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The Emergence and Significance of the Palaestra Type in Greek Architecture

Summary

This paper explores the significance of palaestrae as a characteristic architectural feature of Greek gymnasia. First, the identification of palaestrae from the archaeological evidence is examined. While gymnasia were identified based on the existence of a peristyle courtyard alone in earlier research, I argue that only the combination of peristyle, exedra and loutron is sufficient evidence for the secure identification of a building as a palaestra. Second, the interrelation of gymnasia and general developments of Greek architecture and urban design are discussed. Since gymnasia were a vital part of urban landscapes from the 4th century BC onwards, the architectural shape of palaestrae is closely related to contemporaneous concepts of diversification of urban space, and social exclusiveness.

Keywords: gymnasia; palaestra; Greek architecture; loutron; exedra; peristyle


Keywords: Gymnasion; Palästra; Griechische Architektur; Loutron; Exedra; Peristyl
The interrelation of gymnasia and Graeco-Roman cityscapes is reciprocal. On the one hand, the development of the institution of the Greek gymnasium took place within the framework of the Greek and Roman city, its physical shape and the political and religious institutions of the polis. On the other hand, gymnasia had an impact on the city as a whole. As architecturally defined spaces, gymnasia were part of the urban landscape from the 4th century BC onwards; as a vital place of interaction, the gymnasium usually formed a crucial part of the social life of the polis. Therefore, in order to arrive at a better understanding of the meaning of gymnasia and their architectural form it is inevitable to consider both, the architectural development of Greek cityscapes in general as well as that of Greek gymnasia in particular. Accordingly, the aim of this paper is twofold: in the first part, I will discuss palaestrae as the most typical architectural feature of Greek gymnasia. In the second part, I will focus on the significance of the peristyle as an architectural type in general.

1 Peristyles and (false) Palaestrae

In terms of architecture, probably the most characteristic feature of many Greek gymnasia was the palaestra. It is commonly accepted that Greek gymnasia usually comprised a number of separate architectural structures. This was the case in Amphipolis, Olympia, Priene, and many other places (Pl. 1). Typical buildings that could be part of a gymnasial compound include facilities for running like xystoi and stadia as well as bathing facilities and sanctuaries.\(^1\) The presence or absence of all these structures within an architectural ensemble seems to differ according to local conditions. However, nearly all gymnasia had a peristyle building that is referred to typologically as palaestra.\(^2\) With regard to their function, palaestrae can be considered the focal unit of each gymnasium. It is usually within the palaestrae where the majority of imagery was set up, where prestigious donations of specific parts of the architecture can be observed, etc. In the terms of Greek epigraphy, one might say that the palaestra usually was the epiphanestatos topos of each gymnasium. In addition, the obvious importance of the palaestrae buildings is further emphasized by the chronological development of many gymnasia. As Christian Wacker pointed out in his study of the palaestra at Olympia, palaestra buildings were usually the earliest architectural structures that were constructed within a gymnasial ensemble.\(^3\) The apparent ubiquity of this building type regularly led scholars to the assumption that, in turn, a building with a peristyle is often likely to be a gymnasium.

The reason for this equation lies in the history of modern archaeology and in the excavation of Olympia in particular. It was as early as 1876 that excavations under the auspices of the German archaeological institute led to the rediscovery of a building that was immediately identified as the palaestra mentioned by Pausanias.\(^4\) Furthermore, the palaestra at Olympia was considered to be in accordance with the description of the ideal Greek gymnasium by Vitruvius.\(^5\) Due to its correspondence with these literary sources, the palaestra at Olympia soon became an important model for the interpretation of other peristyle buildings and was regularly referred to as such. Therefore, the impact of the palaestra at Olympia on the interpretation of allegedly similar buildings especially in the late 19th and early 20th century can hardly be underestimated. This is easily illustrated by looking at a number of comparable structures at other sites, that have originally, though wrongly, been identified as gymnasium mostly with explicit reference to the building in Olympia (Pl. 2).

