



# Urban Design and Experience in Ancient Sources: The Examples of Vitruvius and Pausanias (A Brief Assessment of Architectural Theories and Experience)

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## Abstract

This study examines the relationship between the theoretical design principles of ancient cities and narratives based on the use of built spaces through a comparative analysis of Vitruvius' *De Architectura* and Pausanias' *Periegesis Hellados*. The methodological approach of the research is based on the thematic analysis of urban elements in both texts, focusing on sacred spaces, the forum/agora, harbours, the relationship between the acropolis and the lower city, baths and palaestra/gymnasion complexes, and theatres. Vitruvius' text approaches the city as a rational and generalizing system shaped by site selection, climatic and environmental conditions, orientation, proportion, building typologies, and engineering principles. Sacred spaces are defined through architectural order, orientation, and hierarchical placement; the forum is regarded as the centre of legal and economic activity, while harbours are considered as technical infrastructure components associated with waves, winds, and defensive elements. By contrast, in Pausanias the city is conveyed through a descriptive narrative unfolding along walking routes, articulated through the sequencing of sacred stations, mythological references, cult continuity, and local memory. The agora is presented as a public space in which ethical and identity-related meanings are concentrated; the harbour as a significant place charged with religious and political representations; and the acropolis as a higher space where historical and sacred meanings converge. While structures such as baths, gymnasia, and theatres are defined in Vitruvius through criteria of technical functionality, health, and performance, in Pausanias these spaces are associated with cult practices, social identity, and acts of remembrance. In conclusion, the study demonstrates that the ancient city should be evaluated not solely through planning and architectural principles, but also in relation to ritual practices, social memory, and spatial experience. The study argues that a combined reading of Vitruvius' normative framework and Pausanias' descriptive narrative offers a holistic approach to the study of ancient cities.

**Keywords:** Ancient sources, Pausanias, Urban design, Vitruvius

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## INTRODUCTION

In antiquity, cities developed not only through planning principles but also through a complex process shaped by social rituals, religious practices, public activities, and processes of cultural representation. As a natural consequence of this process, theoretical approaches aimed at explaining the design of ancient cities and descriptive narratives and writings concerned with the experience of space have also emerged. These narratives demonstrate that studies of ancient cities should be conducted not only on the basis of tangible archaeological evidence, but also through the representational forms offered by historical texts. In this context, ancient texts provide two fundamental types of information: first, theoretical narratives that articulate the criteria governing the design of spaces in ancient cities; and second, descriptive and topographical narratives that convey the experience of urban space. This study evaluates, within a comparative framework, the texts of the Roman architect Vitruvius and Pausanias, one of the most important representatives of the *Periegesis* tradition, with the aim of bringing these two dimensions together (Drijvers, 2018). Although the two authors lived in different periods, when considered together they offer an important perspective on ancient cities at both the theoretical and experiential levels. In *De Architectura*, Vitruvius discusses architecture within a systematic theoretical framework that extends from site selection to building typologies, from the use of materials to urban design. The work explains numerous technical components, ranging from the positioning of temples to the concepts of proportion and order, from the acoustic principles of theatres to the factors determining the health conditions of cities. In contrast, in *Periegesis Hellados* (*Description of Greece*), Pausanias travels through different regions beginning with Attica, conveying urban components such as sacred sites, temples, statues, stoas, harbours, tomb monuments, and roads together with their associated narratives, mythological references, and practices. By making visible the everyday use of urban space, its religious orientations, and its topography, Pausanias' account reveals, in a sense, the cultural counterparts of Vitruvius' theoretical scheme as manifested in the field.

The present study has been structured with the aim of establishing a framework for understanding perceptions of the city and space through a comparative examination of Vitruvius' and Pausanias' conceptions of the ancient city. First, brief information is provided on the lives of Vitruvius and Pausanias. This is followed by an examination of the principal components upon which the theoretical models employed by Vitruvius to define the ancient city and architecture are based, namely the principles that constituted urban morphology in Antiquity. In parallel, the study seeks to identify what types of experiential data Pausanias offers regarding urban space in his narrative of ancient Greek geography, and how this narrative enables a reading of urban topography and building functions. A combined reading of these two texts aims to reveal the framework formed by the theoretical (normative) model and the

observational (descriptive) model of the ancient city. Within this context, how urban elements are represented in both authors' texts and how these representations support each other in various ways are also central topics of discussion in this study.

### VITRUVIUS AND PAUSANIAS: THEIR LIVES AND WORKS

Vitruvius (Marcus Vitruvius Pollio) (90-20 BCE) was a military engineer and architect who lived during the final phase of the Roman Republican period. Nearly all information regarding his life is derived from his own writings. Vitruvius spent his early career as a military engineer in the army of Julius Caesar, where he specialized in war machines, catapults, and ballistae (Yegül, 1993). In the later stages of his life, he devoted himself to scholarly work and completed *De Architectura* around 27-25 BCE. This work, written in the later years of the Roman Republic, is a fundamental text on architecture and engineering that has survived in its entirety. *De Architectura* elevates architecture beyond a purely technical craft, positioning it as an integral component of the humanities. Consisting of ten books, this work offers extensive information on ancient cities, ranging from principles of city planning and the proportional systems of temple construction to public building typologies, water structures, and mechanical devices (Baldwin, 1990; Reitz-Joosse, 2016). Accordingly, Vitruvius' text contains both formal principles (*proportio*, *symmetria*, and *decor*) and applied knowledge related to urbanism and topography. Vitruvius also addresses the education required of an architect, the principles to be considered in the foundation of cities, the proportional and orientational rules governing temples, the ideal placement of public buildings, and construction techniques (Scranton, 1974; Kołoczek, 2022).

Pausanias (110-180 CE) was a writer, historian, and geographer who travelled through, observed, and described the ancient geography of Greece. In the second century CE, Pausanias journeyed across Greece and recorded cities, sacred spaces, monuments, rituals, and aspects of daily life in his ten-volume work *Periegesis Hellados* (Description of Greece). His narrative is characterized by a descriptive and experience-based mode of writing (Hutton, 2005; Pretzler, 2007). The work portrays ancient Greek geography not merely as a topographical whole, but also through cult practices, ritual activities, mythological narratives, and local traditions (Elsner, 1992). In terms of geographical scope, Pausanias focuses on regions such as Attica, Corinth, Laconia, Messenia, Elis, Aetolia, Achaia, Boeotia, Phocis, and Arcadia. In the political context of his era, Pausanias emerges as a figure tracing Greek cultural heritage under Roman rule. While observing Greek cities governed by Rome, he relegates contemporary political structures to the background and directs his attention primarily toward the monuments of the Archaic and Classical periods (Hutton, 2005; Daubner, 2022).

