

THE ARCHITECTURAL DESIGN OF THE PERISTYLIUM-GARDEN IN
EARLY ROMAN LUXURY VILLAS

Introduction

In Roman domestic architecture the spacious *peristylia/porticus*-gardens, which were added in the late 2nd c. BC, with their accompanying *ornamenta gymnasiode* and *pinacothecae*, emulated the royal and public architecture of the Hellenistic East and particularly the architectural settings of the Greek educational institutions, the *gymnasia*. These structures represented the education and culture of the villas' owners in the Greek style.

The scholarship about these structures has been prolific. In his seminal work on Roman gardens in 1943, Grimal examined the *peristylum* and loose *porticus* structures in relation to the garden and indicated that both were different design solutions to the same »problem« (*sic*), namely the garden¹. Grimal's contribution served to clarify the confusion that Swoboda's typological distinction, between villa with peristyle (»Peristylvilla mit Gartenperistyl«) and villa with *porticus* (»Portikusvilla«), had caused in 1919². In the 1960s and 1970s scholars analysed the visual potency and spatial dynamics in these structures and addressed their dominating relation to the landscape³. In 1987 Mielsch addressed the cultural affiliations of these structures to the Hellenistic *gymnasium*⁴; and finally, most recently Dickmann's analysis suggested that the *peristylum/porticus*-garden structure, with its accompanying *ornamenta gymnasiode*, in being incorporated as an alien element into the Roman house was itself an architectural *ornamentum*⁵.

Whereas previous scholarship analysed the architectural development, cultural affiliations, and history of this structure, my paper addresses it as a novel architectural form that embodied and articulated the ideology of the Roman luxury villa culture. Romans developed a new design language between architecture and landscape by incorporating and appropriating elements of both Greek and Roman architectural vocabularies. By examining this new design language my aim is to shed light on the ways in which these structures amalgamate the cultural negotiations of Roman elites, who were in the process of constructing their identity in the new socio-political situation of the Mediterranean world.

Peristylum-Garden: Definition

The structure to which we refer as a *peristylum*-garden is a four-aisled portico surrounding an interior garden. This is a modern conventional term in the scholarship on Roman domestic architecture – in fact, it is Swoboda that coined the term (»Gartenperistyl«) and Grimal that further defined it (»jardin-peristyle«)⁶. Romans themselves used the words *palaestra* and *gymnasium* for the entire structure or *peristylum*, *porticus*

¹ GRIMAL 1943, 217–247.

² SWOBODA 1919, 5–60.

³ H. DRERUP, Die römische Villa, MarbWPr 1959, 1–24; H. DRERUP, Bildraum und Realraum in der römischen Architektur, RM 66, 1959, 147–174; B. FEHR, Plattform und Blickbasis, MWPr 1969, 31–67; F. RAKOB, Der Bauplan einer kaiserlichen Villa, in: W. HARTMAN (ed.), Festschrift Klaus Lankheit zum 20. Mai 1973 (Cologne 973) 113–125.

⁴ MIELSCH 1987.

⁵ J.-A. DICKMANN The Peristyle and the Transformation of Domestic Space in Hellenistic Pompeii, in: R. LAURENCE – A. WALLACE-HADRILL (ed.), Domestic Space in the Roman world: Pompeii and Beyond, JRA Suppl. 22 (Portsmouth, Rhode Island 1997) 121–136.

⁶ SWOBODA 1919, 14–20; GRIMAL 1943, 226–229.

and *ambulationes* for the portico-structure and ambulatories, and the garden would be described with words such as *silva virdicata* (green shrubberies):

equidem hoc quod melius intellego adfirmo, mirifica suavitate villam habiturum piscina et salientibus additis, palaestra et silva virdicata.

»For my part, I can assure you of this, which is more in my line, that you will have a villa marvellously pleasant, with the addition of a fish-pond, spouting fountains, a palaestra, and green shrubberies«⁷.

Characteristic examples of this architectural type are found in the Villa of the Papyri, the big southwest *peristylum*-garden (fig. 1), and in Villa Arianna A, the west *peristylum*-garden H–Z (fig. 2) – these two examples also indicate the variety in terms of scale. However, there are several variations of the type: instead of a four-aisled portico, there is a three-aisled one where the fourth side either opened to the landscape – as in Villa Oplontis A (*porticus* 40 and garden 59 [fig. 3]) and Villa San Marco (*porticus* 1–2 and garden [fig. 4]) – or was closed with a different architectural structure – such as an arched *cryptoporticus* structure in Villa San Marco (62–63) or a blind wall as in Villa Arianna B (fig. 5). In some cases, the rectangular peristyle form would be abandoned altogether and *porticus* structures would form loose or unconfined design compositions with the garden, for example the north *porticus*-garden (33–34–56) in Villa Oplontis A and the central *porticus*-garden in Villa Arianna A, between *porticus* 73 and U. In these cases, there is no longer a *peristylum* structure and Swoboda's term »Portikusvilla« is a more suitable term than the *peristylum*-garden one.

