with regular punctuation. The S wall of the *atrium* featured a structural First-Style decoration with a high socle in yellow ochre, orthostats and two rows of ashlar, the whole field divided into three by two pilaster strips in low relief coloured purple (fig. 20); these, set in correspondence with the *impluvium*, are off-centre relative to the wall as a whole, but on an axis with the *tablinum* 5, the *antae* of which form decorative pendants to them.<sup>65</sup> The *cubicula* 4, 6 that flank the *tablinum* had high doors, with blocks in Sarno stone laid vertically and horizontally in alternation; subsequently these were lowered, and clear traces remain on the jambs. The floor of these rooms was in *coccopesto* with regular punctuation in white tesserae, largely covered over by a later paving. The large room 3 to the right of the entrance must have had First-Style decoration, but it was completely covered by later redecoration; what survives is a very faded Fourth-Style decoration of the type of the '*Casa dei Pittori*'.<sup>66</sup> Of particular interest concerning the first phase of this house is the decoration in First-Style frescoes and elegant *signinum* pavement of the large dining room; this was subsequently split in two 7/8 — traces of *signinum* pavement are visible under the dividing wall — and at the time of the eruption room 7 func-

<sup>59</sup> In course of publication by P. Carafa and A. Carandini.

<sup>60</sup> See *RStPomp* 6 (1993-94) 89-92 for others, including I.13.11.

<sup>61</sup> Excavations started in February 1959; in 1986-87 the house was completely restored, architecturally and decoratively. See G. Cerulli Irelli in *Instrumentum domesticum* (Rome 1977) 53-57; CTP IIIA, 36; S. C. Nappo, "Regio I, insula 20," *RStPomp* 2 (1988) 189-90; Jashemski (supra n.34) App. 67; PPM III, 1071-78; Eschebach and Müller-Trollius (supra n.27) 81; S. C. Nappo, "Pompeii: la casa Regio I, ins.20, n.4 nelle sue fasi. Considerazioni e problemi," in *Ercolano 1738-1988* (supra n.32) 667-76.

<sup>62</sup> On capitals 'a sofa', see M. Cocco, "Due tipi di capitelli a Pompei: 'corinzio-italici' e 'a sofa,'" *CronPomp* 3 (1977) 110 ff.; further, PPM III, 1072-73, figs. 1-3; Nappo 1993 (supra n.61) 669, pl. CLXVI,1.

<sup>63</sup> Fadda (supra n.53) 161 ff.; Nappo 1993 (supra n.61) 669, pl. CLXVI,2.

<sup>64</sup> *Repertoire* 490.

<sup>65</sup> Other fragments of the same decorative scheme are found on the far right of the W wall and at the corner of the N and E walls; cf. Laidlaw (supra n.48) 98; Nappo 1993 (supra n.61) 669-70, pl. CLXVII,1.

<sup>66</sup> Cf. M. De Vos, "La bottega dei pittori di via di Castricio," in *Pompeii 1748-1980* (supra n.40) 119-30.