## A GENERAL OUTLINE OF THE THEORY OF ARCHITECTURE AND THE URBAN MODEL IN VITRUVIUS

Vitruvius' approach to the ancient city is grounded in a theoretical framework that situates architecture not merely as a building activity, but as a system harmonized with social, natural, and religious order. According to him, the principal subject of architecture is shaped around the concepts of *firmitas* (stability), *utilitas* (functionality), and *venustas* (beauty), and buildings must therefore be durable, function appropriately, and possess a harmonious aesthetic quality (Bianco, 2023). These concepts express general principles applicable to all building types. Vitruvius' architectural theory extends across a comprehensive range of scales, from the foundation of cities to temple design, from the organization of public buildings to residential typologies (Scranton, 1974). The city is conceived as a unified whole that incorporates robust fortifications ensuring military and civic security, functional public buildings accommodating daily life, and aesthetic and ritual values expressing the order of sacred spaces associated with the gods (Vitruvius, I.III.1). Accordingly, Vitruvius' text seeks to construct its descriptions of the city in a systematic manner through decisions related to planning, proportion, orientation, topography, and cult.

The first step Vitruvius identified for founding a city is choosing the location and determining its orientation. The suitability of a city's location in terms of health conditions is evaluated with regard to water resources, air circulation, climate, and topographical advantages (Vitruvius, I.IV.1-5). In this context, he argues that streets should be oriented to receive sunlight in order to avoid the harmful effects carried by winds, that defensive structures should be adapted to the topography, and that monumental buildings should be constructed so as not to coincide with wind corridors. He further notes that streets should be planned in a way that does not block wind flow, and that avenues directly exposed to winds increase the risk of disease (Vitruvius, I.V.1, I.VI.1-8; I.VII.1). This approach demonstrates that harmony with nature was accepted as a fundamental principle in ancient urban planning, and that environmental factors affecting health and comfort were regarded as essential design criteria. Furthermore, Vitruvius places particular emphasis on the quality of urban water sources, recommending that spring waters be evaluated according to their taste, smell, and physical characteristics (Vitruvius, VIII.I.1-7).

Regarding sacred spaces, Vitruvius states that temples should be designed in accordance with both the attributes of the gods and the requirements of cult practices (Vitruvius, IV.V.1). Furthermore, for public spaces within the city, he formulates rules determining the ideal locations of buildings such as the forum, basilica, theatre, bath, and palaestra (Vitruvius, V.I.1-10). He explains this approach as follows: *"Having laid out the alleys and determined the streets, we have next to treat of the choice of building sites for temples, the forum, and all other public places, with a view to general convenience and utility. If the city is on the sea, we should*

*choose ground close to the harbour as the place where the forum is to be built; but if inland, in the middle of the town. For the temples, the sites for those of the gods under whose particular protection the state is thought to rest and for Jupiter, Juno, and Minerva, should be on the very highest point commanding a view of the greater part of the city... Mars outside the city but at the training ground, and so Venus, but at the harbour"* (Vitruvius, I.VII.1). Issues such as the placement of the forum to protect it from climatic effects, the dual commercial and juridical function of basilicas, the acoustic properties of theatres, and the hygienic conditions and distribution systems of water structures constitute technical details regulating urban space in the ancient city (Vitruvius, V.I; V.III; V.V). In particular, the location of the forum is linked to climatic factors such as wind and sunlight. The positioning of the theatre has been described through an approach that takes into account both acoustics and the surrounding landscape (Vitruvius, V.I.1-10). Vitruvius' statements regarding the organization of the city and sacred spaces demonstrate that he conceptualizes architecture as an integrated discipline encompassing the relationships between nature, cult, and society. The city is understood as a coherent whole not only through its buildings, but also through their orientations, elevations, proportions, rituals, and modes of use. In the context of harbours, factors such as wind directions, wave movements, and defensive elements gain particular importance (Vitruvius, V.XII.1-7). When addressing residential architecture, Vitruvius takes into account both economic distinctions and climatic conditions. He does not describe the atrium-type domus in detail, noting instead that it represents an aristocratic residential model (Vitruvius, VI.III). On the other hand, the multi-storeyed and contiguous insulae type is regarded as a necessary solution for cities with high population density (McKay, 1998).

### THE GENERAL OUTLINE OF URBAN PERCEPTION AND TOPOGRAPHY IN PAUSANIAS

Pausanias' approach to the ancient city differs from the model articulated by Vitruvius in that it is grounded in how the city is experienced, traversed, and remembered. As Pausanias was neither an architectural theorist nor an urban planner, his work presents cities as narratives that intertwine monuments with the stories behind them, the continuity of cult practices, and the geographical configuration of space. Unlike Vitruvius, Pausanias does not address the question of how cities or buildings should be constructed. Instead, his texts are structured around what is seen, how it is named, and which myth or cult it is associated with. For this reason, Pausanias' city is not constructed through plans or drawings, but through a topography shaped by cultural and geographical traces (Jones, 1918). In this manner, the sacred structures and public spaces of cities are documented through an observational perspective. Pausanias' mode of describing the city is based on a walking order that follows his travel itinerary. Beginning in Attica, he proceeds through different regions of Corinth, and then onward to

Boeotia, Phocis, and other Greek cities. Along this route, temples, altars, statues, stoas, agoras, harbours, acropoleis, and burial areas are presented as a sequence of interconnected elements (Elsner, 1992). While introducing sacred spaces in various cities, Pausanias establishes a spatial transition between the harbour and the acropolis, thereby making visible the geographical hierarchy of sacred and civic areas within the city. This approach demonstrates that the experiential organization of the ancient city takes precedence over monumental architecture, and that practices of use constitute the memory of space. In a passage describing the city of Elis, Pausanias notes that *"another way out of the gymnasium leads to the market-place, and to what is called the Umpires' Hall beyond the tomb of Achilles, and it is by this way that the Umpires are accustomed to enter the gymnasium"*. In another passage, he states that *"and the market-place at Elis is not like that of the Ionians, or of the Greek cities in Ionia, but is built after a more antique type, with porticoes and streets at regular intervals"* (Pausanias, VI.XXIV). These descriptions exemplify Pausanias' manner of depicting urban space. Moreover, Pausanias' perspective on the city is selective in terms of timeframe. His tendency to place the Roman domination of his own second-century CE context largely in the background, to focus instead on the monuments of the Archaic and Classical periods of ancient Greece, and to mention Roman building activities only in limited contexts constitutes a clear indication of this selectivity (Bergmann, 2001).

