Architecture and Urban Design in Ancient Pompeii

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Introduction

Ancient Pompeii was a planned city, like countless other Roman cities, military camps and forts. Roman colonies founded on open field sites display Roman grid planning or Centuriation, at its most elaborate such as at Cesena, Padua, and Florence. Here, at Pompeii, a famous Italian town in antiquity because of its excellent preservation caused by the volcanic explosion of Mt. Vesuvius during the first century AD. The streets, canals, agriculture plots and public spaces were laid out along geometric lines and these striations are suggestive of an ordered arrangement reflected by the regular layout of a square grid, made famous by the Romans. However, unlike in the sites listed above, Pompeii exists as a unique example of Roman urban planning as it incorporates ideas of traditional grid-style planning, but also more organic forms as well. In this assessment of the urban setting of Pompeii, there will be a brief historical overview of the city in terms of urban design and its rediscovery, followed by an analysis describing the importance of the domestic architecture, proceeding to evolution of the development and layout of the urban landscape and it affected the social fabric of the town.

History of the Pompeii Urban Setting

Pompeii, whose heritage was originally Greek, had become overrun by the Samnites in the fifth Century BC and even at that point had a plethora of urban buildings that predate Rome by several centuries. The Samnites greatly expanded the original settlement and gave monumental

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shape to the city centre (seen in figure 1 in the bottom left corner). As a wealthy city along the Campania coast, it had been open to eastern influences for centuries. It is here that the emergence of many typical Roman stone buildings can be traced, along with the typical Roman house, with its atrium and colonnade garden.\(^2\) The town itself, in the traditional Roman custom, was encompassed by a wall featuring several gates, often with two or three arched entrances to delineate pedestrian and vehicle traffic. Historically the town was used by both Greeks and Etruscans as their transportation/shipment centre and base for agriculture.\(^3\) Within the walls there are spacious paved streets in a regular layout (excluding the southwest corner as will be discussed later) but upon viewing some images of the site, there were no street names or numbers. These Pompeiian roads incorporated heavy flagstone pavements, sidewalks and stepping stones to allow pedestrians to cross the street without having to step in puddles (or refuse piles and overflows from fountains), while also allowing vehicles passing through the town to straddle them.\(^4\) The town presents an incredible assortment of several thousand buildings including: shops, large elaborate villas, smaller unpretentious domestic housing, temples, workshops, exercise grounds, baths, an arena, public latrines, markets, taverns, a basilica, and theatres.\(^5\) And among all of these buildings hundreds of small shrines to all kinds of deities and ancestors and an additional forty public fountains could be found.\(^6\) It's rediscovery in the late 18th Century (1755) was of particular significance because it revealed Roman domestic buildings, such as those listed above, in a far more perfect state of preservation than had been seen


\(^3\) Ibid., 195.


\(^5\) Freeman, *Egypt, Greece and Rome*, 517.

previously. Pompeii, thus, had all the amenities one would expect to find in a thriving and prosperous community.

**Domestic Architecture**

The Pompeiian villas are a particular piece of architecture that is important and unique to Pompeii, which also has an important link to the town's urban layout. These homes are referred to as the Roman Domus, and most of those found in Pompeii were built in the second century BC and are some of the best structures that display the Greek colonial origins of the town. These buildings were plentiful in towns like Pompeii but very rare in cities such as Rome, whose residents rather lived in large multi-storey apartment buildings. The typical entrance to these elaborate homes was a small street doorway with an entrance corridor that opened out into a large columned atrium with a rectangular pool of water open to the sky and from which other rooms called cubiculums were accessed. Movable screens, often decorated with mythological scenes, separated rooms and in colder temperatures kept in the heat provided by torches and indoor furnaces. Other common features were a tablinum or ‘office’ where archives and valuables were kept. A remarkable

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10 “Pompeii.”
attribute of these domestic residences was their phenomenal floor mosaics, which illustrated all manner of scenes from myths to the homeowner’s business activities.\textsuperscript{11} Many of these larger houses also had a private garden with statues, decorative fountains, vine-covered pergolas, canvas awnings and the whole surrounded by a peristyle at the rear of the home.\textsuperscript{12} What is most striking about these villas is their similar relationship to the urban layout of Pompeii itself. The urban setting and shape share the same general trapezoidal shape of the town, and similarly retains the same straight, perpendicular lines in its walls and rooms that is also reflected in Pompeii as a town. The homes of local Pompeiian’s act as a smaller interoperation of the urban landscape in comparison to each’s plan.