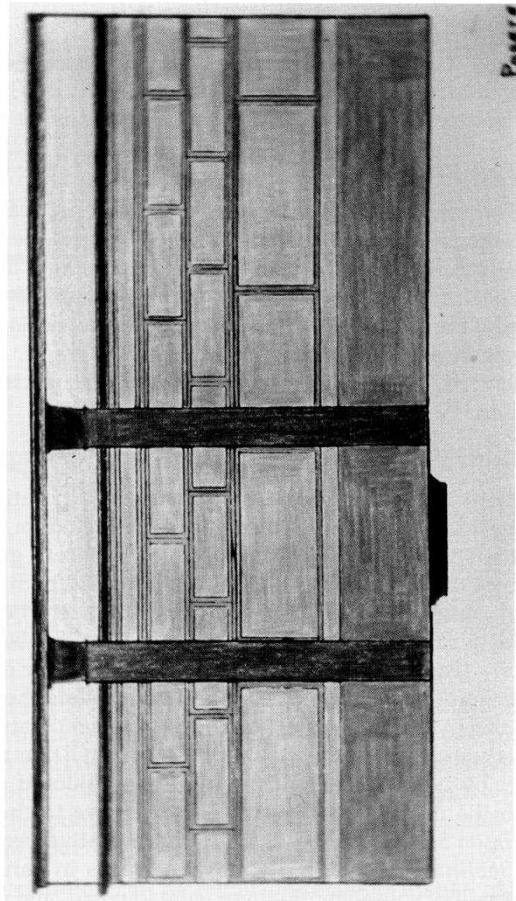
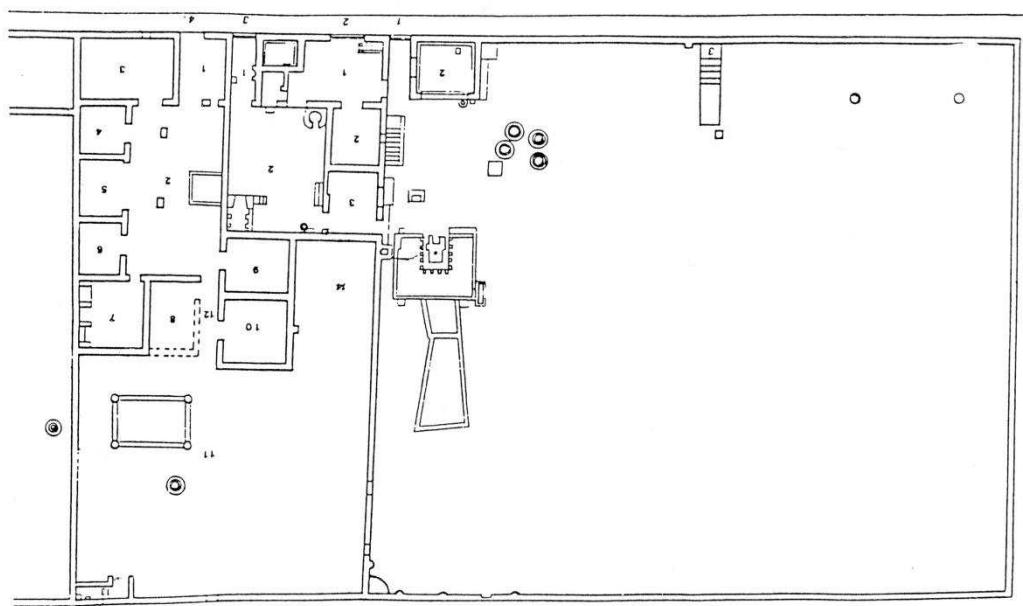


Fig.19 (above). House I.20.4, *impluvium* and south wall.  
Fig.20 (below), House I.20.4, room 2, reconstruction of the south wall.



tioned as kitchen/latrine, room 8 apparently as a threshing floor. The First-Style wall decoration features a high socle with a design of cubes in perspective, coloured white, yellow and brown on the end wall, white, green and black on the side walls, with a border of a frieze depicting an Ionic wave on a purple base plinth; above the perspective cubes is a strip of faux marble, a band of square panels, three rows of faux polychrome marble in ashlar blocks, edged above by a red crowning strip, and a cornice in moulded stucco jutting out boldly.<sup>67</sup> The *signum* pavement decorated with white tesserae had a single central carpet with a broad linking band of regular pointing, and an outer meander border with swasticas and squares, enclosing a field of much elongated losanges.<sup>68</sup> A corridor 12 led to the garden in the W part of the house, where in the centre of the end wall a back door opened. The house underwent a long process of transformations, still unfinished to judge by the heaps of lime and crushed terracotta. The first layout<sup>69</sup> underwent first a reorganisation,<sup>70</sup> and then, presumably after the earthquake of 62, an enlargement at the expense of the house immediately to the south.<sup>71</sup>