Architectural Vocabulary

There are two elements in the architectural language of these structures: the *porticus* structure (whether a *peristylum* or a loose *porticus* structure) and the big pleasure garden, which are indebted in both, Hellenistic and Roman, architectural vocabularies. These precedents have been pointed out in the aforementioned scholarship⁸. I will summarise them here in order to address the ways in which Roman designers transformed them and in doing so created a novel architectural language.

The peristylum/porticus structure

Hellenistic royal, public and religious complexes provided the inspiration for the *peristylum* and *porticus* structures. The precedents were the peristyle courtyards of the Hellenistic palaces (e.g. the palaces in Pella, Aigai and Demetrias)⁹, the *palaestrae* and *stoai* of the Hellenistic *gymnasia* (e.g. at Olympia, Delphi and Delos)¹⁰, the *stoai* of sanctuaries (e.g. the sanctuaries of Asklepios in Kos, of Athena in Lindos, and of Athena and Dionysos in Pergamon)¹¹ and the *stoai* in the *agorai* (e.g. in the *agorai* of Priene, Milet and Athens)¹².

The use of the four-aisled or three-aisled *porticus* structures had started in the Roman Republican sanctuaries, for example, in the Sanctuary of Fortuna Primigenia in Praeneste and in the Sanctuary of Hercules in

⁷ Cic. ad Q. fr. 3, 1, 3. Translation by D. R. SHACKLETON BAILEY, ed. Loeb; cf.: Cic. de orat. 1, 98; 2, 21; Vitr. 5, 11, 1.

⁸ Especially: GRIMAL 1943; MIELSCH 1987.

⁹ NIELSEN 1999, 81–94.

¹⁰ Olympia: DELORME 1960, 102–114 fig. 21; WACKER 1996, 13–19 fig. 4; 121–131. Delphi: J. JANNORAY, Le gymnase. Topographie et architecture, FdD 2 (Paris 1953) 35 f. pl. 9, 1; DELORME 1960, 76–80, figs. 11, 12; GLASS 1967, 84–101; E. PENTAZOS, Le gymnase, in: J.-F. BOMMELAER (ed.), Delphes. Centenaire de la grande fouille réalisée par l'École française d'Athènes, 1892–1903. Actes du Colloque Paul Perdrizet, Strasbourg, 6–9 novembre 1991 (Leiden 1992) 225–232; WACKER 1996, 195–207. – Delos: DELORME 1960, 149–153; J. AUDIAT, Le gymnase, Délos 28 (Paris 1970) pl. A; J.-C. MORETTI, Le gymnase de Délos, BCH 120, 1996, 617–638; GLASS 1967, 175–187; WACKER 1996, 179–193.

¹¹ H. LAUTER, Die Architektur des Hellenismus (Darmstadt 1986) 106–109, 122, 290–301; I. D. KONTES, Αἱ ἐλληνιστικαὶ διαμορφώσεις τοῦ Ἀσκληπείου τῆς Κῶ (Rhodes 1956).

¹² J. J. COULTON, The Architectural Development of the Greek Stoa (Oxford 1976) 61, 219–226 (Athens); 63 f. 260 f. (Milet); 64 f. 277–279 (Priene).

Tivoli¹³, as well as in the public *porticus*, for example in the *porticus* of Metellus in Rome¹⁴. By incorporating these monumental public structures in domestic architecture, Roman designers wished to assimilate both the *luxuria* of the Hellenistic East and the grandiose character of Roman public architecture.