For instance a major building in the sanctuary of Asklepios at Epidauros was identified as a gymnasium by its excavator Panagiotis Kavvadias in 1900 (Pl. 2).\(^6\) However, further research conducted by August Frickenhaus and successively by Richard Tomlinson proved that this building served as a dining establishment due to the installation of klinai within the major rooms.\(^7\) Similarly, a building in the extraurban sanctuary of Hera near Argos was considered a gymnasium by the excavators due to

\(^{1}\) For these components see Delorme 1960, 253–260; Wacker 1996, 61–66.
\(^{2}\) For the term palaestra see Delorme 1960, 260–271.
\(^{4}\) Paus. 6.21.2; Adler, Borrmann, and Dörpfeld 1892, 113–121.
\(^{5}\) Vitr. 5.11.1.
the existence of a peristyle courtyard.\textsuperscript{8} It was once again Frickenhaus who could prove that the building was used as a setting for symposia due to the evidence of klinai in the three rooms that open onto the peristyle courtyard.\textsuperscript{9} Similarly, a building at Miletus has been identified as a ‘Hellenistic Gymnasium’ by its excavator Theodor Wiegand.\textsuperscript{10} This interpretation was based mainly on the alleged similarity to the lower gymnasia at Priene that had been excavated about 10 years earlier by Wiegand, as well.\textsuperscript{11} In addition, the excavators considered the adjacent thermae of Capito a later addition to the original gymnasia.\textsuperscript{12} However, whereas the secondary addition of bathing facilities to pre-existing gymnasia is generally a common phenomenon in Asia minor in the Roman Imperial era, this rule does not apply to the case of Miletus. In this case, no attempt was made to connect the thermae by adding a door to the northern back wall of the Hellenistic building (Pl. 3).

Since washing facilities have not been safely identified in the original structure, it seems very unlikely that this building functioned as a gymnasium at any point of its history. Due to its position at the center of the city as well as its spatial and chronological relationship to the neighboring bouleuterion the alleged Hellenistic gymnasium of Miletus might have housed a political or administrative institution of the city, instead.\textsuperscript{13} Yet another example is the case of the gymnasia at Sikyon. This building was originally identified as a gymnasium by its excavator Anastasios K. Orlandos with reference to its ground plan as well as a passage in Pausanias who mentions a gymnasium ‘not far from the Agora’.\textsuperscript{14} The building was referred to accordingly until recently.\textsuperscript{15} However, a recent reassessment of the archaeological material found in the course of the excavations showed that this interpretation is rather unlikely.\textsuperscript{16} Further buildings that have been identified as gymnasia due to the existence of a central courtyard include a building in Ai Khanoum as well as the so-called ‘Asclepieion’ at Paestum.\textsuperscript{17} Whereas the identification of the first building has been challenged by Inge Nielsen, who interpreted it as part of the extensive palatial quarters of Ai Khanoum,\textsuperscript{18} the example in Paestum is likely to be another example of a lavish dining hall from the early Hellenistic period.\textsuperscript{19}

These examples illustrate that the general assumption that a building with a peristyle court must be interpreted as a gymnasium became something like a self-fulfilling prophecy within the archaeology of the early 20th century. Contrarily, the problem of the identification of palaestrae shows that the most conspicuous feature of this building type, i.e. the peristyle, was used for structures with a variety of other functions, as well. This observation leads to two implications. 1.) Since a peristyle court alone is not sufficient evidence for the identification of a palaestra or gymnasium, more specific criteria need to be defined in order to securely identify these buildings from the archaeological evidence. 2.) Since the peristyle as an architectural feature is not restricted to gymnasia, the significance of this architectural type must lie beyond the concrete function of the individual building. Therefore, in order to arrive at a proper understanding of the phenomenon of Greek palaestrae it is inevitable to consider some general developments of Greek architecture and urban planning, especially of the 4th century BC when the peristyle became a widespread phenomenon in Greek cities and sanctuaries.