Regio I, ins. 13, door 8 (fig. 21)<sup>72</sup>

The final state of the house at the time of the eruption seems to have been the result of some reorganisation, but consistent traces of the earlier phases remain. The distribution of rooms on the ground floor is essentially that of the earliest layout, given that the load-bearing elements in large square blocks of Sarno stone remained unchanged (fig. 22). Here too the entrance/garden axis stands at right-angles to the *tablinum*/courtyard axis. That the courtyard remained un-roofed throughout is clear from the absence of beam holes for roofing in the walls (particularly the S wall which stands to a considerable height); a series of small holes in this wall indicates an insubstantial shelter sloping to the W, and excludes a more substantial roofing for the whole area. Consistent with this is the provision of an *impluvium* in the back yard 9, both acting to collect water and to illuminate the dining room 11 through a window in its S wall, which was subsequently blocked. In the earliest layout, the house had a garden at the rear where subsequently a *caupona* (I.13.15) was inserted, as well as the extreme northern strip of the extensive garden of house I.13.12. Signs of this reorganisation are legible on the walls of both the latter houses. It is not unlikely that these changes took place shortly after the original layout, and that the construction of the *impluvium* served to give light to rooms 10, 11, after the loss of light consequent on ceding the garden. That this happened in the 2nd c. B.C. is implied by the moulded edges of the *impluvium*, of Fadda's type A, and the use of irregular construction in homogeneous lava blocks, in contrast to the Sarno stone used in the rest of the house.

In the Augustan period, when the via di Nocera grew in importance thanks to the proximity of a focus of public life in the amphitheatre/palaestra complex, the house was extended to a second floor on the three sides with existing rooms. The upper floor was accessible by a stairway 7 inserted to the west of the *tablinum*. At the point of juncture of lower and upper floors the western front of the courtyard was given a moulded cornice of grey Nocera tuff, projecting sharply. Nothing remains in place to indicate the form of the upper floor, but the presence in room 4 of a considerable quantity of columns and capitals of the same material, probably piled here after the earthquake of 62, suggests colonnaded *cenacula*. Belonging to the same Augustan phase is a splendid terracotta well-head in the form of a tetrastyle tholos, with a representation in relief of banquet scenes; it was positioned on the mouth of the cistern

<sup>67</sup> The state of the decoration has degenerated considerably since excavation; see Laidlaw (*supra* n.48) 98, pl. 38b; *PPM* III, 1076-78, figs. 7-10; Nappo 1993 (*supra* n.61) 670, pl. CLXVII,2.

<sup>68</sup> *Repertoire* 11; Nappo 1993 (*supra* n.61) 670, pl. CLXVII,3.

<sup>69</sup> Nappo 1993 (*supra* n.61) pl. CLXV,1.

<sup>70</sup> Ibid. pl. CLXVIII,1.

<sup>71</sup> Ibid. pl. CLXIV,1.

<sup>72</sup> Excavated between 1953 and 1956, the house was fully restored in 1993. Cf. *PPM* III, 896-902; Eschebach and Müller-Trollius (*supra* n.27) 69.