But it was not merely the public, monumental and sumptuous character of these structures to which Romans aspired. The *peristylum* and *porticus* structures were foremost representative of the architecture of the Greek educational institution, the *gymnasium*, as is evident from the literary sources. It is not by chance that Latin authors located philosophical discussions in the *peristylum*-garden. The appropriateness of these structures as settings for philosophical discussions is explicitly stated by Catulus in a discussion that Cicero narrates as taking place at Crassus' villa at the end of the 1st c. BC:

... *num tandem aut locus hic non idoneus videtur, in quo porticus haec ipsa, ubi ambulamus, et palaestra, et tot locis sessiones, gymnasiorum, et Graecorum disputationum memoriam quodam modo commovent?*

»... surely you do not think this is an inappropriate place (sc. for discussion)? Here, where this portico, in which we are now walking, and this palaestra, and sittings at so many places, awaken somehow the memory of the *gymnasia* and the philosophical disputes of the Greeks?«¹⁵

The Hellenistic *gymnasia* were institutions for the education of the youth. Their purpose was to promote the physical education but foremost the cultivation of the mind¹⁶. Cicero used *palaestra* and *gymnasium* interchangeably to signify the *peristylum/porticus*-gardens in his villas, whereas in its original context the word *gymnasium* signified the institution and the words *palaestrae* and *stoai* signified the architectural forms of the *gymnasium*¹⁷. Whether the architectural form that Romans used was the actual architectural form of the *gymnasium* is not important. What is important is that Romans thought that these structures were the architectural language of the Hellenistic *gymnasia*, and by incorporating them in their private architecture they made a conscious cultural reference to the *gymnasium* institution¹⁸. We should bear in mind that Roman elites had not only visited the Hellenistic *gymnasia*, or had heard of them by reputation, but some of them had also studied in these institutions. An inscription from Attica attests the presence of young Romans studying in a *gymnasium* as early as 119/8 BC¹⁹, and we know that Cicero himself had studied in Athens and he also had sent his son to do the same²⁰.

Furthermore, owners made conscious references to the *gymnasium* in choosing the statues displayed in their villas' gardens. For example, in his letter to M. Fadius Gallus Cicero indicated that the sort of statues that he had in mind for a *palaestra* was in the fashion of the *gymnasia* (*similitudinem gymnasiorum*):

Ea enim signa ego emere soleo quae ad similitudinem gymnasiorum exornent mihi in palaestra locum.

»The sort of statues that I am accustomed to buy are such as may adorn a place in a *palaestra* after the fashion of *gymnasia*«²¹.

¹³ F. COARELLI, I santuari del Lazio in età repubblicana (Rome 1987); J. M. MERZ, Das Heiligtum der Fortuna in Palestrina und die Architektur der Neuzeit (Munich 2001); I. NIELSEN, Cultic Theatres and Ritual Drama: A Study in Regional Development and Religious Interchange Between East and West in Antiquity (Aarhus 2002); J. A. HANSON, Roman Theater-Temples (Princeton 1959) 31–36; NÜNNERICH-ASMUS 1994, 189–196.

¹⁴ Porticus of Metellus (*terminus post quem* 146 BC) in the Circus Flaminius: NÜNNERICH-ASMUS 1994, 203–205.

¹⁵ Cic. de orat. 2, 19–20. Translation after T. M. O'SULLIVAN, The Mind in Motion: The Cultural Significance of Walking in the Roman World (Ph.D diss. Harvard University, Cambridge 2003).

¹⁶ H. I. MARROU, Histoire de l'éducation dans l'antiquité (Paris 1965) 197–201; DELORME 1960, 260.

¹⁷ There is, as always, confusion regarding the terms used to describe the institution and/or its structures and a lot of ink has been spent about this: DELORME 1960; S. L. GLASS, The Greek Gymnasium. Some Problems, in: W. J. RASCHKE (ed.), The Archaeology of the Olympics: The Olympics and Other Festivals in Antiquity (Madison 1988) 155–173; N. B. CROWTHER, The Palaestra, Gymnasium, and Physical Exercise in Cicero, in: N. B. CROWTHER (ed.), Athletika. Studies on the Olympic Games and Greek Athletics (Hildesheim 2004) 405–419; WACKER 1996; WACKER 2004.

¹⁸ We may infer the potency of this cultural reference when we read Piso's thoughts as he and Cicero visit the Akademia in Athens: Cic. fin. 5, 2.

¹⁹ IG II 2, 1008.

²⁰ In March 28, 45 BC Cicero writes to Atticus in regard to Cicero junior's studies in Athens (Cic. Att. 12, 32, 2) and in May 25, 44 BC Trebonius writes to Cicero that Cicero junior expresses the intention to visit Asia Minor (Cic. fam. 7, 16).

²¹ Cic. fam. 7, 23, 2. Translation by D. R. SHACKLETON BAILEY, ed. LOEB.

We find such cultural references in the *peristylia*-gardens of villas, for example the head of Doryphoros by Polykleitos in the small *peristylum*-garden in the Villa of the Papyri²². Cicero, or any other elite, associated these *ornamenta gymnasiode* with the intellectual aura of Classical Greece and provided a mere stage for their ambitions²³.