Urban Development in Pompeii

The earlier Samnite-Etruscan city which formed the south west section of Pompeii, included the the Forum, temples and other public buildings (see figure 1 and the forum plan in figure 4) had a more organic or natural style of growth in regards to its urban development. This is plainly visible in figure 1, where the comparison of the forum in the southwest section to the grid structure evident in the southeast section of the town, near the amphitheatre with large parallel streets, or decuriones,

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure4.png}
\caption{Plan of the Forum of Pompeii, illustrating the placement of the town’s notable administrative and public structure.}
\end{figure}

\textsuperscript{11} Ibid., 190.
\textsuperscript{12} “Pompeii.”
connected by smaller cross streets, or cardines, creating the visible rectangular blocks of grouped but separate buildings in a singular structure (insulae). This quarter of tight, small blocks in the southwest of the town can identify its irregular configuration to the oldest Oscan settlement that originally occupied the area as an informal open space. Before the eruption of Mt. Vesuvius the Pompeian forum included numerous public and administrative buildings including: the Temple of Jupiter, honorary arches, municipal buildings, the Basilica, the temple of Apollo and the temple of Vespasian, the grain and food market, and variety of sanctuaries. Interestingly, the eastern part of the city was still relatively underdeveloped at the time of Mount Vitruvius’ volcanic explosion, with expansive garden spaces still available for development, and the presence of all this relatively open space to yet be fully developed would suggest that the population density had not matured to a point where the city was required to continue building structures within the city walls. This undeveloped area would have likely been planned out similar to the grid layout that existed in the eastern half of the town.

Figure 5: An aerial view of the ruins of the forum found at Pompeii. It continued to play a fundamental role in the political, religious, and economic life of the city.

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14 Ibid, 195.
Urban Layout of Pompeii

In regards to the apparent grid style of Roman town planning, Francis John Haverfield, the British Oxford historian, originally illustrated the notion of the planned Roman city in 1913. In his book entitled *Ancient Town Planning* he defined town planning as:

> The art of laying out towns with due care for the health and comfort of inhabitants for industrial and commercial efficiency and for reasonable beauty of buildings is an art of intermittent activity. It belongs to special ages and circumstances. For its full unfolding two conditions are needed. The age must be one in which whether through growth or through movements of population are being freely founded or freely enlarged and almost as a matter of course attention is drawn to methods of arranging and laying out such towns. And secondly the builders of these towns must have wit enough to care for the well being of common men and the due arrangement of ordinary dwellings.\(^{16}\)

Haverfield expressed that ancient town planning, with its characteristic grid design of straight lines at right angles, was what separated the sophisticated civilized men: the Greeks, the Romans and other ‘superior’ Mediterranean peoples from the barbarians who lurked on the periphery of the civilized world (Haverfield clearly expressed a bias regarding the above idea).\(^{17}\) Haverfield further claimed that the Roman town plan, which was focussed on the use of straight streets branching off each other at right angles, was derived from the ancient Greeks and from this basic tenet the Romans were able to perfect the grid pattern.\(^{18}\) This grid pattern was formed as the streets created a series of intersections of streets and buildings that ran parallel and perpendicular to each other.\(^{19}\)

Long, narrow residential blocks were separated by narrow access roads running at right angles to the main avenues.\(^{20}\) Haverfield's fascination with Roman towns lay in the solidarity of the their urban setting, in the sense that Roman towns were ‘harmonized’ with ‘the whole…treated as one organism’.\(^{21}\) He was critical of ideas where there was ‘only one idea of a small house’ that

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21 Haverfield, *Ancient Town Planning*, 18
characterized ‘monotonous streets’ in less wealthy areas of towns. Nevertheless, despite the obvious admiration Haverfield had for the Roman building methods practiced at Pompeii, he seemingly had reservations about an urban existence (which will be discussed later).

