A DIGITAL RECONSTRUCTION OF VISUAL EXPERIENCE AND THE SEBASTEION OF APHRODISIAS

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ABSTRACT

Today, computers enabled architects to represent their ideas in a fast and more efficient way compared to making drawings by hand. It enabled architects to visualize their ideas in a way that hand drawings cannot. This paper is an attempt to make digital reconstructions to provide the visual experiences of the ancient city Aphrodisias in western Asia Minor and its temple dedicated to divine emperors known as the Sebasteion of Aphrodisias. Its aim is to show that by using common architectural softwares one can overcome the possible problems of graphic representations in the history of architecture. Moreover, this study focuses not only on the interpretations of the data at hand but also demonstrates how the missing information defines and shapes the digital models in order to convey the meaning of the buildings.

Key words: Digital Reconstruction, Visuality, Aphrodisias, the Sebasteion of Aphrodisias

1. INTRODUCTION

It is fascinating to see how architecture evolved in a decade in terms of graphic representation tools. When looked at real estate sections of the newspapers or advertisements of construction projects viewers mostly "convinced" with "breathtaking" animations and graphics where the projects take place in amazing landscapes, brand new buildings in perfect weather conditions and everyone is happy and content about their life. In short, it is possible for us to say that 3d visualization tools are offering a lot to its users in order to represent a prospected future not only for the architect and engineers but also to people who has no training at those fields at all. On the other hand, when looked at the possibilities to create spaces that does not exist in the physical space one might ask can we indeed reconstruct a building completely and give the observer an idea about how it looked

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like originally, and demonstrate its transitions, evolutions to convey the meaning of the building in a convincing way?
In this paper other than trying to make digital reconstructions of the city of Aphrodisias and the Sebasteion of Aphrodisias, I will try to test and understand better both the advantages and problems of using such a strong graphic communication tool in coming closer to convey and understand how historical buildings were experienced by their users in the past. In doing so, I also hope to broach the pressing question: Can we really get the meaning of the building by making such a model considering the fact that the image can overwhelm the meaning?

2. APHRODISIAS, CITY OF APHRODITE

2.1. City of Aphrodisias

The city of Aphrodisias is located in the south-western part of the modern day Turkey. The area was identified as Caria in the known ancient geographical terms. According to the excavation reports, the first known settlements at the site date back to 5800 B.C. the late Neolithic and Chalcolithic periods (Joukowsky, 1986). In the Classical era, it was considered as a small size settlement rather than a city because the earliest public buildings, the Sanctuary of Aphrodite and the North Agora, are dated as late as the 1st century B.C.(Ratté, 2001) Until then, it is generally believed that the main building process was primarily limited to housing[2]
The city then draws the attention of Julius Caesar with its dedication to Aphrodite. Since Caesar's family claimed direct descent from Venus, this helped Aphrodisias to develop a privileged relationship with Rome herself [3](Erim, 1986). Additionally, a former slave of Gaius Julius Octavian, Zoilos, starts one of the most important construction phases of the city, the northern colonnade of the North Agora, the new Temple of Aphrodite and the stage building for the city theater. By the mid 2nd century the area between the North Agora and the Theater, which is known as the South Agora, was enclosed with colonnaded porticoes. On the west end of the South Agora, one can see one of the two baths of the city dated to the Early Hadrianic period due to the distinctive decoration of its time; it is known as the Baths of Hadrian in order to clarify any confusion among the two baths[4]. The civil basilica, a basilical hall thought to be used for administrative purposes was located in the SW corner of the South Agora. The Temple of Aphrodite underwent some modifications too. First, the temple was enclosed with a colonnaded court having an entrance from the east. Later, another walled-off area with porticoes and a large columnar gateway called the Tetrapylon was added to the east of the compound. In addition the Stadium, at the northern edge of the city (Ratté, 2001), and the Sebasteion, at the eastern end of the North Agora, were also built at the same time period (Smith,

[2] Until the 2nd and early 1st century B.C. the population of the area was not enough to call the settlement a city.
[3] Based upon these connections, the city receives a senatorial decree *(senatus consultum)* which grants her freedom, a non-taxable status and increased asylum rights in Aphrodite's sanctuary.
[4] The other bathhouse is located south of the theater and called Theater Baths.