The pleasure garden

The second element in the architectural vocabulary of the *peristylia*-gardens is the pleasure garden, which was not associated with the Hellenistic *gymnasia*. The *stoai* and *palaestrae* of the Hellenistic *gymnasia* were situated in the midst of big parks, which were the earliest forms of *gymnasia*²⁴. We are told, for example, that the Akademia, Lykeion and Kynosarges were planted with trees and laid out with lawns²⁵ and that the courses of the *xystos* of the *gymnasium* at Elis were aligned with tall plane trees²⁶. The parks of the Hellenistic *gymnasia* were not designed landscapes or pleasure gardens, though. Moreover, they provided open-air areas with shade for the intellectual activities of the *gymnasium*²⁷.

The inspirations for the Roman pleasure garden, with its sumptuous waterworks and its ornamental plantings, seem to have been the luxurious pleasure gardens of the Hellenistic world and East Persia. It is generally assumed that the exemplars for the Roman pleasure gardens were the royal parks of the successors of Alexander²⁸, e.g. in the *basileia* of Alexandria and in the royal palace of the Seleucids in Antioch (situated on an island in the river Orontes)²⁹ and the public gardens of Hellenistic cities, e.g. the public parks in Alexandria, which, in turn, emulated the Persian *paradeisoi*³⁰, for example the hanging gardens in the palace of Babylon³¹, the park around the palace complex at Pasargadae and the palace of Dareios in Susa³². However, there is no indication that the incorporation of pleasure gardens in Roman domestic architecture was a conscious cultural reference to Hellenistic royal parks or to Persian *paradeisoi*³³.

Yet again, these pleasure gardens with their ornamental plantings and sumptuous waterworks do seem to point towards the East in that they made all the appropriate references to luxury and pleasure. The pleasure gardens in the Roman villas were, however, not purpose-built *paradeisoi*, but the »*paradeisos*-theme« was subordinated to the architecture³⁴. In doing so, designers followed the tradition of the Roman domestic garden, where green spaces were either enclosed constructed landscapes or Purcell's »domestic buildings«³⁵. This approach to the garden as a constructed landscape is clear in the design of the *peristylum/porticus*-garden, where the garden is framed and accessed by the *peristylum* or the *porticus* structure (fig. 6).

New architectural language: peristylum/Porticus structure and pleasure garden

The *peristylum* structure had entered the vocabulary of Roman domestic architecture in the 2nd c. BC, where – as Dickmann's analysis has indicated – they remained a culturally alien element »with the conscious

²² NM 4885. WOJCIK 1986, G 1, 171–173 pls. 90. 91.

²³ Cic. Att. 1, 6, 2; Z. NEWBY, Greek Athletics in the Roman World (Oxford 2005) 91; M. MARVIN, Copying in Roman Sculpture: The Replica Series, in: E. D'AMBRA (ed.), Roman Art in Context: An Anthology (Englewood Cliffs 1993) 161–188 esp. 162–164; S. DILLON, Subject Selection and Viewer Reception of Greek Portraits from Herculaneum and Tivoli, JRA 13, 2000, 21–40.

²⁴ WACKER 2004, 353.

²⁵ Herakleides [sub auctore Dicaearchos] Athenaiou Perieg. fragm. 1, 98. – The Akademia was situated in a big park with plane trees, olive trees, white poplars and elms, amongst which the athletic structures and the religious monuments were disseminated: Aristoph. Nub. 1002–1008; Plin. nat. 12, 5; Paus. 10, 30, 2; Plut. Sulla 12, 3. DELORME 1960, 41 f.

²⁶ Paus. 6, 23, 1; St. G. MILLER, Arete: Greek Sports from Ancient Sources (Berkeley 1991) no. 64. 67–68.

²⁷ DELORME 1960, 336–361.

²⁸ GRIMAL 1943, 226.

²⁹ NIELSEN 1999, 35–51; NIELSEN 2001, 167.

³⁰ GRIMAL 1943, 86–92. Xenophon describes the impression of *paradeisoi* in the Hellenistic period: Xen. oec. 4, 13–14.

³¹ A. KUHR, The Palace(s) of Babylon, in: NIELSEN 2001, 77–93 esp. 82.

³² NIELSEN 2001, 169–172; D. STRONACH, Pasargadae: A Report on the Excavations Conducted by the British Institute of Persian Studies from 1961 to 1963 (Oxford 1978).

³³ The literary record merely attests the term *paradeisos*: Gell. 2, 20, 4.

³⁴ N. PURCELL, Dialectical Gardening, JRA 14, 2001, 546–556 esp. 551.