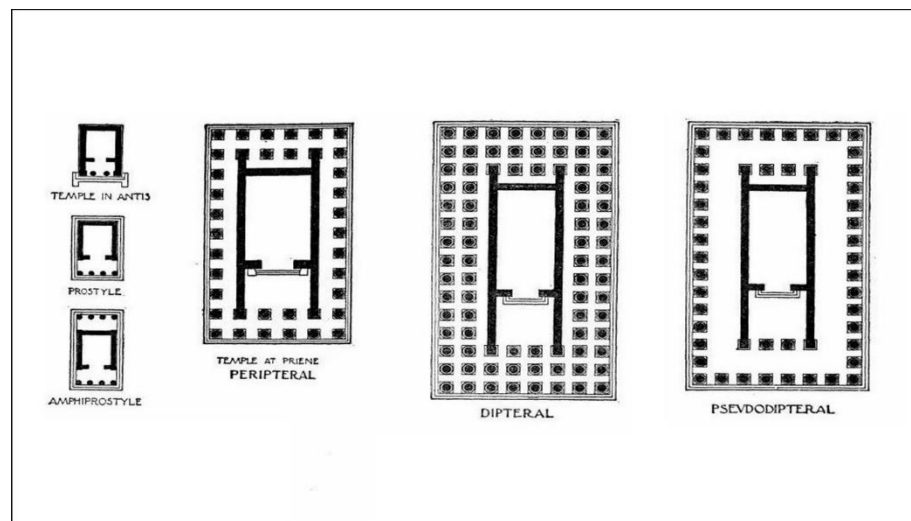
## THE EVALUATION OF CITIES AND THEIR STRUCTURES IN ANTIQUITY: THE THEORETICAL MODEL IN VITRUVIUS AND THE EXPERIENTIAL TOPOGRAPHY IN PAUSANIAS

Although the texts of Vitruvius and Pausanias belong to different fields of knowledge, they address similar themes when explaining the components of the ancient city. In Vitruvius, the city is conceived as a theoretical composition defined through architectural proportion, knowledge of materials, building typologies, and principles of order. In Pausanias, by contrast, the city appears as a narrative topography constructed around sacred spaces, altars, statues, roads, harbours, and marketplaces. The location of the city, the relationship between temples and altars, the organization of public spaces, and the connection established with topography are represented in both texts in ways that both overlap and diverge.

### The Temple and the Perception of Sacred Geography

Vitruvius approaches temples from an architectural perspective and defines three fundamental criteria in their design: orientation, proportion, and order (Vitruvius, III.I, IV.V) (Figure 1). When establishing the relationship between temple and altar within a city, Vitruvius takes ritual orientation as his point of departure and transforms it into a technical principle. As he states, *"the quarter toward which temples of the immortal gods ought to face is to be determined on the principle that, if*

*there is no reason to hinder and the choice is free, the temple and the statue placed in the cella should face the western quarter of the sky". He further explains the purpose of this arrangement: "This will enable those who approach the altar with offerings or sacrifices to face the direction of the sunrise in facing the statue in the temple, and thus those who are undertaking vows look toward the quarter from which the sun comes forth, and likewise the statues themselves appear to be coming forth out of the east to look upon them as they pray and sacrifice". On the other hand, Vitruvius adds that "But if the nature of the site is such as to forbid this, then the principle of determining the quarter should be changed, so that the widest possible view of the city may be had from the sanctuaries of the gods" (Vitruvius, IV.V.1-2).*



**Figure 1.** Temples according to the arrangement of their columns (Vitruvius, III.II)

Vitruvius articulates the relationship between temple and altar in a city by exploring the position and sensory experience of the worshipper during ritual practice. Architectural order thus becomes an instrument that consciously directs the bodily and visual orientation of sacred action. This formulation demonstrates that temple orientation is determined through the interplay of nature, ritual practice, and celestial movement. Orientation, therefore, constitutes a functional component of sacred space (Incerti, 2013).

Vitruvius integrates not only orientation but also visual and ritual routes into the architectural design. He further argues that sacred buildings should be located along the main circulation axes of the city or at points that dominate these axes (Figure 2). In this way, temples remain continuously within the field of vision of individuals moving through public space, rendering religious practice a visible component of everyday urban experience (Vitruvius, I.VII.1).

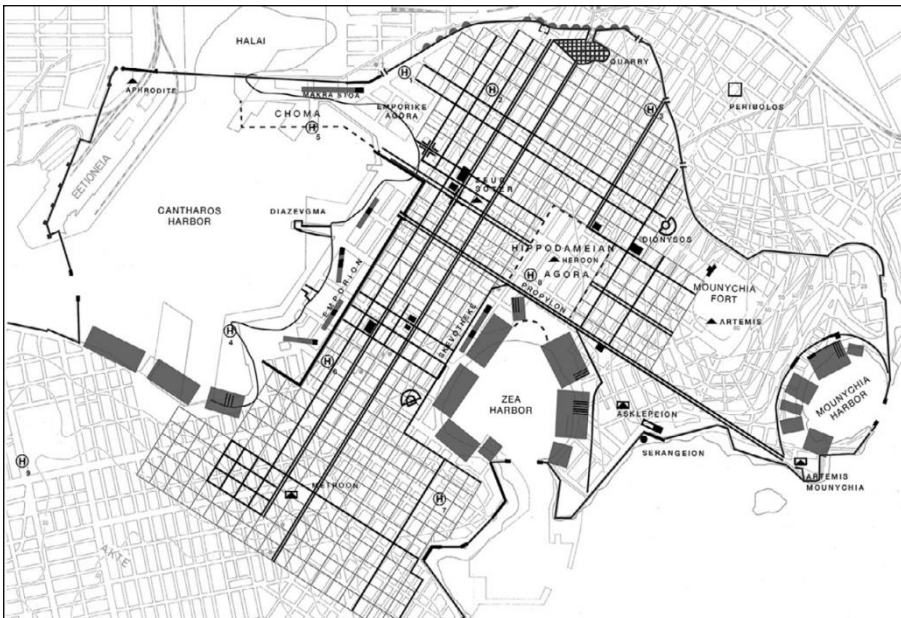
In Pausanias, temples and sacred spaces are not described on the basis of orientation or architectural principles, but through the walking routes traced within the city's topography, the sequencing of sacred stations, and the experiential relationships established between these locations

(Wycherley, 1986; Elsner, 2001). In his description of Piraeus, the spatial organization that embodies the ritual and political significance of the area is conveyed as follows (Figure 3): *“Now of all the things in the Piraeus best worth seeing is the temple of Athene and Zeus; both their statues are of gold, and Zeus has a sceptre and Victory, while Athene is armed with a spear. Here, too, is a painting by Arcesilaus of Leosthenes and his sons...”*



**Figure 2.** The Acropolis of Athens and the surrounding structures (URL-1)

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**Figure 3.** The Harbour of Piraeus (Steinhauer, 2021)

In the continuation of the same passage, a triangle formed by harbour, portico, and agora is described: *“...it is in the long portico, where those near the sea have their market, (for there is another market for those more inland), and in the back of the portico near the sea are statues of Zeus and Demos, the design of Leochares”* (Pausanias, I.I). This narrative does not focus on the orientation of the temple, but rather on the position of the

sacred structure within the urban topography and on the spatial relationships established between public spaces such as the harbour, agora, and stoa, and the cult symbols represented by statues and altars. The same approach becomes even more explicit in the description of the cult of Aphrodite at Knidos: *"...near the sea is a temple erected to Aphrodite by Conon, after his victory over the Lacedemonian fleet off Cnidus in the peninsula of Caria. For Aphrodite is the tutelary saint of the men of Cnidus, and they have several temples of the goddess; the most ancient celebrates her as Doritis, the next in date as Acraea, and latest of all that which everybody else calls Athene of Cnidus, but the Cnidians themselves call it Athene of the Fair Voyage"* (Pausanias, I.I). Pausanias emphasizes the intensity with which the Knidians honoured the goddess and the existence of multiple temples dedicated to her. This sequence is not based on the orientation of the temples, but on topographical and ritual criteria such as elevation (Acraea), the relationship with the harbour and maritime context (Fair Voyage), and the continuity of historical sacredness (Doritis). Thus, in Pausanias, the relationship between sacred spaces and the city is established not through architectural principles, but through the continuity of cult within the urban geography.