1987) In the mid-3rd century, as mentioned by Erim and Ratté, nobles of the city invested in their own private housing rather than commissioning new public buildings, except for repairs and restorations. the only notable progressive construction project one can see is the construction of the city walls on the late 4th century. In the 5th century A.D., the sanctuary of Aphrodite was converted into a church By dismantling and using almost every building component of the temple, literally turning the temple "inside out".
Although there is some dispute about what happened between the mid-5th and 7th century,[5] adding up the stage wall of the theater to build a fortress may show us that there was a dramatic change in the population of the city. The city shrunk back to the same population-size at the same spot where it had started out but with a church instead of a temple. Aphrodisias was now called Stavropolis, the city of the cross, rather than the city of Aphrodite.

2.2. The Sebasteion of Aphrodisias

By looking at the city plan retrieved with recent excavations and geophysical surveys in the city it is possible to say that the city of Aphrodisias had a grid plan. According to Ratté, the city centre was bordered by four major streets and the most important one was the street running at the N-S axis from the Tetrapylon to the Theater (Ratté, 2001). On this alignment one can see six important buildings of the city: The Sanctuary of Aphrodite, North and South Agoras, The Sebasteion, Theater and the Theater Baths. However the Sebasteion draws attention on this aligned orthogonal city pattern with its conspicuous angled position.
This building complex consisted of four components: a propylon, monumental gateway, two porticoes and a temple. The propylon is situated along the wide N-S oriented street facing the entrance of the North Agora. The existing situation of the propylon consists of podium blocks and three staircases where one can step up to a higher level than the street. Small segments of the North and South Porticoes also face the street and unify the propylon with the porticoes. Two porticoes located at the North and South of the building escort the viewers to a processional road which leads to a temple dedicated to *Sebastos*[6].
The Propylon consisted of two storeys, in the Ionic and Corinthian styles respectively, with sculptural additions in between the columnar axis. Thanks to the information gathered from the surviving sculpture bases, even though we do not have the sculptures themselves, we do have a fairly good idea about the location of the statues.
When looking at the two porticoes, even though they comprise similar components of the overall building, they stand quite apart from each other with their different architectural and sculptural features. Firstly, along the length of these almost 90m long porticoes, intercolumniations were different on both sides. In the North, the

[5]It is not known whether a change in the water level, earthquakes and invasions were instrumental.
[6] *Sebastos* is the Greek equivalent of the Latin Augustus. See Erim, K. T. (1986). Recent Discoveries. In K. T. Erim, *Aphrodisias, The City of Aphrodite* (pp. 103 - 126). London: Muller, Blond & White. see also Smith, R. (1987). The Imperial Reliefs from the Sebasteion at Aphrodisias. *The Journal of Roman Studies , 77*, 88 - 138.

intercolumniation consisted of a single width, in contrast to the rhythmic system going on at the South Portico. In the latter, *a module of a room* consists of one wider intercolumniation in the middle and two narrower ones at the sides. Both porticoes were also at different heights and architectural detailing. Although very few reliefs of the North Portico have survived, we have an idea of the composition at the north. We know that there were a series of allegorical figures personifying elements of time and space(Smith, 1988), such as the personifications of the Day and the Ocean, and *ethnos* reliefs[7]. On the other hand, possibly because the South Portico collapsed at a later date and the fragments of the building were not used as *spolia*, we have a larger reflection of the South Portico in its entirety. On the second storey of the building, we can observe a sequence from Greek mythology like Leda and the Swan, Demeter and Triptolemus, Bellerophon and Pegasus... On the third storey of the building we see the Roman Emperors depicted with the themes of imperial victory, the divine emperors and the gods. As Ratté has pointed out (Ratté, 2002), in view of the fact that the first storeys of both the porticoes had no function with their small unconnected rooms, the users most probably did not have much to do inside the alley except walking up and down along *the street*.
As far as we know, the temple was a Roman style podium temple in the Corinthian order (Smith, 1987). During the conversion of the city to Christianity in the 5th century, the Temple lost its function with this new religion and it was dismantled to pieces and converted into workshops (Ratté, 2001).