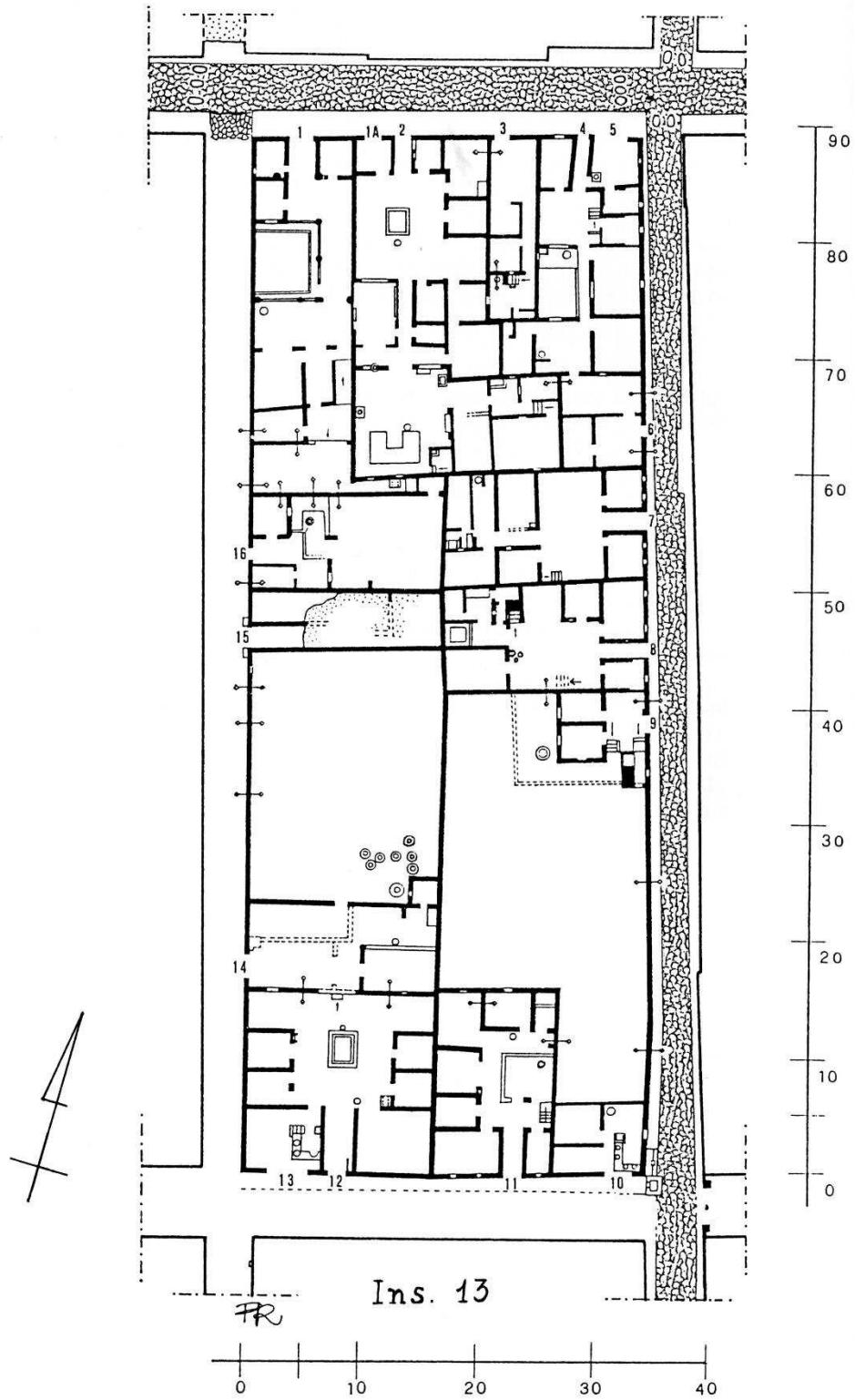


Fig.21. Insula I.13.



Fig.22 (above). House I.21.5, corridor and side rooms. Fig.23 (below) House II.9.4, the garden and E wall.

by the N door-jamb of room 11. This well-head was subsequently almost completely buried by the raising of the floor after the earthquake.<sup>73</sup>

#### Conclusion

The houses examined above are all fairly simple and modest. The extent of the built-up front part is roughly equivalent to that of the garden at the rear; in the front, the ratio of roofed to unroofed space is about 60 : 40. From a constructional point of view, the structures require no particular craftsmanship. There was no need to roof significant spans, since the courtyard was left open, and no room was particularly large.