³⁵ N. PURCELL, The Roman Garden as a Domestic Building, in: I. M. BARTON (ed.), Roman Domestic Buildings (Exeter 1996) 121–151.

intention of preserving and displaying its alien character«. In the luxury villas, Roman designers went one step further and manipulated its design to satisfy the evolving social and cultural needs of the owners.

Until then, these two elements, the *peristylum* or *porticus* structure and the pleasure garden, were two separate architectural forms with different ideological underpinnings. The former signified the austere architectural framework of the educational institution and the latter pointed to the excessive pleasures of the Hellenistic East. By incorporating the pleasure garden inside the austere structure of the educational institution – the *peristylum* – Roman designers domesticated the *luxuria* of the Hellenistic East. In doing so they did something very »Roman«, that is the domestication of the garden, but in a different way. The Roman domestic garden had been a green space with religious and economic significance for the household, whereas in the Roman luxury villa gardens this aspect was played down and the garden assumed a decorative role³⁶. The pleasure gardens of the luxury villas were embellished with exotic trees and ornamental shrubberies and were animated with sculptures and moving water.

The plantings articulated and enhanced space, for example, flower beds and box hedges created paths in the north *peristylum*-garden of Villa Oplontis A, which were visually enforced by the architectural design of the villa (fig. 7)³⁷; big plane trees provided shade, e.g. in the central *peristylum*-garden in Villa San Marco (fig. 8)³⁸. The architecture was embellished as well, e.g. by vines climbing around the columns of the south-east *peristylum*-garden (40–59) in Villa Oplontis A.³⁹ The statuary display animated the space of the garden by participating in its design strategies: two fauns placed on the opposing ends of the *euripus* in the big *peristylum*-garden of the Villa of the Papyri accentuated the axis of the garden⁴⁰; in the east *peristylum*-garden in Villa Oplontis A, marble statues and herms aligned the east side of the pool and behind them a variety of trees – oleander, lemon, and plane trees – created a colourful backdrop with a variety of heights⁴¹. The water structures animated the architectural forms and the sculptural *ornamenta* and reflected the architectural surroundings, for example the pool in the east *peristylum*-garden in Villa Oplontis A (fig. 9) and the pool in the central *peristylum*-garden in Villa San Marco (fig. 8). The following passage from Pliny the Younger's description of his Tusculan villa shows the ways in which water animated a villa's garden:

Contra mediam fere porticum diaeta paulum recedit, cingit areolam, quae quattuor platanis inumbratur. Inter has marmoreo labro aqua exundat circumiectasque platanos et subiecta platanis leni aspergine fovet.

»Nearly opposite to the middle of the terrace, a dwelling-room (*diaeta*) recedes slightly and encircles a small playground, which is overshadowed by four plane trees. Between these (i.e., the plane trees) water flows out from a marble basin and waters the surrounding plane trees and the ground below them with mild sprinkling«⁴².

Cultural significance: discipline and pleasure

The *peristylum* or the *porticus* structures framed all this architecture of pleasure with its accompanying *ornamenta gymnasiôdê* (fig. 10). The rectangular *peristylum*-garden structure, which articulated a defined relationship between the *porticus* and the pleasure garden, was probably the first instance of this new architectural language (generally dating after the middle of the 1st c. BC); for example, the *peristylia*-gardens in the Villa of the Papyri, the *peristylia*-gardens in Villa San Marco (the southwest one and the central one during

³⁶ Gardens with economic significance that were related to houses in Pompeii: JASHEMSKI 1979, 183–199. For the religious significance of the garden: GRIMAL 1943, 44–67; JASHEMSKI 1979, 115–140.

³⁷ JASHEMSKI 1979, 297–306, figs. 447. 448. 450. 464.

³⁸ A. CIARALLO, Capitolo II. L'architettura. 3. Osservazioni sui Platani dei Portici, in: A. BARBET – P. MINIERO (eds.), *La Villa San Marco a Stabia* (Rome 1999) 61; cf. Plin. epist. 5, 6, 20.

³⁹ W. M. F. JASHEMSKI, The Campanian Peristyle Garden, in: W. M. F. JASHEMSKI – E. BLAIR MACDOUGALL (eds.), *Ancient Roman Gardens* (Washington DC 1981) 29–48 esp. 43. 46; cf. Cic. ad Q. fr. 3, 1, 5.

⁴⁰ WOJCIK 1986, D 3 109 f. pl. 59; D 6 115 f. pl. 60.