3. MODELLING PROCESS

3.1. Decisions before Modeling Process

As previously stated, I will try to reconstruct the Sebasteion of Aphrodisias and the city itself via daily used architectural programs. Therefore we have to set up some parameters and basic notions even before modeling the city and the Sebasteion.
In order to understand the Sebasteion within its context and the urban pattern of Aphrodisias, we have to make a model of the whole city with its landscape. One of the purposes of making the model of the landscape of the city and its vicinity is to experience the city in an urban context. Additionally, a detailed digital reconstruction of the Sebasteion will be made in order to understand better or at least get closer to the meaning of the building.
In both of the models, one of the main concerns of the modeling procedure is the amount of detail needed on the buildings. In view of the fact that I was a member of the Anastylosis Team of the Sebasteion for seven years, I had the chance to draw almost every block type of the building which gives me a large amount of architectural data. As a result, this gives me a chance to show the architectural features of the building to the viewers. In addition, by adding the reliefs to their proposed locations on the building, we might be able to get much closer to generate the visual imagery of the building. As mentioned before, one of the main purposes

[7] These include the depiction of nations and provinces conquered by the Julio - Claudian family.

of the digital reconstruction is to create the effect of being there at that selected moment which faded away centuries ago, at least, in visual perception.
Additionally, one has to determine which time era of Aphrodisias is going to be modeled. Since the purpose of this is to experience the Sebasteion as a whole within the context of the city, the date of the city must be set to early 3rd century A.D. As a result there will be no city walls (Staebler, 2008) and the stadium would be higher than its current height (Welch, 1998) a model cannot contain both the city walls and the North Portico of the Sebasteion at the same time and be academically dependable.

3.2. Model of the City of Aphrodisias

In view of the fact that models generate the visual imagery of the buildings rather than the photorealistic experience of the city, the landscape also had to be presented in the same way. Therefore, a more figurative but comprehensive way of modeling was selected. For this reason, none of the architectural orders are recreated or remodeled on building models. Especially in a city-scale model, eggs and darts of the Doric order or volutes of the Ionic order would not help us to understand the importance of the Sebasteion in the city scale.
Even though the details of the buildings are *"sticks and boxes"* due to difference of scale this model helps us to visualize how Aphrodisias looked like in its heyday in the 3rd century A.D.
In the process of modeling buildings, one of the decisions was about whether to show the roof tiles on the buildings or not. Even though it is known that buildings were painted in antiquity, it is hard to find complete data about the use of colors on the buildings of Aphrodisias with the exception of studies made by Mark Abbe on polychromy.(Smith and Lenaghan, 2008) and (Smith and Ratté, 2006) [8] On the other hand, highlighting the heights of the buildings would give the viewer's eyes the sense of height and three dimensions among all the different shades of grey. As a result, only the roof tiles of the buildings are put in their places to show the edges of the buildings.
Even though there is evidence for an ongoing urban grid pattern one cannot simply recreate whole houses of the city for practical reasons. The city lived on and its people modified their environment according to their needs which made it impossible to figure out how houses looked like in 3rd century A.D. However it is crucial to give the effect of the housing pattern of the city in order to bind the monumental buildings of the city to each other in re-creating the urban setting. Consequently, instead of modeling houses, only big boxes are modeled to define prospected areas of housing in 3rd century A.D. By doing so, the model gave the chance to perceive the streets and their role in order to understand the role of the Sebasteion in the urban context.

[8] see also Abbe, Mark B. "Polychromy of Roman Marble Sculpture". In *Heilbrunn Timeline of Art History*. New York: The Metropolitan Museum of Art, 2000–.
http://www.metmuseum.org/toah/hd/prms/hd_prms.htm (August, 2012)

3.3. Model of the Sebasteion

In order to make a 3D model of the Sebasteion every known block type was drawn, studied and documented in the field during the anastylosis project. Moreover, besides the actual reconstruction of the SE corner of the building, the Propylon and some fragments of the temple were studied for future projects. As a result, block typologies, detailed drawings and more importantly, some reconstruction drawings were already made in order to understand the structure of the Sebasteion at Aphrodisias. The model of the Sebasteion had to have more architectural details in contrast to the city model and its *"boxes and sticks"* approach. Some basic elements of the architectural orders such as; triglyphs of the Doric order, dentils on the Ionic cornices, lion heads on all cornice blocks, acroteria of the South Portico and the flutings on column shafts were added.