2 Peristyles and (genuine) Palaestrae

The problem of identifying gymnasia or, more precisely, palaestrae from the archaeological record is closely re-
lated to the problem of the function of these buildings. With regard to the ubiquity of palaestrae within Greek gymasia it seems striking that the precise function of these buildings is far from being understood completely. Whereas the archaeological evidence of the use of individual rooms is often scarce, literary sources evoke the impression of a variety of different rooms for specific functions such as apodyteria, konisteria, sphairistrae, korykeia etc. However, discussions of these terms among both epigraphists and archaeologists have made it clear that many of them cannot be identified within the archaeological or architectural evidence from any site.²⁰ A promising example is the gymnasium at Delos. In this case, a rather precise description of the building survives in the form of several inventories from the mid-2nd century BC. The most famous among these lists, the so-called inventory of Kallistratos, can be dated to the year 156/155 BC.²¹ The inventory mentions the names of several rooms of the Delian gymnasium such as an apodyterion, a portico (peristoon), an exedron, a loutron and an epistasion. These names have been attributed to different parts of the building by different scholars.²² The most likely solution is shown here in Pl. 4.

However, it is crucial to point out that only three parts of the building can be identified with certainty, according to their architectural shape. Obviously, the term peristoon refers to the portico, surrounding the central courtyard. The loutron can be identified with two rooms in the north-western corner of the building.²³ Finally, the term exedron is likely to refer to the room on the northern side of the building regarding its architectural layout and the bench along its rear wall. The identification of the other rooms mentioned in the inscription relies mainly on the assumption that their order in the inventory reflects the progression of the magistrates on their way through the building.

Thus, the case of the Delian gymnasium illustrates that only three components can be identified with certainty from the archaeological evidence alone: beside the peristyle itself, this includes washing facilities (loutra) and exedrae. Whereas a loutron will usually be discernible due to water installations such as basins, pipes, a water-proof floor etc., the main features of an exedra include a broad opening in the form of a colonnade and benches alongside the three remaining walls of the room. Rooms of this kind are found in almost all palaestra buildings where they served as places for lectures, philosophical discussions or similar gatherings. On the contrary, the precise architectural form of other rooms that are usually mentioned in the literary sources such as koinisteria, apodyteria etc. remains unclear. Therefore, it seems reasonable to accept the combination of the above-mentioned three features for the identification of palaestrae buildings from the archaeological evidence. The validity of this approach can easily be tested regarding palaestrae of the 4th and early 3rd century BC that have been identified with certainty (Pl. 5).

Following the works of Jean Delorme, Henner von Hesberg and Christian Wacker, it is commonly accepted that there is hardly any archaeological evidence for Greek gymasia before the early 4th century BC. Early examples include the gymasia at Eretria, Amphipolis, and Delphi.²⁴ The Academy and the Lykeion of Athens might be two more candidates, but the current state of publication is too difficult to assess the precise date of these structures and their original layout in any detail.²⁵ As far as I can see, none of these buildings can be dated securely to the first half of the 4th century BC. To this group I would further add the palaestra at Olympia that is usually dated to the early 3rd century BC.²⁶ In the case of the gymnasium at Delos, a secure date based on archaeological criteria has not yet been established. The building or a predecessor on the same site might very well belong to the later 4th or early 3rd century BC, as well.²⁷ Finally, the gymnasium at Samos was presumably constructed at some point in the early 3rd century BC as well, but its design is not well known.²⁸