⁴¹ JASHEMSKI 1979, 311 fig. 480; 314; S. DE CARO, The Sculptures of the Villa of Poppaea at Oplontis: A Preliminary Report, in: W. JASHEMSKI (ed.), *Ancient Roman Gardens. Dumbarton Oaks Colloquium on the History of Landscape 10, 1984* (Washington 1987) 79–133 esp. 102–112 nos. 13–18; R. NEUDECKER, *Die Skulpturenausstattung römischer Villen in Italien* (Mainz 1988) 241 f. nos. 71, 10–12.

⁴² Plin. epist. 5, 6, 20. Translation by the author.

its first phase) and the southwest *peristylum*-garden in Villa Arianna A. At the same time, the *peristylum* structure formed more loose compositions between the *porticus* and the garden, for example, the north and east *porticus*-gardens in Villa Oplontis A and the central *porticus*-garden in Villa Arianna A, or the already existing *peristylia*-gardens were modified to animate the forms. For example, the central *peristylum*-garden in Villa San Marco acquired a curved *cryptoporticus* at its fourth side with a *nymphaeum* in its middle. However, these two design solutions, the rectangular *peristylum*-garden and the loose *porticus* + garden composition, was continued to be used side by side, for example, the central *porticus*-garden and southwest *peristylum*-garden in Villa Arianna A and the *peristylum*- and *porticus*-gardens in Villa Oplontis A. One form was not an evolution to the other, but rather both were expressions of this new architectural language. In both cases, the *peristylum* structure and the loose *porticus* structure were the architectural framework of the garden. They provided a semi-open (colonnaded) area, which mediated the transition of closed (interior of the house) to open (garden) space and in doing so, domesticated the pleasure garden. The conservatism and the freedom expressed in the design of these two architectural compositions are at the core of the luxury villa culture, in that they fit and at the same time deny to be fitted into a canon of architectural design.

Undoubtedly, this novel architectural language formulated in space the Roman preoccupation with landscape that literary and visual representations described. In doing so, Roman designers developed an architectural language that transformed the existing Hellenistic and Roman architectural vocabularies. The two elements of this new architectural language signified two different power relations in space: the one of discipline and the one of pleasure. By framing the architecture of pleasure with the architecture of discipline, Roman designers domesticated the threatening *luxuria* of the Hellenistic East and used architectural design in the construction of their cultural identity.

List of Bibliographical Abbreviations

The citation follows guidelines of the German Archaeological Institute <www.dainst.org> (16.01.2009) and those of the Austrian Archaeological Institute <www.oeai.at/publik/autoren.html> (16.01.2009).

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| DELORME 1960 | J. DELORME, <i>Gymnasion. Étude sur les monuments consacrés à l'éducation en Grèce. Des origines à l'empire romain</i> (Paris 1960). |
| GLASS 1967 | S. L. GLASS, <i>Palaistra and Gymnasium in Greek Architecture</i> (Ph.D diss. University of Pennsylvania, Philadelphia 1967). |
| GRIMAL 1943 | P. GRIMAL, <i>Les jardins romains à la fin de la République et aux deux premiers siècles de l'Empire: essais sur le naturalisme romain</i> (Paris 1943). |
| JASHEMSKI 1979 | W. M. F. JASHEMSKI, <i>The Gardens of Pompeii: Herculaneum and the Villas Destroyed by Vesuvius</i> (New Rochelle 1979). |
| MIELSCH 1987 | H. MIELSCH, <i>Die römische Villa: Architektur und Lebensform</i> (München 1987). |
| NIELSEN 1999 | I. NIELSEN, <i>Hellenistic Palaces: Tradition and Renewal</i> (Aarhus 1999). |
| NIELSEN 2001 | I. NIELSEN, <i>The Gardens of Hellenistic Palaces</i> , in: I. NIELSEN (ed.), <i>The Royal Palace Institution in the First Millennium BC</i> , <i>Monographs of the Danish Institute at Athens</i> 4 (Athens 2001) 165–187. |
| NÜNNERICH-ASMUS 1994 | A. NÜNNERICH-ASMUS, <i>Basilika und Portikus. Die Architektur der Säulenhallen als Ausdruck gewandelter Urbanität in später Republik und früher Kaiserzeit</i> (Cologne 1994). |
| SWOBODA 1919 | K. M. SWOBODA, <i>Römische und romanische Pälaste. Eine architekturgeschichtliche Untersuchung</i> (Vienna 1919). |
| WACKER 1996 | C. WACKER, <i>Das Gymnasion in Olympia. Geschichte und Funktion</i> (Würzburg 1996). |
| WACKER 2004 | C. WACKER, <i>Die bauhistorische Entwicklung der Gymnasien. Von der Parkanlage zum ›Idealgymnasion des Vitruv‹</i> , in: D. KAH – P. SCHOLZ (ed.), <i>Das hellenistische Gymnasion</i> (Berlin 2004) 349–362. |
| WOJCIK 1986 | M. R. WOJCIK, <i>La Villa dei Papiri ad Ercolano. Contributo alla ricostruzione dell'ideologia della nobilitas tardorepubblicana</i> (Rome 1986). |

Sources of Illustrations

Fig. 1: based on Weber's plan, after WOJCIK 1986, pl. 1; after FÖRTSCH 1993, pl. 69, 4.