Modeling the reliefs and bases of the Sebasteion was rather a challenge when compared to modeling the architectural components of the building. First of all, every architectural component of the Sebasteion was drawn in the field. Even though there might be missing blocks, in view of the fact that the building had a repetitive tempo, which helped to replace the missing parts of the building, it was modeled without any technical difficulties. On the other hand, when looking at the reliefs, it is almost impossible to find a common repetitive pattern. Additionally, none of the reliefs has any information at all about how the missing ones could be. Therefore, the models of the reliefs could only be as real as the existing information at hand could offer. Moreover, there are 51 (fifty one) possible spaces where a relief can be put between the columns of the North Portico on the Ionic and Corinthian stories which gives us the total number of 102 (a hundred and two). Unfortunately, the surviving reliefs of the North Portico are just a handful and most of them are just relief bases which give us information about the placement of the particular relief but not its visual imagery (Smith, 1988).

Secondly, the original locations of the reliefs are in debate. Even though there is a drawing at the new wing of the Museum of Aphrodisias with the reliefs on their projected and prospected locations on the building, there is one important detail about the reliefs. As mentioned by Smith, the reliefs of the South portico have clamp holes on their sides which help the reliefs to connect to architectural pieces and thus the structural system (Smith, 1987). Therefore in order to verify the original locations of the reliefs all of the original architectural pieces must be tested with the reliefs so that we can have a solid verification about the position of the relief on the building. As mentioned by Jones, arranging reliefs according to context and find spot plans might give an idea about the visuality of the building but it is really important to keep in mind that this visual image might not be the original state of the building and the reliefs (Jones, 2000). Therefore, even before modeling the reliefs on the building, it is important to keep in mind that existing data is not very solid about the positions of the reliefs which basis a very doubtful base for the modeling process. Making a reconstruction of the building with reliefs based on this data might create an image of the building in a state which it had never been, causing some serious problem of perception.

4.PROBLEMS WITH VISUALITY AND MISINTERPRETATION

4.1. New Museum Wing to the Museum of Aphrodisias

A new museum wing was built for the Aphrodisias Museum in 2007. The main intention of this project was to create enough space to make a new exhibition space for the reliefs of the Sebasteion. The reliefs are currently in a perfectly illuminated and clean exhibition hall where all visitors can reach and even though they should not, touch them.

A significant argument about the museum exhibition is that it does not get close to the visual reality of the building in terms of understanding the impact of the building or the possible experience that their long gone users had. It may help to examine the details on reliefs more closely and give us some clue about the possible production methods. However by doing so, it might be faulty in terms of understanding the building as a whole and might even create a wrong perception about the building.

In addition to this *change of perception* due to presentation in a museum, it would help to ask the question of how much we can understand the entire building from a component of it. How much can a viewer understand the whole with a photo of a relief or a single sculpture of a façade? The technology employed in the study helped us to perceive the Sebasteion in two models. The main concern of both of the models was to put every bit of information on the models so that the models could be "real" as much as possible. Unfortunately some information was always missing and this absent information affected the final result of the models. Starting with colors of the components, missing reliefs and unexcavated areas around the Sebasteion or the site caused problems in the modeling process.

4.2. Color and the Sebasteion

The neo-classical premise assumed that the ancient Greek and Roman sculpture and architecture were monochromatic and sought to represent the figures in terms of such aesthetics. Recent studies have shown that antiquity was not monochromatic as previously assumed. Color was an important aspect of architecture and applied in a wide variety (Brinkmann, 2006).