In *De Architectura*, Vitruvius states that *"Altars should face the east, and should always be placed on a lower level than are the statues in the temples, so that those who are praying and sacrificing may look upwards towards the divinity"* and adds that even this difference in height varies according to the attributes of the gods. *"They are of different heights, being each regulated so as to be appropriate to its own god. Their heights are to be adjusted thus: for Jupiter and all the celestials, let them be constructed as high as possible; for Vesta and Mother Earth, let them be built low"* (Vitruvius, IV.IX). In this way, temple architecture in Vitruvius emerges as a consciously designed sacred space structured around orientation, spatial hierarchy, and the ritual qualities of the gods, directing worship practices in both bodily and visual terms (Karababa, 2022). In Pausanias, by contrast, the relationship between altar and deity is not explained through technical criteria to the same degree. Instead, an experiential classification appears, based on the division of ritual space according to different deities. While describing the sanctuary at Sikyon in the Peloponnese, Pausanias notes that the altar is divided into sections, stating: *"And the altar has five divisions: one belongs to Hercules and Zeus and Paeonian Apollo, and another is dedicated to heroes and heroes' wives. And the third belongs to Vesta and Hermes and Amphiaraus and the sons of Amphilochus... And the fourth division of the altar belongs to Aphrodite and Panacea... And the fifth has been set apart for the Nymphs and Pan..."* (Pausanias, I.XXXIV). Here, criteria such as elevation, orientation, or architectural axes, which are decisive in Vitruvius, are not mentioned. Instead, Pausanias conveys, through observation, in whose name sacrifices are made, which god or hero occupies which part of the sacred area, and how the cultic order is organized in practice. This distinction reflects not a simple architectural arrangement, but a classification

related to the hierarchical organization of cults (Barker et al., 2023). Elsewhere, Pausanias remarks that the Athenians are more devoted to religion than other peoples and draws attention to the cult of Athena Ergane and the placement of Herms as examples (Pausanias, I.XXIV). He also describes the cult of Artemis Amarysia in rural Attica by establishing connections between local festivals, place names, and epic traditions (Pausanias, I.XXXI). These examples demonstrate that sacred topography extends beyond the urban centre, forming an integrated ritual geography through surrounding villages and roads.

Vitruvius states that temples should be oriented toward the rising sun, so that morning rituals may take place together with light (Vitruvius, IV.V.1). According to him, the orientation of temples is not merely a spatial preference, but an integral component of ritual order. For this reason, temples oriented toward the east, west, or south acquire distinct cultic meanings depending on the deity. The issue of proportion is explained through the concept of *symmetria*. For Vitruvius, temple architecture achieves beauty through mathematical harmony and proportional coherence (Smith, 2003). Accordingly, the relationships between column diameter, stylobate width, intercolumniation, and façade height are determined through geometric ratios (Figure 1). Temple orders are classified as Doric, Ionic, and Corinthian. Vitruvius defines the formal, proportional, and aesthetic differences among these orders, characterizing the Doric as more rigid and austere, the Ionic as more elegant and slender, and the Corinthian as the most elaborate and ornate (Lefas, 2000). When stating that altars should be placed lower than the cult statues within temples, Vitruvius emphasizes the need to establish a hierarchical spatial order so that those who pray and offer sacrifices may look upward toward the deity. This statement demonstrates that Vitruvius deliberately designs ritual experience within architectural order, directly linking changes in spatial elevation to cultic behavior. Moreover, as expressed in his assertion that “...for we must not build temples according to the same rules to all gods alike, since the performance of the sacred rites varies with the various gods”, he maintains that the plan schemes and dimensional proportions of temples must vary according to the function and cultic character of each deity (Vitruvius, IV.VIII.6).

By contrast, in Pausanias, even the fact that part of a sacrificial ritual dedicated to Herakles is directed to the god and part to the hero indicates a distinction in status between deity and hero. However, Pausanias does not formalize this as a rule, but merely records the practice (Pausanias, I.XXXII). Thus, Vitruvius’ normative approach that the height of the altar varies according to the god and Pausanias’ experiential account that the altar area is divided according to the god demonstrate that the same cult space is conceptualized on two different levels. This distinction becomes even more pronounced when the issue of sacred topography is considered. In Vitruvius, the location of sacred spaces is described in relation to wind conditions, climate, and public accessibility. His

statement that “...houses of the gods on the sides of public roads should be arranged so that the passers-by can have a view of them and pay their devotions face to face” transforms ritual visibility into an architectural design criterion (Vitruvius, IV.V.2). This approach suggests that sacred structures are not positioned as background elements within the urban fabric, but are instead deliberately opened towards visible areas and integrated into public use.

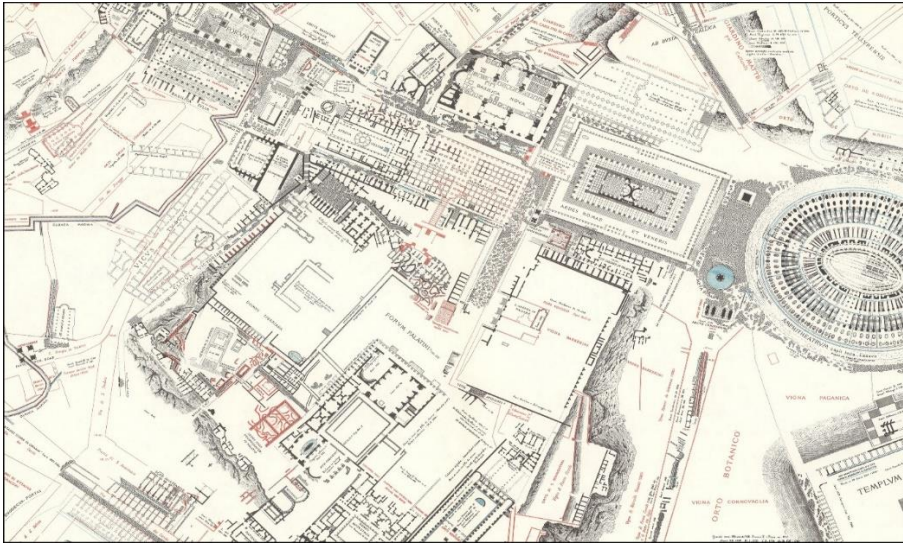


**Figure 4.** The Ancient City of Corinth and the surrounding structures (URL-2)

Consequently, in Vitruvius, orientation and location become technical principles that anticipate and direct ritual behavior, forming integral components of architectural order (Lefas, 2000). In Pausanias, spatial organization is understood through walking routes traced between the harbour, acropolis, hilltops, marketplaces, and sacred spaces. In examples such as the placement of the sanctuary at Sikyon within a triangle formed by the gymnasium, agora, and altar, or the narration of sanctuaries around Corinth as connected from the harbour toward the acropolis, spaces are linked not through architectural hierarchy, but through relationships of religious meaning (Pausanias, II.III; Owens, 2000) (Figure 4).