Among the buildings mentioned, the gymnasium at

²⁰ For a detailed discussion of these terms see Delorme 1960, 272–336.
²¹ I. Delos Nr. 1417.
²² Audiat 1970; Roux 1980; Salvat 1994; Ferrutti 1998–2000. In contrast, Moretti 1996, Moretti 1997 proposed that the gymnasium mentioned in the inventory should be identified with the *Palaestra du lac*. However, this interpretation seems rather unlikely, regarding the fact that the function of this building is generally far from clear, see Emme 2013, 255–256.
²⁶ Wacker 1996.
²⁸ Martini 1993.
Amphipolis yields good evidence for the functional conception of late-classical palaestrae. In its original state, the building was equipped with two loutra in the northeastern and northwestern corner, respectively. A long room on the western side of the building has the form of an exedra with five columns of the front and a stone bench on the back wall. Another exedra might have existed in the eastern part of the building. Similarly, the western section of the gymnasium at Eretria comprised an exedra and an adjacent loutron in its northern aisle. Further research on the recently discovered eastern section of the building complex will clarify, in which way both parts were used with regard to their individual functions.29 Given the state of preservation, the situation of the gymnasium at Delphi is less clear. Obviously, water installations were placed outside the palaestra proper in an open courtyard, including a circular pool and a series of basins along the western wall of the courtyard. A room for lectures or similar gatherings may be identified in the southern part of the palaestra, but the reconstruction of an exedra remains conjectural. Finally, the palaestra at Olympia combined two loutra in the northwestern and northeastern corners of the building with a total number of six exedrae of varying size. In sum, even though the total number of buildings is rather small, the archaeological evidence illustrates that the combination of loutron, exedra and a peristyle courtyard was something like a standard for palaestrae from the middle of the 4th century BC onwards.

While the existence of loutra and exedrae is closely related to the actual functions of these rooms within the gymnasial context, the reasons for the ubiquity of the peristyle itself are less obvious. The dating of the earliest examples of palaestrae to the middle of the 4th century BC indicates that the architectural scheme of the peristyle was not used for the construction of gymnasial architecture in the first place. In contrast, earlier examples of peristyle buildings clearly demonstrate that the architectural concept of a courtyard surrounded by porticoes was established already at the end of the 5th century BC within Greek architecture.30 This is illustrated mainly by the development of Greek dining facilities such as the Pompeion at Athens or a similar building in the Argive Heraion, mentioned above (Pl. 2).31 The scheme was then adopted for gymnasial architecture probably around the middle of the 4th century BC. Therefore, in order to arrive at a better understanding of the peristyle motif it is necessary to focus on some general developments of Greek architecture in the 4th century BC.

3 Peristyles and Urban Design

A good example from this period is the layout of Megalopolis in Arcadia (Pl. 6). The city was founded immediately after the defeat of Sparta in the battle of Leuktra in 371 BC. As recent fieldwork by Hans Lauter and Heide Lauter-Bufe has revealed the city center of Megalopolis was organized in an orthogonal shape. A central square can be identified as the agora. The place was surrounded by freestanding porticoes on all four sides, a conception that echoes the idea of the peristyle on a larger scale.32 In addition, two major building complexes were situated on the western side and in the southeastern corner of the agora. Whereas the first structure served to accommodate the political institutions of the city, the latter complex housed a sanctuary of Zeus.33 The sanctuary consisted of a temple that was incorporated into the western portico of the complex. The secluded character of the building illustrates how the religious concept of the temenos was transferred into architecture.34 The building complex on the western edge of the agora is yet more telling for the new conception of urban space in the first half of the 4th century (Pl. 6).35 The extant remains show that the original complex consisted of four units: a spacious hall in the north, followed by three courtyard sections of different size and structure. According to the excavators, the complex originally housed a number of political and administrative institutions such as the boule, the damiourgeion as well as another sanctu-

29 See G. Ackermann and K. Reber in this volume.
30 Emme 2013, 294; while some earlier examples from the Archaic period may have existed, the type was widely adopted no earlier than in the late 5th century BC.
31 Pompeion: Hoepfner 1975; Argive Heraion: Emme 2011; Emme 2013; for an alternative dating of this structure to the late Archaic period see Pfaff 2005, 376.
33 For the complex on the western side of the agora see Lauter-Bufe and Lauter 2011; for the sanctuary of Zeus see Lauter-Bufe and Lauter 2009.
34 Emme 2013, 55–57.
35 Lauter-Bufe and Lauter 2011.
ary of Zeus and Hestia that would have been equivalent to a prytaneion in other cities. Even though the identification of some of these institutions is hypothetical the general notion of defining different spaces for different functions by means of architectural segregation becomes obvious. Accordingly, the peristyle was used for a variety of different tasks, i.e. sacred and administrative functions in this case.