There are few publications about the use of color on the components of the Sebasteion (Smith and Ratté, 2006). Unfortunately, due to the different scale and viewpoints, color detail would not be visible to the viewer's eye and the whole composition would still be seen as different shades of gray with light and shading effects. Even though there is a vast amount of missing information about the color use in the Sebasteion, it does not mean that if any data is found, this information cannot be applied to the model. In contrast, this kind of monochromatic model will help us to visualize a possible colored version of the building if the data at hand is solid and reliable. By modeling possible varieties of the Sebasteion with colors on architectural components and reliefs, based on a solid and scientific study, can get us one step closer to understanding the overall impact of the building and the possible visual experience that an Aphrodisian would have had in the 3rd century A.D.

4.3. Data That Built the City Walls

Another problem occurs regarding the whereabouts of the missing blocks of the Sebasteion. The North Portico collapsed around the 3rd century and its components were re-used as *spolia* for the city walls. Dramatically a considerable part of the Temple and the sculptures of the Propylon shared the same fate. Moreover the temple was converted into workshops in the 5th century.Yet the existing building blocks of these components give the viewers enough information about the whole of the building in terms of architectural composition. However one cannot say the same for the reliefs and the sculptures of the North Portico. As seen in Smith's article (Smith,1988) a handful of reliefs and relief bases have survived from the North Portico. Sadly, the amount of information about the North portico reliefs has made it impossible to model the whole with reliefs. As a result, one can only have an idea of what the buildings were like when they were intact but did not have enough information for a massive photorealistic reconstruction.

In addition to *spolia* use and conversions of the building itself, another major problem occurred during the modeling process. Albeit the information about the interior and the possible visual effects at the alley of the Sebasteion, it is really hard to visualize the exterior of the building. The existing information suggests that the back walls of the Sebasteion were masonry walls without any cladding or ornaments. Moreover if there was any cladding or ornamentations on the building, the possible area that these blocks might have fallen has not been excavated yet or may still be lying just under the excavation compound.

4.4. It is always Sunny in Renderland

Despite all the missing factors and detailed information about the components of the building, a digital reconstruction study could still get us closer to understand the impact of the Sebasteion because there some factors that can still be tested. In view of the fact that it is not possible to make a photorealistic image of the Sebasteion in terms of architectural details and reliefs does not mean that realism can be achieved only by these details.

As mentioned before when looked at architectural presentations about predicted future it is always sunny in this digital environment. On the other hand, when people actually start to use the building, they add or take away something from the building and due to usage some deterioration occurs inevitably. In other words, nothing stays the same. Unless it is intended in the design dirt never looks good on a new building and it never was a desired object for the design community. On the contrary Favro points out that:

"...visitors to the physical sites recall not only the monuments seen, but, with equal force, the weather, crowding, mood, sounds, and other sensorial responses. These vibrant aspects of the human-architecture connection need to be evaluated for historical environments." (Favro, 2006)

In addition to various weather conditions and the dirt effects to enhance the perspective images it is important to put human figures on them. By doing so, perspective images will help the viewer's eye to scale every detail on presentations. In addition to enhancing visuality and reality it is important to visualize the same

perspectives with a different user population. Therefore it is important to visualize the Sebasteion in different times of the day, in different weather conditions and in different user numbers. Experiencing different numbers of visitors on different days is quite expected in a city which was devoted to Aphrodite. In view of the fact that the Julio-Claudian dynasty traced their roots to Aphrodite, a building dedicated to the Imperial cult in Aphrodisias would have drawn a lot of attention during a festival of Aphrodite. As a result, there will be a big collection of similar images during different times of the day, weather conditions and different user population, but this bombardment of information will help the viewer's eye to perceive the Sebasteion one step closer to reality.

4.5. Neither Fantasy nor Reality

The Tetrapylon of Aphrodisias is the monumental gateway to the temple of Aphrodite. It was built around 3rd century A.D. and except for a renovation in the 7th century; it stayed intact until it collapsed. In the 1980s the building was re-erected back to its original place with an extensive anastylosis project and since then the Tetrapylon of Aphrodisias has welcomed all visitors to the site with its strong visuality.[9] After a small village square, which resembles the old days of its village days just before Kenan Erim started his expedition, visitors who choose the North path first encounter the Tetrapylon. However, this first visual encounter is rather different than what an Aphrodisian might have had because the tourist path is higher than the prospected street floor of the 1st century.