The materials employed for construction were homogeneous within individual houses, or within groups of houses evidently constructed together, like I.9.8-10 or I.11.12-14; however,

<sup>73</sup> See *Riscoprire Pompei* (Rome 1993) 242 n.146.

across the quarter as a whole there are considerable variations, as is also true of construction techniques. Sarno stone is abundant, employed both in *opus africanum* frameworks and in load-bearing elements like pilasters, jambs or columns. In the make-up of the walls, apart from Sarno stone, lava crust and lava stone of Vesuvian origin occur fairly frequently.<sup>74</sup> These materials are mostly used in rubble construction in *opus incertum*, but occasionally courses of lava stone, particularly in foundations, are followed by courses of Sarno stone. In the case of *opus africanum*, the vertical chains of Sarno stone sometimes contain filling of the same material, sometimes lava stone.<sup>75</sup> The articulation of the roofs allowed the collection in cisterns of enough rainwater for domestic use and for the cultivation of the small garden. Decoration was in the First, 'masonry', Style, not greatly elaborated.<sup>76</sup> In many cases, pavements in decorated *cocciopesto* are found, but these belong, in our view, to a secondary stage, not to the first layout.

Hoffmann's reconstruction of the houses as small in plan, but constructed on two floors and almost completely roofed (fig. 5 above), seems for a number of reasons to apply only to the later stages of development. We have seen in several cases that where there is evidence of a second storey, clear traces also remain of a previous phase consisting of a single storey with an unroofed central courtyard. Further, given a situation of new housing being built in an area that previously had at most only a few scattered buildings, it seems hard to explain the reason for houses with upper floors, and with covered central spaces requiring the use of trusses, entailing a highly specialised workforce and significant costs. In many cases, the impression given by the plan of the insulae of a longitudinal dividing line down the centre, apparently separating house plots to E and W, is no more than the division between the built-up area of the houses and their gardens.

Indeed, one need only look at Hoffmann's example, ins. I.11 (fig. 9). There is no case of an entrance door, open or blocked, in the E wall, apart from the evident backdoors at 8 and 9 (cf. fig. 10), and the original boundary walls of the properties, which still remain unaltered, show no signs of rooms demolished or passages blocked. The point can be confirmed in many other insulae in Regiones I and II, as, for example, at II.9.4, where there has been a recent excavation in the garden created by uniting what had been the two gardens of two separate houses.<sup>77</sup> There it was possible to see clear traces in the E wall of blocked back doors (one for each house) and of the previous dividing wall; but neither on the N and S walls, nor on the E wall itself, is there any sign of demolished rooms (fig. 23). The same results emerge from examination of the walls of the whole E side of ins. II.8 (fig. 24), of the E sides of I.13 and 14, and of other insulae.

It is likely that in later centuries some of these gardens were used for new houses, and particularly in the Augustan period when there was a shortage of building land within the city and the area around the via di Nocera acquired importance from the construction of the large Palaestra. The house at I.20.4 is a case in point: extensive stratigraphic exploration throughout the uncovered area 11 has exposed (fig. 25) the foundations of a house inserted in the original garden; they extend over the N part of the garden (corresponding to the façade of house 4), while the S part (corresponding to the façade of house 2/3) had no traces of structures. The foundations in question emerged at a depth of little more than 30 cm below the soil level of 79. The house was very small and simple: an entrance set in the middle of the wall, originally

<sup>74</sup> Lava crust (schiuma di lava), i.e., the top part of the lava flow, is normally identifiable by a reddish colour and porous consistency; light but tough, it is suitable for the upper parts of walls; lava stone, normally grey, very hard and heavy, is used particularly in foundations and in the lower levels. Cf. J. P. Adam, "Les matériaux pompéiens," in *Pompéi, étude de dégradation, proposition de restitution* (CNRS 1983).

<sup>75</sup> E.g., the W wall of I.12.1 that faces the lane. Cf. Adam, *Roman building* (supra n.40) fig. 277.

<sup>76</sup> On the distribution of First Style, see *Pompeii 1748-1980* (supra n.40) App. pl. 2 (not complete), and Laidlaw (supra n.48) 68-102, 343-43.

<sup>77</sup> See Sodo 1987 (supra n.3) 158; Sodo 1988 (supra n.3) 200-1.

Urban transformation at Pompeii, late 3rd and early 2nd c. B.C. 119



Fig.24. House II.8.6, the garden and east wall.