Perhaps what is most famous about Roman urban planning and seen in a particular way in Pompeii, is the use and formation of the decumanus and the cardo.

These are characteristic features that distinguish the Roman from the Greek method of town planning, and they revolve around one key difference: the town centre. While both methods have straight lines and right angles, two streets bisect in Roman cities, with each running perpendicular to the other in the shape of a cross. This cross forms the basis from which all other streets come from whether they are at right angles or not. Greeks cities do not have a tendency to have this centre cross as the basis of their plan, but rather a single road. The larger/longer street of the main cross is called the decumanus, which usually ran west to east, while the smaller/shorter street, called the cardo, usually ran from north to south. The Roman military camps, the latin castra, share this same cross-shaped pattern formed by the decumanus and

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22 Ibid., 131.
24 Haverfield, Ancient Town Planning, 73.
the cardo. Pompeii, however is an interesting example of how not all Roman towns are made up of perfect right angles and straight lines such as in the Roman castra. While Pompeii’s plan does include straight roads and a different placement of the Decumanus and the Cardo, it does lack the plethora of right angles found at street level.

Many sections of Pompeii are laid out in different orientations in relation to each other causing Pompeii’s overall layout to look more trapezoidal in shape, rather than square or rectangular (See figure 1 above). The unique shape of Pompeii can be attributed to two main potential causes: one, the previously existing Italic tribal elements of the town (its previous inhabitants including the Oscans, and Samnites), and secondly, the potential influence from military ideals of trying to occupy a specific piece of land despite its asymmetry. Therefore in the case of Pompeii, the straight right angles are disregarded and straight oblong shapes are substituted instead, and the influence from military camps could not always be built in a perfect rectangle, because of the limiting factors of the geography of the site in question. Pompeii was constructed to occupy a peninsula of volcanic effluvium, and this geologic feature had defined the layout of the city with the town wall following the natural tier of the hill for most of its course. When cities are placed in these strategic locations, they cannot always keep the perfect rectangular layout that would normally be preferred due to geographic limitations or characteristics. Again, Pompeii is an illustrious example of this as the natural topography of the land, along with preexisting architecture, has skewed and changed what would ideally be a rectangular plan. The inexactitude of the layout of streets in Pompeii thus can be accounted for through the different methods the planners had utilized the natural geographic

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28 Ibid., 19  
29 Haverfield, Ancient Town Planning, 67-68.  
31 “The Influence of Roman Military Camps on Town Planning”
features, for example, landscape contours. In fact, the layout of Pompeian insulae had a close relationship to the natural topography of the site and was adapted to the irregularities of the hillside. The most regular, are upon the land that slopes in a southerly direction. The roughly square insulae to the east are built on an area of ground sloping to the south with streets following the contours of the site. These irregular patterns may be caused by the pressure on the space in this area and may be the root of the alterations made to the original street pattern.

Another factor that separates the urban setting of Pompeii from most traditional grid plan centres is that the town combines both rectangular right angle streets and organic non-rectangular streets. One reason for this is based on the older archaic foundations. The southwest corner of the city, the location of where forum can still be found, is an intricate pattern of streets, which differs from the rest of the city’s standard rectilinear plan. This area is a representation of the archaic foundations of the city, based on the much older Italian tribes with later renovations made by Roman architects. Aside from Pompeii’s unique urban layout, the attribute that holds a significant impact is reflected in the complex example of the decumanus and the cardo in its town plan. At Pompeii, the two crosses formed by the decumani intersecting with the main the cardo does appear to be an attempt by Roman architects to build in the castrum plan. An attempt to apply a castrum plan, where the plot of land reserved for or constructed for the use as a military defensive position,