Moreover this kind of wide perspective view where the tourists can perceive the Tetrapylon is from the inside of a building and possibly through a wall. When looking from the street level of the city, one can see that the Tetrapylon is hard to perceive because the other side of the street is filled with shops and colonnades. In addition, the Tetrapylon was only the monumental entrance of a processional courtyard which means that there were walls on the North-South axis of the building and it was never visual as it is today. Therefore the image of the Tetrapylon which is experienced so focally during a visit to the site is a *romantic image of a wrong perception* rather than the reality. Digital modeling techniques and presentations in architecture may have a similar tendency when it comes to representing ideas and spaces. These drawings are mostly to give the viewers' eyes an idea about how the project might look or feel like when they are completed. The *possible* visual experience of a user will not be the reality itself but it might give an idea.

In view of the fact that the Sebasteion had a similar problem of presentation on the site due to tourist paths, unexcavated areas and the presentation of building components in the new museum wing, images created by a digital model of the Sebasteion has to cover what the site experience could not in terms *of visual experience*. For example, Smith criticizes the work of Aphrodisian sculptors as the models were redesigned according to local concepts and simplified the work on

[9] As a sign of respect after his death, Kenan T. Erim's tomb is also located very close to the Tetrapylon.

detail[10]. On the other hand, when the reliefs are put into their projected locations one might wonder how these abbreviated depictions would have been perceived. Looking at the same relief in a perfectly illuminated museum and on its projected location on the building two stories up from the ground have different effects to the viewer's eye. Consequently the amount of the perceived detail would be different from each other.

4.6. Replacing the Actual Past with an Imagined Past

Images had to be a product of an extensive study of the building and its surroundings. All the known data that might affect the result of the model should be applied to it carefully and all the known users should be aware of advantages and disadvantages of such studies. In view of the fact that a tool that is used to represent a building in an imaged future is turned in a way to visualize a past based on scientific information, it is really important to draw a line that separates the actual past and the imagined past (Arnold and Bending, 2003).

Representing the imagined past to viewers in a very strong but faulty communication language will end up in misinterpretation of history which will make the whole modeling process less worthy, if not worthless. For instance; the example of Paestum engravings might give an idea of how a pretentious action might lead one to another and end up in a skewed perception with or without intention. The first engravings we know about the temples in Paestum were made by Bartozolli and these engravings became standard views for the following fifty years. These engravings were long accepted as the real depiction of the buildings despite the fact that they were in conflict with verbal descriptions of the buildings (Arnold and Bending, 2003) Therefore by creating an imagined past based on assumptions and missing information alone, the whole study would be another subject of an academic work in the future on how an erroneous digital reconstruction may lead into fantasy rather than reality. Such complications can arise with any academic work, but digital reconstructions are more prone to it, since they are visual tools viewed by the masses as well as academics. As a result while working with such strong graphic communication tools it is important to keep in mind that the image is a wolf with puppy eyes.

5. CONCLUSION

The aim of this study was getting closer to understanding the impact of the Sebasteion within the city context by using architectural visualization tools.

With the help of such strong graphic tool which helps to create an *imagined future* helps us to visualize the *past* in a way that their architects, builders and users would have done was applied to the city of Aphrodisias and the Sebasteion, difficulties were encountered and decisions had to be made. Starting with the missing

[10] For a criticism of R. Smith's approach see Öztürk, O. *Temples of Divine Rulers and the Urban Transformation in Roman-Asia, The Cases of Aphrodisias, Ephesos and Pergamon.* Unpublished dissertation project, University of Texas at Austin.

information about the studied area, extensive studies were made not only to gather information but also to represent that merged information at hand. Even though bringing various disciplines together to achieve the kind of result presented in the study is a real challenge, this will hopefully help us to understand or get closer to understanding the impact of buildings such as the Sebasteion and the mind of their users and builders. Although the result of the models created for Aphrodisias in this paper are eye appealing to the viewers in a way that has never been possible before with other visualization techniques, it is really important to emphasize what kind of information was used in this procedure and more importantly, how the missing information was represented, since the amount of missing information defined the accountability of the result.