### **Forum and Agora: Legal-Spatial Order and Social Memory**

The forum and the agora were public spaces in ancient Greek and Roman cities that fulfilled similar functions. Established at, or defining, the urban centre, agoras and forums met a wide range of commercial, administrative, and social needs for citizens (Wycherley, 1986) (Figures 5-8).



**Figure 5.** Ancient Rome, plan of the forum and surrounding structures (Lanciani, 1901)

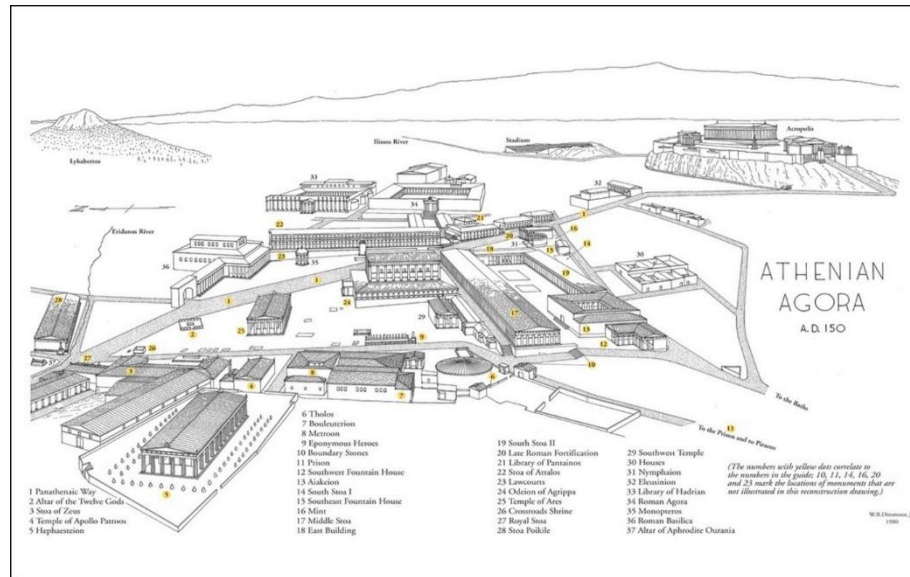


**Figure 6.** The Roman Forum and the surrounding structures (URL-3)

Vitruvius defines the forum as the centre of the ancient city and describes it primarily as a public space in which judicial decision-making processes and commercial activities were carried out in an orderly manner (Owens, 2000; Yaylı & Küçük, 2011). When discussing the principles governing the location of forums, Vitruvius states that “...the size of a forum should be proportionate to the number of inhabitants, so that it may not be too small a space to be useful, nor look like a desert waste for lack of population”, and then notes that basilicas should be arranged in close proximity to the forum (Vitruvius, V.I.2) (Figure 5). He further explains: “Basilicas should be constructed on a site adjoining the forum and in the warmest possible quarter, so that in winter business men may gather in them without being troubled by the weather... This is because the two middle columns on that side are omitted, in order not to obstruct the view of the pronaos of the temple of Augustus (which is built at the middle of the side wall of the basilica, facing the middle of the forum and the temple of Jupiter) and also the tribunal which is in the former temple, shaped as a hemicycle whose curvature is less than a semicircle. The open side of this

*hemicycle is forty-six feet along the front, and its curvature inwards is fifteen feet, so that those who are standing before the magistrates may not be in the way of the business men in the basilica” (Vitruvius, V.I.4, 7-8).*

Here, the basilica is presented as a public building associated with judicial and administrative activities, and Vitruvius thus defines the forum normatively through law and architectural order (Flohr, 2020; Gates, 2021). In contrast to this, Pausanias’ accounts of the agora differ fundamentally from those of Vitruvius. Pausanias does not present technical principles regarding the plan or organization of the agora; instead, he conveys the meanings it carries in terms of memory, identity, and cult (Barker et al., 2023).



**Figure 7.** The Agora of Athens (Dinsmoor, 1980)

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**Figure 8.** General view of the Athenian Agora (URL-4)

While describing the Athenian Agora, he records the following observation (Figures 7-8): “...the Athenians have in the market-place among other things not universally notable an altar of Mercy, to whom,

*though most useful of all the gods to the life of man and its vicissitudes, the Athenians alone of all the Greeks assign honours. And not only is philanthropy more regarded among them, but they also exhibit more piety to the gods than others. For they have also an altar to Shame, and Rumour, and Energy” (Pausanias, I.XVII). In this context, the agora is associated with custom and virtue, and its function is perceived not as the exchange of goods but as a moral reminder. Thus, Pausanias’ depiction of the agora is constructed through a cultural and identity-based perspective rather than a juridical or commercial one, in contrast to Vitruvius’ account. Whereas Vitruvius describes the forum as a legal-economic space in which transactions are regulated, guarantees are recorded, and debts are registered, Pausanias presents the agora as a scene of memory and cult, where mercy is honoured and an ethical bond between gods and humans is made visible (Elsner, 1992). This distinction is also evident in the surrounding elements of the agora and forum. Pausanias further defines the agora in relation to stoas, statues, and altars. In Piraeus, he refers to “...it is in the long portico, where those near the sea have their market, (for there is another market for those more inland)...” thereby treating the space not only as a commercial area but also as a topographical one (Pausanias, I.I; Wycherley, 1986) (Figure 3). His mention of the statues of Zeus and Demos located behind the stoa indicates that the agora also functioned as a space of political representation and cult symbolism. Moreover, the presence in the Athenian Agora of altars dedicated not only to gods but also to abstract concepts such as Aidos (Shame), PHEME (Rumour), and Orme (Energy) demonstrates that the space of the agora was deeply intertwined with ethical, religious, and social components (Pausanias, I.XVII).*

### **Harbour - Sacred Area Connection**

Vitruvius treats harbours as an integral part of architectural and engineering knowledge and evaluates these structures entirely within the context of technical infrastructure. In his descriptions of harbours, he emphasizes wave movements, wind directions, natural shelter, and the technical norms governing the structural elements to be constructed, defining the harbour as an engineering system based on functionality and durability (Iossifidis, 2024). In this context, wind regimes, wave action, and defensive features become decisive factors. Vitruvius recommends that harbours be established in natural bays or protected inlets and discusses engineering solutions such as moles and breakwaters to mitigate wave action: *“The subject of the usefulness of harbours is one which I must not omit, but must explain by what means ships are sheltered in them from storms. If their situation has natural advantages, with projecting capes or promontories which curve or return inwards by their natural conformation, such harbours are obviously of the greatest service. Round them, of course, colonnades or shipyards must be built, or passages from the colonnades to the business quarters, and towers must be set up on both sides, from which chains can be drawn across by machinery”*