Another example is Miletus. Here again, the architectural scheme of the peristyle was used for sacred as well as administrative buildings. In addition, a peristyle court was constructed as part of a market building on the southern side of the Lion Harbor at the end of the 4th century BC (Pl. 7). The complex consisted of a central square that was surrounded by rooms of equal size on all four sides as well as two outer porticoes on its northern and eastern sides. Due to its architectural shape and its position, the building is securely identified as a market. The conception of the structure corresponds to a well-known passage in Aristotle’s Politeia wherein the author claims that “there should also be a traders’ agora, distinct and apart from the other [i.e. the political agora].”

The new conception of urban space that developed over the course of several decades between the later 5th and the early 4th century BC is interesting in several aspects: On the one hand, literary sources like Aristotle and Plato make it clear that the social and constitutional structure of the polis was supposed to find its physical equivalent in the city’s layout and architectural shape. On the other hand, the conceptual differentiation of space was articulated architecturally by making use of a common architectural scheme, i.e. the portico in general and the peristyle, in particular. It is against this cultural and architectural background that Greek gymasia were constructed from the 4th century BC onwards in the shape known to us. The impact of these ideas on the overall appearance of urban space is hard to envision, because of the poor condition of many of these buildings. The secluded character of peristyle architecture is best illustrated by reconstructions (Pl. 7). Interestingly, from an architectural point of view it was not possible to tell whether a building like this was a bouleuterion, a sanctuary, a dining hall or a gymnasium, respectively.

Furthermore, the context of many buildings indicates that the architectural form of the peristyle often had a connotation of social exclusiveness. This is especially the case with regard to early examples such as dining facilities. In this case, Christina Leypold pointed out that lavish buildings like the Pompeion at Athens or the ‘gymnasium’ at Epidaurus were used by members of a local or international elite. Similarly, the peristyle was a common feature within (proto-)hellenistic palaces like those of Vergina and Pella and became part of upper-class houses in the early 4th century BC, as well. It is not surprising, therefore, that the peristyle was adopted for gymnasial architecture. Literary and epigraphic sources clearly state that the gymnasium was a space exclusively frequented by male citizens of the polis and their sons. The social distinction that was inherent to the institution of the Greek gymnasium was marked architecturally by the adoption of a secluded building type.

In addition, the secluded character of peristyle architecture was further stressed by the construction of propyla. Usually, propyla were built as secondary additions to the preceding structures like in case of the palaestrae in Amphipolis and Olympia, thus changing the outer appearance of these buildings. On the one hand, a lavish propylon would add significantly to the outer appearance of a building whose façades consisted mainly of blank walls. On the other hand, the monumental entrance would have transformed the act of entering a building into a special situation. However, the addition of propyla was not restricted to palaestrae but can be observed in combination with a variety of peristyle buildings. Therefore, like in case of the peristyle itself, the significance of propyla lies in their general connotation of exclusiveness and nobilitation.

Finally, with regard to the interrelation between the individual building and the surrounding cityscape, it is worth mentioning that the first buildings of the palaestra type can be observed at a time when the institution

36 For the interpretation of the individual parts of the building see Lauter-Bufe and Lauter 2011, 105–118.
37 Emme 2013, 265–270; Sielhorn 2015, 125–132.
39 Arist. Pol. 1331a–b; see also Plat. Nom. 778 c; compare Sielhorn 2015, 115; Dickenson 2017, 50–57.
of the Greek gymnasium was transferred to places inside the city. It is generally accepted that this change in the placement of gymnasium happened sometime in the early 4th century BC. This development is echoed in contemporaneous literary sources. For example, Aristotle demands that gymnasium for the presbyteroi should be situated near the agora, i.e. within the city. Whereas the philosopher’s claim reflects a theoretical ideal a contemporaneous passage from Aeneas Tacticus’ book on poliorcetics illustrates that the placement of gymnasium extra muros was still the rule in the first half of the 4th century BC. The author explicitly states that military commanders should not leave the city in case that an enemy set fire to buildings outside the walls like dockyards or gymnasia. Therefore, another reason for the adoption of the peristyle scheme for gymnasial architecture may have been the shifting of the institution to locations inside the city. It was in an urban surrounding, after all, where the application of secluding architecture was necessary in order to maintain the exclusive character of the social institution.