Fig. 2: after A. BARBET – P. MINIERO (eds.), *La Villa San Marco a Stabia* (Naples 1999) fig. 2.

Fig. 3: after M. S. PISAPIA, *Mosaici antichi in Italia. Regione prima, Stabiae* (Rome 1989) p. 37 fig. 10.

Fig. 4–10: M. Zarmakoupi. Published with permission of the Ministero per i Beni e le Attività Culturali and the Soprintendenza per i Beni Archeologici di Napoli e Pompei.

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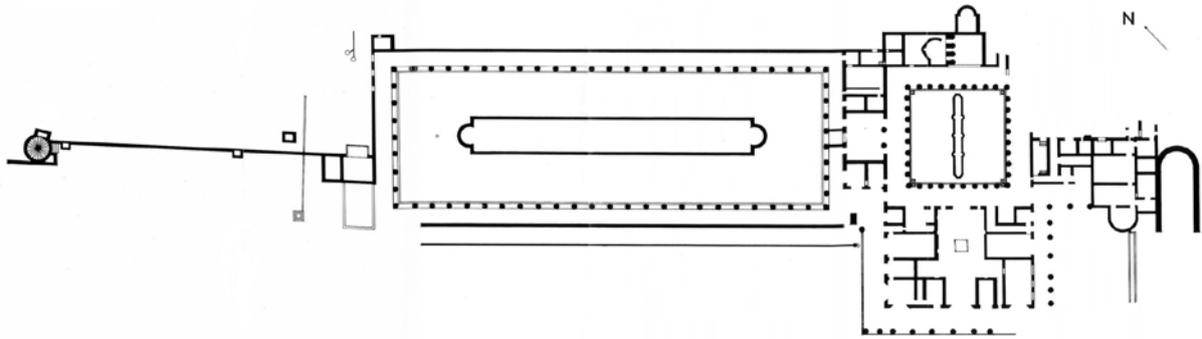