(Vitruvius, V.XII.1). In this framework, the harbour is treated primarily as an infrastructural element serving military and economic functions. It is conceived as a system of transport, trade, and protection (Vitruvius, V.XII.3-7). For Vitruvius, therefore, the harbour is not associated with ritual or sacred geography, but rather constitutes an engineering entity intertwined with military logistics, defence, and commerce. For Pausanias, by contrast, the harbour is not merely a structure of transportation and protection, but also a place where cult practices are enacted (Figure 9). Describing the harbours of Corinth, Pausanias states: *"The Corinthian seaports got their names from Leches and Cenchrias, who were reputed to be the sons of Poseidon by Pirene the daughter of Achelous... And there is at Lechaeum a temple and brazen statue of Poseidon, and as you go to Cenchrae from the Isthmus a temple of Artemis, and old wooden statue of the goddess. And at Cenchrae there is a shrine of Aphrodite and her statue in stone, and next it, on the breakwater near the sea, a brazen statue of Poseidon. And on the other side of the harbour are temples of Aesculapius and Isis"* (Pausanias, II.II).



**Figure 9.** The Harbour of Lechaeum (Preiser-Kapeller & Ginalis, 2021)

Through this account, Pausanias emphasizes that the harbour is not solely a commercial zone, but a space where divine and political representations intersect. What is particularly striking here is the formation of a sacred iconographic environment surrounding the harbour. In Pausanias' perspective, the harbour is interpreted within a framework of state identity, divine protection, and urban circulation. A similar situation appears in his description of Limera. Pausanias notes: *"And on the road from Boeae to Epidaurus Limera there is a temple of Artemis called by the Epidaurians Limnas. The town is at no great distance from the sea, and is built on an eminence: and the sights worth seeing here are the temple of Aphrodite, and a statue of Aesculapius in stone erect, and*

*a temple of Athene in the citadel, and in front of the harbour a temple of Zeus Soter*" (Pausanias, III.XXIII). In another passage, he states: "...at Zarax there is nothing remarkable but a temple of Apollo at the end of the harbour, and a statue of the god with a lyre" (Pausanias, III.XXIV). In Pausanias' narrative, the harbour thus emerges as a sacred medium. Whereas for Vitruvius the harbour is a technical system defined through waves, moles, breakwaters, winds, and structural components designed to provide protection against natural forces and grounded in functionality (Owens, 2000); in Pausanias it appears as a ritual landscape endowed with religious and ideological dimensions, shaped by gods, heroes, and political symbols.

### **The Acropolis (Upper City) and the Lower City: Hierarchy and Memory**

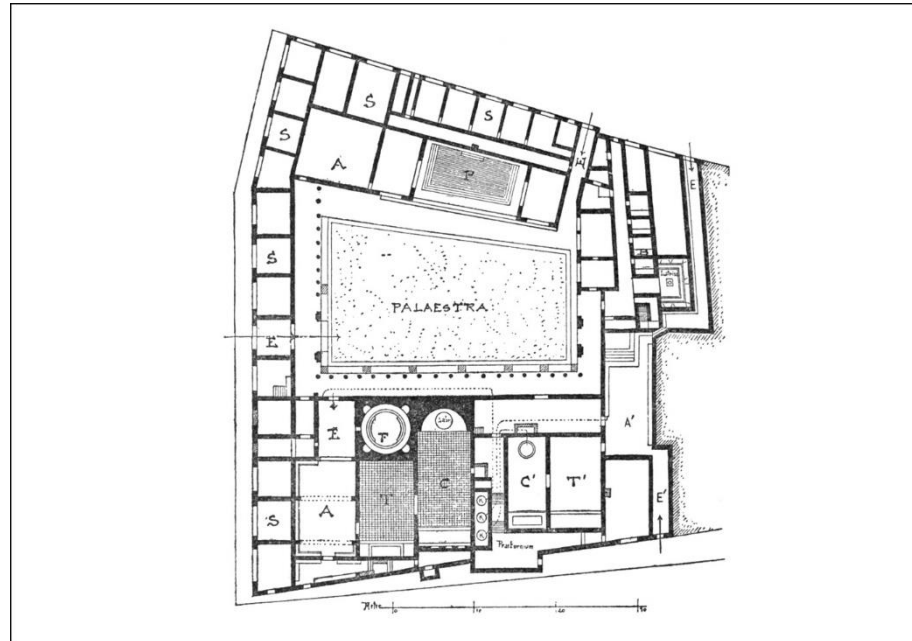
Although Vitruvius does not explicitly employ the term acropolis, he nonetheless treats the notions of elevation and dominance as technical principles directly governing the placement of public buildings. In his discussions of the positioning of structures within the city, he emphasizes the need to evaluate suitable locations with care (Wycherley, 1986; Gates, 2021). In a similar manner, his insistence that temples should be located along public roads and in visible positions aims to establish religious dominance within urban space through visual perception (Vitruvius, I.VII.1). In Pausanias, the acropolis becomes a focal point embodying the triad of historical, mythical, and cultural memory. Pausanias frequently structures his accounts of entering a city along the axis of the harbour, lower city, and acropolis. In his narrative of Attica, he underscores the sacred character of the Athenian Acropolis, making both its topographical and cultural distinctiveness explicit (Pausanias, I.XXII) (Figure 2). A similar approach is evident in his description of Piraeus, where the route begins at the harbour and proceeds through the lower city level, with its stoas, statues, and altars, to the sacred areas located above (Pausanias, I.XXIX; I.XXX). This spatial sequencing demonstrates that, in Pausanias, the acropolis is not merely a "high place," but also a ritual destination. Accordingly, the acropolis is understood through the interrelation of elevation, sacredness, and historical depth. When these two authors are considered in comparison, it becomes clear that the relationship between the acropolis and the lower city is articulated in different ways. In Vitruvius, the elevation on which the acropolis is situated is justified through technical criteria such as acoustics, visibility, and accessibility; decisions such as placing the theatre on a slope or ensuring the visibility of a temple along a road are organized in terms of architectural functionality.

In Pausanias, however, elevation is interpreted through cult, myth, and memory; the acropolis functions as the bearer of gods, heroes, archaic remains, and the collective memory of the community (Barker et al., 2023). The former defines the acropolis within an engineering framework, while the latter situates it within the category of cultural

memory. Within this distinction, the lower city likewise assumes different roles: in Vitruvius, it is the space of a public network furnished with forums, basilicas, baths, and theatres; in contrast, Pausanias' depiction of the lower city as a ritual zone of transition is characterised by harbours, stoas, agoras, statues, and altars.