4 Conclusion

I tried to illustrate that architectural form and practical function are less interdependent than is usually thought. On the one hand, the Greek gymnasium would have fulfilled its basic function as a place of physical training and education very well without a peristyle courtyard. On the other hand, the architectural scheme of the peristyle was applied to a variety of functions other than gymnasium from the late 5th century BC onwards. This observation implies that the peristyle can hardly be reduced to a specific functional meaning. Its significance lies on a more general level: as a secluding architecture, the peristyle made it possible to close off spaces for a variety of specific functions as well as individual social groups. It is obvious that both aspects apply extraordinarily well to the gymnasium. Finally, this interpretation is important for the understanding of the process of adaptation of peristyle architecture in the western Mediterranean as well. With regard to the variety of functions of peristyle buildings in the Greek east there is little reason to assume that every courtyard surrounded by columns was meant to evoke the impression of Greek gymnasial architecture or was even used accordingly. On the contrary, the adoption of the architectural scheme in Italian architecture reflects a profound understanding of the general significance of the type: to organize urban spaces and to provide secluded units for specific functions and individual groups. This becomes most obvious with regard to the imperial fora in Rome. As Paul Zanker pointed out “the imperial fora were closed, self-contained areas. Each was strictly closed off from the next, even though they were adjacent to one another. [...] These separate spatial entities also constituted specific pictorial spaces”. It seems important to note the difference in the overall conception of these buildings. Whereas the gymnasium of the Greek polis were spaces of social interaction that were constantly shaped and re-shaped by the donation of individual parts and the construction of honorific monuments (Pl. 4) the imperial fora were clearly dominated by the individual person of the emperor including the iconography of statuary and decoration.

Therefore, it seems more likely that Italian buildings like the grande palestra in Pompeji where constructed on the conceptual model of the fora of Caesar and Augustus in Rome rather than on Hellenistic gymnasia. Thus, even though their architectural layout might be comparable, the function and social significance of these buildings could hardly have been more different.

45 Arist. Pol. 7.11.1–3.
46 Aen. Tact. 23.6.
47 Dickmann 1999, 158.
49 Kyrieleis 1976; Zanker 1997; Emme 2013, 240.
Amphipolis, gymnasium. 4th century BC

Delphi, gymnasium. 4th century BC

Olympia, palaestra and gymnasium. 3rd/2nd century BC

Delos, gymnasium. 2nd century BC

Priene, Lower gymnasium. 2nd century BC

Pl. 1 Greek gymnastial compounds, 4th–2nd century BC.
Pl. 2 Alleged Greek gymnasia.
Pl. 3  Miletus, ‘Hellenistic Gymnasion’ and adjacent thermae. Note the non-existence of a door between both buildings as well as missing water installations in the northern aisle of the ‘gymnasion’.
Pl. 4 Delos, gymnasium. Hypothetical reconstruction of room names according to the Delian inventories of the mid-2nd century BC (author).
Pl. 5 Greek Gymnasia. Exedrae marked red, loutra marked blue.
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Pl. 6  Megalopolis, plan of city center at the end of the Hellenistic period.
Miletus, reconstructed aerial view of city center at the end of the Hellenistic period.
Kobes 2004

Kyrieleis 1976

Lauter-Bufe and Lauter 2009

Lauter-Bufe and Lauter 2011

Lauter 1986

Lazaridis 1997

Leybold 2008

Lolos 2015

Lygouri-Tolia 2002

Maiuri, Aurigemma, and Spinazzola 1986

Mango 2003

Martini 1993

Moretti 1996

Moretti 1997

Nielsen 1994

Orlandos 1934

Pfaff 2005

Roux 1980

Salviat 1994

Sielhorst 2015

Tomlinson 1969

Tomlinson 1983

Trümper 2008

Trümper 2015

Veuve 1987

Wacker 1996

Wacker 2004
Waldstein 1902

Walter-Karydi 1998

Wiegand 1908

Wiegand and Schrader 1904

Zanker 1997

Plate credits
1–6 B. Emme. 7 Gerkan 1922, pl. 27.

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