Fig. 1: Villa of the Papyri, plan

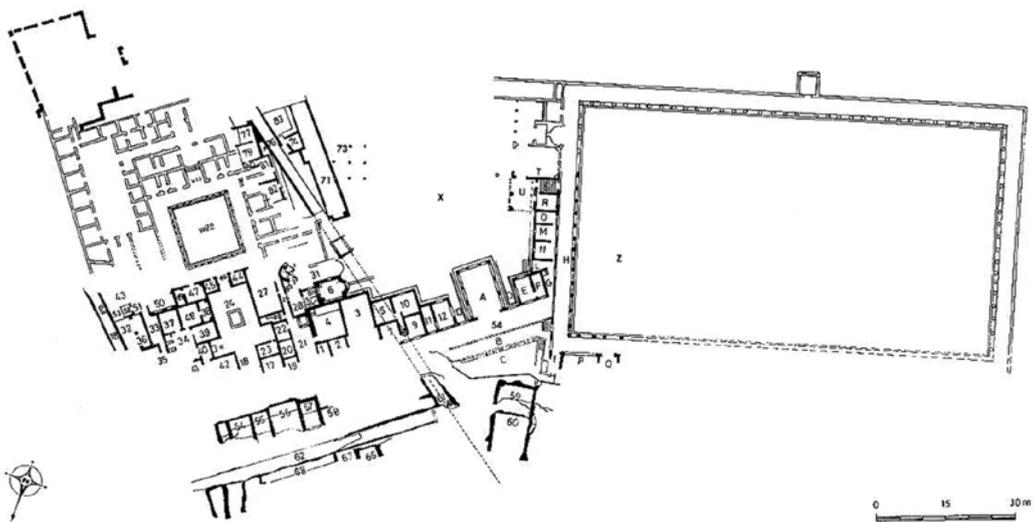


Fig. 2: Villa Arianna A, plan

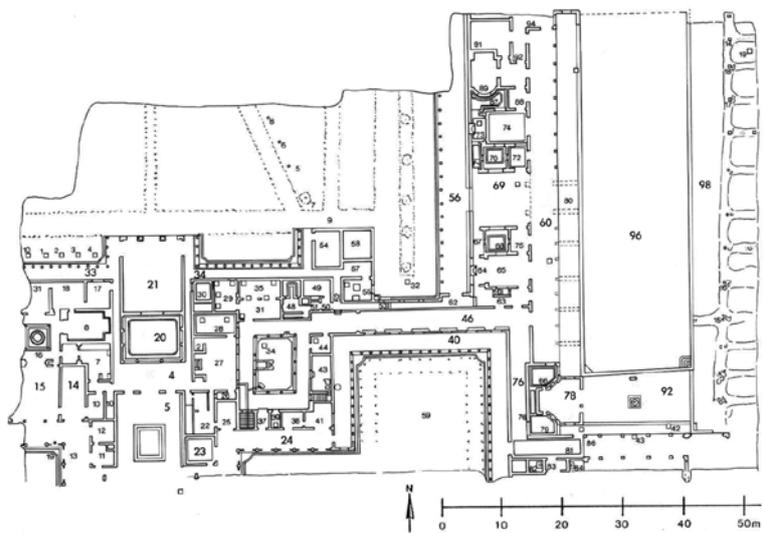


Fig. 3: Villa Oplontis A, plan

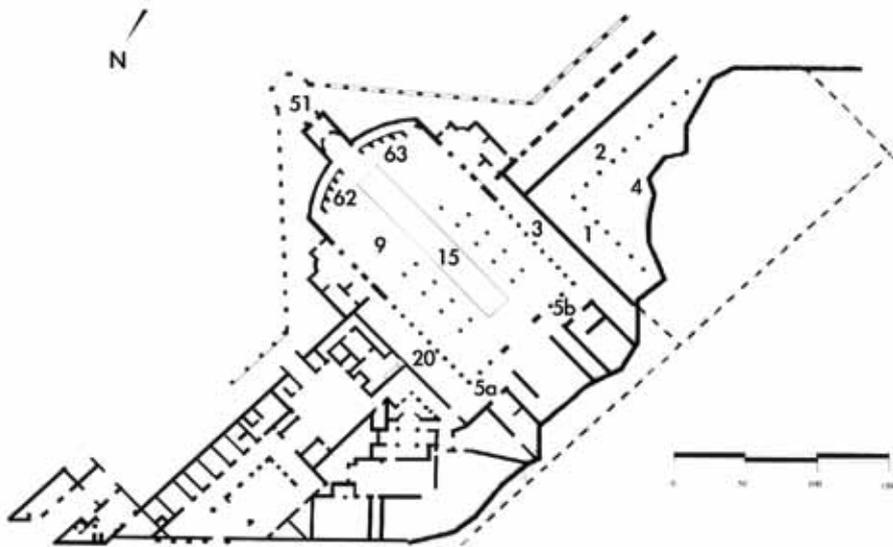


Fig. 4: Villa San Marco, plan

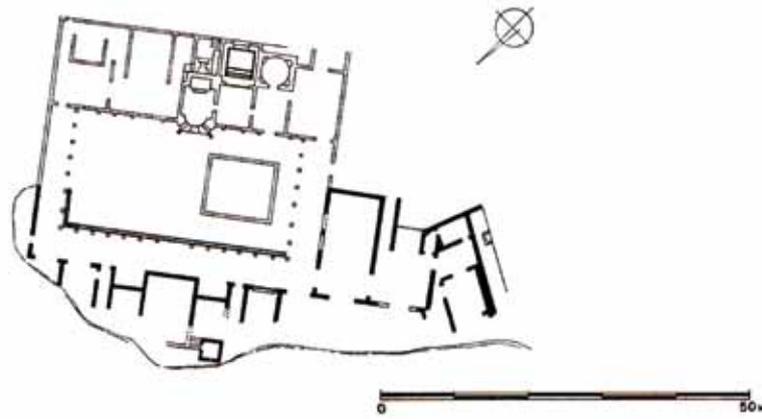


Fig. 5: Villa Arianna B, plan



Fig. 6: Villa San Marco, view of the central peristylum-garden from northwest end of porticus 20



Fig. 7: Villa Oplontis A, view of the north porticus-garden from the north



Fig. 8: Villa San Marco, view of garden of the central peristylum-garden from the middle of porticus 5



Fig. 9: Villa Oplontis A, view of the east porticus-garden with pool 96 from the south



Fig. 10: Villa of the Papyri, bird's-eye view of reconstructed model