### **Bath-Palaestra/Gymnasium: Functional Typology and Educational-Cultural Space**

Vitruvius addresses baths and palaestrae within the framework of the physical and hygienic requirements of urban planning (Yegül, 2006). When explaining the internal arrangement of palaestrae, he describes in detail the colonnades surrounding the space, changing rooms, oiling rooms, and areas of earth and sand. He clearly specifies the relationships between these units and their spatial dimensions with statements such as: *"The square or oblong peristyle in a palaestra should be so formed that the circuit of it makes a walk of two stadia... Let three of its colonnades be single, but let the fourth, which is on the south side, be double, so that when there is bad weather accompanied by wind, the drops of rain may not be able to reach the interior. In the double colonnade let the rooms be arranged thus:...the anointing room... the cold bath room... the furnace... a Laconicum..."* (Vitruvius, V.XI.1-2) (Figure 10).



**Figure 10.** Plan of the Stabian Baths at Pompeii (Vitruvius, V.X)

Adjacent units such as areas for javelin and discus throwing, running tracks, and sand courts appear in Vitruvius as spaces organized in direct relation to the connection he establishes between athletic activity and bodily health (Nielsen, 1990). Baths, on the other hand, are significant in terms of engineering calculations concerning the heating of water, the arrangement of hot and cold rooms, the positioning of pools, and the elements used in heating systems, such as tubuli, spacer tubes, and

tegulae mammatae (Rook, 1978). Vitruvius states that “...the hot rooms should be protected from the north winds” and explains the flow of water and the distribution of heat using technical terminology. He further notes: “In the first place, the warmest possible situation must be selected; that is, one which faces away from the north and northeast. The rooms for the hot and tepid baths should be lighted from the southwest, or, if the nature of the situation prevents this, at all events from the south, because the set time for bathing is principally from midday to evening”. He also mentions the technical features of the heating system by stating that “...three bronze cauldrons are to be set over the furnace, one for hot, another for tepid, and the third for cold water...” (Vitruvius, V.X.1). In this way, the Roman bath emerges in Vitruvius as an architectural typology shaped by considerations of health, cleanliness, and bodily discipline. On the other hand, the terminological problem between gymnasium and palaestra is also encountered in the works of ancient authors. While Vitruvius never uses the term gymnasium in his descriptions of athletic spaces (Vitruvius, VI.II.1), Pausanias explicitly states that the gymnasium and the palaestra differ from one another in functional terms (Pausanias, V.XV). Setting aside terminological differences, although the distinction is not always clear, it is evident that there are certain fundamental differences between the two structures. First, the gymnasium has the character of a public and official building or area, whereas the palaestra is more often associated with private use. Moreover, while gymnasia stand out as multifunctional spaces in which citizens of all ages received both intellectual and physical education, palaestrae were primarily dedicated to activities focused on physical training (Wycherley, 1986) (Figure 11). Although both structures served educational purposes, palaestrae could be constructed either as components within a gymnasium complex or as independent buildings.

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**Figure 11.** Stabian Baths of Pompeii (URL-5)

In Pausanias, descriptions of gymnasia and baths are situated primarily within a social and cultural context rather than focusing on structural characteristics. As he notes: *"... there are several baths in various parts of Corinth, some erected at the public expense, and others by the Emperor Adrian. And the most famous of them is near the statue of Poseidon. It was erected by Eurycles a Spartan, who beautified it with various stones, amongst others by the stone they dig at Croceae in Laconia. On the left of the entrance is a statue of Poseidon, and next to him one of Artemis hunting"* (Pausanias, II.III).

Pausanias frequently records where gymnasia are located in various cities, to which deity or hero they are dedicated, and which statues are associated with these spaces. In the section describing Phocis, he states: *"There are also two gymnasiums, one contains baths, the other opposite to it is an ancient one, in which is a bronze statue of Xenodamus, a native of Anticyra, who, as the inscription states, was victor at Olympia among men in the pancratium"* (Pausanias, X.XXXVI).

Likewise, in his account of Corinth and its surroundings, Pausanias writes: *"And as you go hence to the gymnasium, on the right is the temple of Pheraean Artemis: the wooden statue of the goddess was, they say, brought from Pherae. Clinias built this gymnasium, and they educate boys there still. There is an Artemis also in white stone, carved only down to the waist, and a Hercules in his lower parts like the square Hermae"* (Pausanias, II.X).

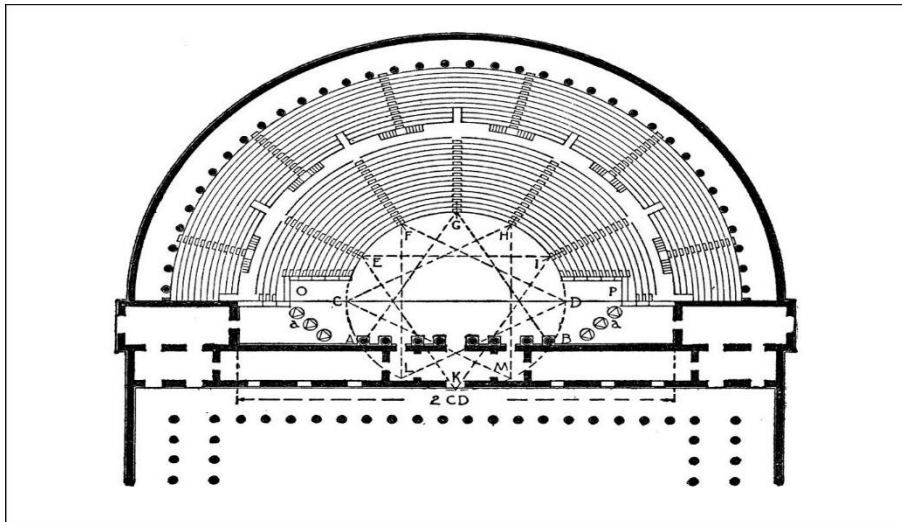
In these narratives, Pausanias places particular emphasis on the figures in whose honour these spaces were dedicated. The gymnasion thus appears not merely as a place for the physical training of youth, but as a setting in which hero cults, local pride, and civic identity are made visible. When a gymnasion contains a statue dedicated to a specific god or hero, Pausanias records this fact; by contrast, he does not engage with details concerning the plan, dimensions, or construction techniques of the building. This distinction highlights a fundamental difference in perspective: whereas in Vitruvius the palaestra is treated as a space organized for physical exercise and bodily care in the service of health, in Pausanias the gymnasion emerges as a place closely associated with identity, cult, and remembrance. Accordingly, while Vitruvius considers factors such as heat, air, water, and circulation in relation to bodily health, Pausanias interprets the body within the broader frameworks of education, virtue, and citizenship.