33 Richardson, Jr., Pompeii An Architectural History, 41-42.
to Pompeii creates too many problems because of the lack of a clear central point from which the town expanded; the notion that town came into being independent of a preexisting fort. Nevertheless, because Roman architects did not simply build Pompeii around an existing military settlement does not imply that the Roman principles of urban planning, primarily the cardo and decumanus layout, were not important elements during Pompeii’s construction. It is the influence of the need to occupy specific land, as explored by Haverfield, that has created a fusion of the rectangular, castrum plan with previous archaic construction, overlaying the physical geography.

While ideally the cardo and the decumanus should split the town (or fort) into four relatively equal quarters, with a forum in the town centre, this could not always be accomplished. Pompeii is an example of this asymmetrical quality. In most cases the forum lay next to the central point formed by the main streets (although at Pompeii, how planned this was is unknown), but in Pompeii’s case the central forum has been shifted to the southwest, still at the intersection of the cardo and the decumanus.

**Urban Social Fabric and Space**

To further understand the nature of urban space in Pompeii, we also need to recognize the urban setting comprehensively. This is not a subject necessary discussed by Haverfield or most of the sources used for they rather conceive of their ideas in terms of ground plans and layouts, not as an architect would in three dimensions taking space into consideration. For the relationship that exists between space and society is a complex relationship and the urban layout of Pompeii is a reflection of the nature of Pompeian society. Additionally, the recognition that space is not entirely a neutral commodity is just as important as the people who were not only born in an urban environment that had already been constructed, but their social choices were also made in the context of their urban landscape. Therefore, in contrast to Haverfield, the urban space has its distinct structure and regulations, and it can be arranged in a more organic fashion. The arrangement

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34 “The Influence of Roman Military Camps on Town Planning.”
35 Ibid., 36.
36 “The Influence of Roman Military Camps on Town Planning.”
and evolution of the streets is an example of not only planned, geometric space, but also of organic structure of space. The significance of private property over public spaces had an effect upon the arrangement of space, and this feature of Pompeian society placed a constraint upon the arrangement of space. This is likely, why the Roman Domus is much more prevalent here than in Rome, as well as the geographical limitations of the land available for development. Equally, regarding the preferences of individuals, the concentration of available activities and the usage of the space by the people, all placed their constraints upon the structure of the urban layout. Thus, the urban public also performs a major role in shaping the nature of space and can mould space to its needs. Thus, it could be argued that in Pompeii the urban setting of the town was also shaped to fit the needs of the people and can be seen as a social product rather than solely a planned settlement.

Conclusion

Pompeii, for the greater part of history, was an architectural crossroads between the Italic north and the Greek south, constantly updating its image with direct infusions from one sphere or the other and with conventions brought in already hybrid forms. The towns complex historical background and design, the example of domestic architecture, and the process of how the layout of the urban landscape developed over time and the effect the social tendencies of the people all shaped the urban setting that is the ancient town of Pompeii. This gives Pompeii a unique urban setting with an irregular building configuration and layout in addition to complex mixtures of cultures and histories and provides it with its identity.

Figure 8: Panorama photograph of Pompeii from the southeast. The amphitheatre can be seen in the bottom right of the picture.

37 Kostof, A History of Architecture, 197.
Bibliography


Figure 2: Archeology.org. “Surgeon plan.” N.D. Drawing. <http://interactive.archaeology.org/pompeii/jpegs/surgeonplan.jpeg>


Figure 5: N.N. “The Roman city of Pompeii set to be restored.” N.D. Photograph. travelnewsdigest.in. <http://www.travelnewsdigest.in/wp-content/uploads/2013/09/pompeii.jpg>


Figure 8: Nagel, Norbert. “Ancient Roman Pompeii panorama with colosseum in the foreground, Campania, Italy.” 2013. Photograph. <http://upload.wikimedia.org/wikipedia/commons/f/f7/Ancient_Pompeii_Panorama_-_01.jpg>