Fig.25. House I.20.4, the garden during excavation.

the back door of house 4, opened on a passageway that led to a sort of tetrastyle court with columns in brickwork, collecting water in a large cistern that stretched to the E under the house. To the right of the corridor opened a latrine and two *cubicula*, to the left a dining room approach-

ed from the court.<sup>78</sup>

The evidence confirms that the insulae were not originally laid out with houses on both the E and W sides, and that the dividing line in the middle is only that between house and garden. On the basis of this evidence, it seems difficult to support Hoffmann's picture of houses occupied by a property-owning middle class.<sup>79</sup> The simultaneous creation of several dozens, if not hundreds, of plots of modest dimensions suggests an influx of new population, of people unlikely to be of more than low standing. If we are dealing with a primarily agrarian economy, it is hard to imagine that the proprietors of these new plots were more than smallholders living at subsistence level.

Moreover, the development of these houses cannot, in my view, be explained simply as the product of the decisions of individual owners; rather, it appears a planned response to a specific situation, and the realisation of a detailed scheme of urbanisation of the remaining unbuilt areas within the circuit of the walls. In all likelihood these houses will have been constructed within the space of a few years (perhaps a generation) following a predetermined plan of division into building lots granted on the basis of precise assignations. The slight variations in the dimensions of the lots are probably due to a combination of the lie of the land with the precise position of the lot within the insula, and of the insula within the area.

The impression that emerges is that the subdivision of the insulae took place in response to some extraordinary event, such as the injection into the city, under outside pressure, of numerous families originating elsewhere and arriving more or less together within a period of a few years. Their simultaneous need for housing led to the development of architectural solutions that were simple, functional, economical and easy to carry out. When might this have happened? Certainly it was at a time when First Style wall decoration was standard, as also was the widespread use of Sarno stone in various techniques. The most suitable context, in my view, is the end of the Second Punic War, a time when the destruction of so many cities in the region created the need for new settlements for refugees. The suggestion is supported by the presence at Pompeii of Praenestine and Latin gentile names, including those deriving from Capua and Nocera, both cities destroyed in the Hannibalic invasion.<sup>80</sup> It would be no surprise if the assignation of building lots within the city was linked to the assignation of agricultural plots outside the walls. This pattern of settlement started, I believe, at the end of the 3rd c. B.C., and was effectively complete in the first quarter of the 2nd c. with the occupation of virtually all the free area within the walls.

That a large part of the economy of Pompeii before the Social War depended on the presence of many small proprietors with holdings in the *ager Pompeianus* and houses within the walls has been argued on the basis of other evidence.<sup>81</sup> The new picture that emerges is one of a remarkably swift absorption of a significant additional population of small proprietors within the socio-economic context of the city and its territory, and one of striking vitality in succeeding generations, indicated by the numerous modifications to buildings and by the frequent acquisition and disposal of properties and parts of properties within only a few years of the first settlement. Here was a transformation of the urban fabric of the city of Pompeii, one that left a lasting impact on its development in subsequent centuries.

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<sup>78</sup> See Nappo 1993 (supra n.61) 670, fig. CLXVIII,1.

<sup>79</sup> On the connections between social status and housing, see Wallace-Hadrill (1994).

<sup>80</sup> On the influx to Pompeii of such *gentes*, see P. Castrén, *Ordo populusque pompeianus. Polity and society in Roman Pompeii* (Rome 1975) 39 ff.; E. Lepore, "Il quadro storico," in *Pompeii* 79 (supra n.10) 17-18. On archaeological links between urbanisation and the post-Hannibalic period, cf. Nappo 1988 (supra n.3) 32; De Simone in Conticello 1990 (supra n.4) 120; De Caro 1992 (supra n.12) 88; Zevi 1991 (supra n.32) 52.

<sup>81</sup> E.g., Lepore in *Pompeii* 79, 17-18; G. Gullini, "Il restauro a Pompei," in *Restaurare Pompei* 28-29.