### Theatre

Vitruvius approaches theatres by structuring the entire discussion around acoustic science, geometry, and engineering (Sear, 2006). He begins by emphasizing the importance of site selection and positioning, asserting: *"After the forum has been arranged, next, for the purpose of seeing plays or festivals of the immortal gods, a site as healthy as possible should be selected for the theatre, in accordance with what has been written in the first book, on the principles of healthfulness in the sites of cities. For*

*when plays are given, the spectators, with their wives and children, sit through them spellbound, and their bodies, motionless from enjoyment, have the pores open, into which blowing winds find their way. If these winds come from marshy districts or from other unwholesome quarters, they will introduce noxious exhalations into the system. Hence, such faults will be avoided if the site of the theatre is somewhat carefully selected” (Vitruvius, V.III.1).*

In subsequent sections, Vitruvius explains in detail the semicircular plan, the tiers of seating, and the inclinations of walls that enhance acoustic performance (Figure 12). According to Vitruvius, placing the theatre on a slope is not merely a topographical convenience, but a physical necessity that facilitates the natural transmission of sound (Vitruvius, V.III.1). He defines the theatre primarily through the circulation of sound and does not engage with its festival or ritual context (Haddad, 2026).



**Figure 12.** Theatre plan in Vitruvius (Vitruvius, V. VII)

Pausanias addresses theatres not through their technical characteristics but largely within a cultural and festival-oriented framework. In his account of Corinth, he notes: “... in the present citadel there is a temple to Fortune Dwelling on the Heights, and next it one to the Dioscuri. Both these and the statue of Fortune are of wood. And in the theatre built under the citadel the person represented on the stage-curtain is, they say, Aratus the son of Clinias. And next to the theatre is a temple of Dionysus: the god is fashioned in gold and ivory, and near him some Bacchantes in white stone” (Pausanias, II.VII). In another passage (Figure 13), he remarks: “...the Epidaurians have a theatre in their temple, especially well worth seeing in my opinion: for the Roman theatres beat all in the world in magnificence, and for size the Arcadian theatre at Megalopolis carries the day: but for beauty of proportion what architect could compete with Polycleetus? And Polycleetus it was that designed this theatre and round building” (Pausanias, II.XXVII).

**Figure 13.** Theatre of Epidaurus  
(URL-6)



Similarly, the Theatre of Dionysos in Athens is directly associated with the cult of Dionysos (Wycherley, 1986) (Figure 14). In these accounts, the theatre emerges as a point of intersection between ritual, performance, and civic identity. Pausanias presents theatrical spaces across different sections of his work, most often within the context of the Dionysian cult. Moreover, when referring to a small temple associated with the transmission of the Dionysos cult (Pausanias, I.XXIX), he offers an indirect narrative indicating that theatrical activities were embedded within a cultic framework.

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**Figure 14.** The Theatre of Dionysos in Athens and the Acropolis (URL-1)



## CONCLUSION

The evaluations of ancient cities demonstrate that the design principles of urban space and its experiential dimensions are addressed through different modes of knowledge production. In *De Architectura*, Vitruvius approaches the city within a framework of universal, rational, and normative principles, largely excluding historical and geographical particularities, and treats architecture and urban planning as systematic and rule-based practices. In contrast, Pausanias' *Periegesis Hellados* presents the cities of Greece within diverse historical layers and local contexts, conveying them through cult practices, ritual continuities, and mythological-historical memory. This distinction reveals that the ancient city could be designed as an abstract theoretical model on the one hand, and that cities become meaningful through concrete spaces and local narratives on the other. In Vitruvius, the city is understood as a technical system that must be designed in harmony with natural and social order, with architecture functioning as the regulatory instrument that ensures the continuity of this system. In Pausanias, the city is not constructed through predetermined planning principles, but emerges as an experienced and holistic topography articulated through narratives that move along sacred spaces, stoas, agoras, harbours, funerary monuments, and roads. His narrative foregrounds not the technical rationale of spaces, but the ways in which they acquire meaning within cultural and ritual contexts. This methodological divergence becomes particularly evident in the treatment of sacred spaces. In Vitruvius, temples and sanctuaries are defined through architecturally controllable criteria such as orientation, hierarchy, and ritual visual alignment; the relationship between temple and altar is the result of a deliberate design decision intended to regulate the bodily and visual orientation of worship. In Pausanias, sacred space is articulated less through orientation than through topography, sequences of stops, and cult continuity. Thus, while the sacred in Vitruvius forms a component of a planned urban order, in Pausanias it appears as an integral element of urban memory and lived experience. The comparison of the agora and the forum further reinforces this distinction. In Vitruvius, the forum is treated as a centre regulating legal and economic processes and is defined within a typological and functional unity through structures such as the basilica. In Pausanias, the agora is represented less through technical organization than as a public stage where ethical, political, and cultural meanings are concentrated. The same type of space is thus understood in one text as the spatial counterpart of institutional order, and in the other as a bearer of social memory and symbolic representation. A similar divergence is observed in the example of the harbour. In Vitruvius, the harbour is an engineering problem resolved in terms of protection and functionality, closely related to natural forces such as waves and winds, with military and economic infrastructure taking precedence. In Pausanias, however, the harbour becomes a threshold space where political and religious representations intersect; cult practices and expectations of divine protection constitute

fundamental elements shaping its meaning. This demonstrates that even infrastructural components of the ancient city must be evaluated not only in technical terms, but also through their ritual and representational dimensions. The relationship between the acropolis (upper city) and the lower city is likewise articulated differently in the two texts. In Vitruvius, elevation is justified as a rational design principle based on criteria such as dominance, visibility, and functionality. In Pausanias, elevation is treated as a focal point woven from mythical, historical, and cultural memory, playing a decisive role in the formation of ritual destinations within the city. The same topographical feature thus functions, in Vitruvius, as a design rationale, and in Pausanias as a place of memory that generates meaning. Spaces dedicated to bodily practices, such as baths, palaestrae, and gymnasia, also clearly reflect this divergence in approach. In Vitruvius, these structures are defined through technical criteria such as orientation, light, heating systems, and interrelations between spatial units, with hygiene and order taking precedence. In Pausanias, the same spaces derive their significance less from plan and measurement than from dedication, cultic context, and the visibility of civic identity. Similarly, while the theatre in Vitruvius is resolved according to principles of acoustics, geometry, and engineering, in Pausanias it is situated within the framework of festival cycles, ritual practices, and local identity. This comparative reading clearly demonstrates that the ancient city cannot be explained through a single theoretical framework. While Vitruvius' text provides a normative and foundational schema for the ancient city, Pausanias' narrative makes visible how this schema was lived and interpreted in different cities and historical contexts. In conclusion, the ancient city should be understood as a multilayered whole formed through the interrelation of architecture, cult, topography, and memory. When Vitruvius' generalizing and theoretical framework is read together with Pausanias' place-based, historical, and experiential narrative, it becomes evident that the city was both a designed and a lived construct. This holistic perspective offers a methodological foundation for ancient urban studies that foregrounds not only architectural solutions, but also urban experience and cultural continuity.

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## Resume

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