This paper shows that every reliable model will help us to ask new questions - that were not possible before - in order to get closer to understanding the impact of the ancient settings and the procedures of design, these new questions will in turn generate new knowledge which creates an indefinite loop between modeling and research for the modeling process that will help us to understand these urban settings in a better way.

As a final word, one must stress that digital reconstructions are not time machines that will take the viewers back in time. They are an alternative way to experience and explain the dynamics of architecture which has to be handled with care. If not, they might end in a dramatic but disastrous result that will echo in the future. As a result, any pretentious action based on assumptions rather than scientific proofs during the modeling process will not get us closer to understand this impact. On the contrary it will create a diversion that will lead to misunderstanding and misinterpretation of the building and its components and it will echo in the future in a brutally straightforward way.

5.1. Figures, Graphics, Photographs and Tables

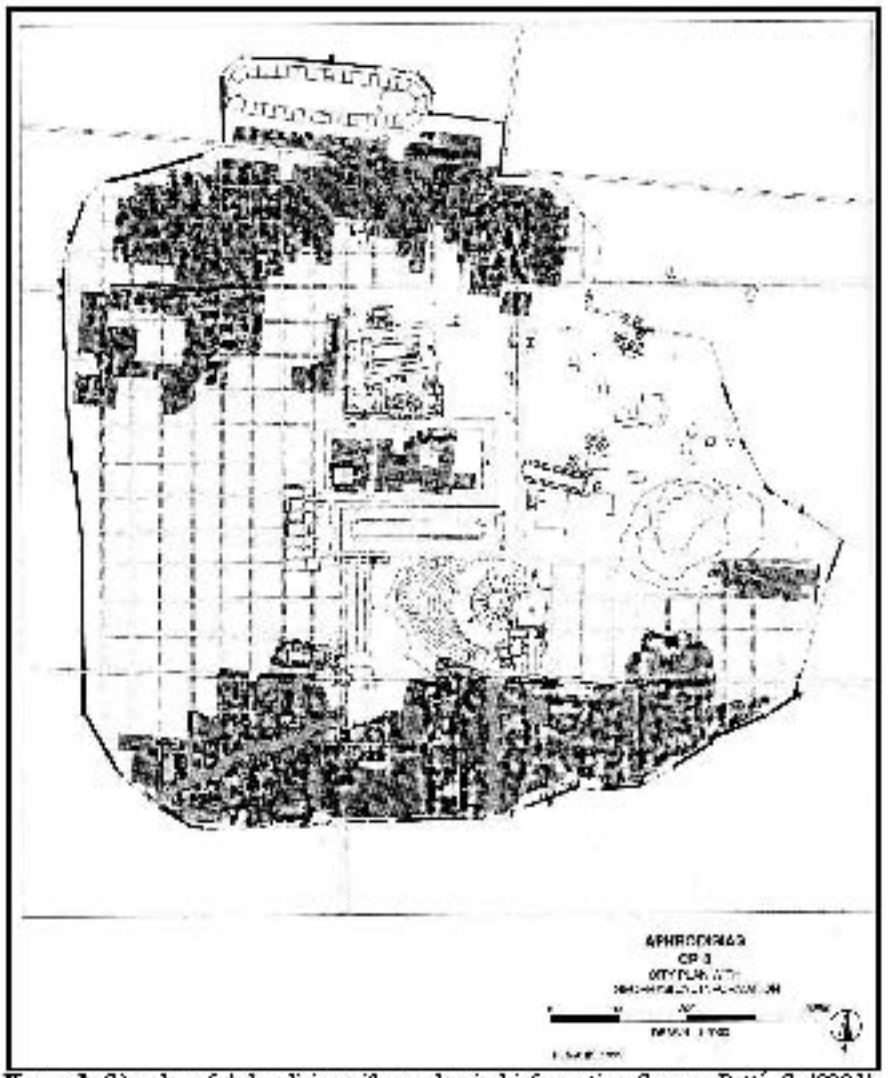

Figure 1. Cityplan of Aphrodisias with geophysical information. Source: Ratté, C. (2001). New Research on the Urban Development of Aphrodisias in the Late Antiquity. (D. Parrish, Ed.) *Journal of Roman Archaeology Supplementary Series* (45), pp.118.

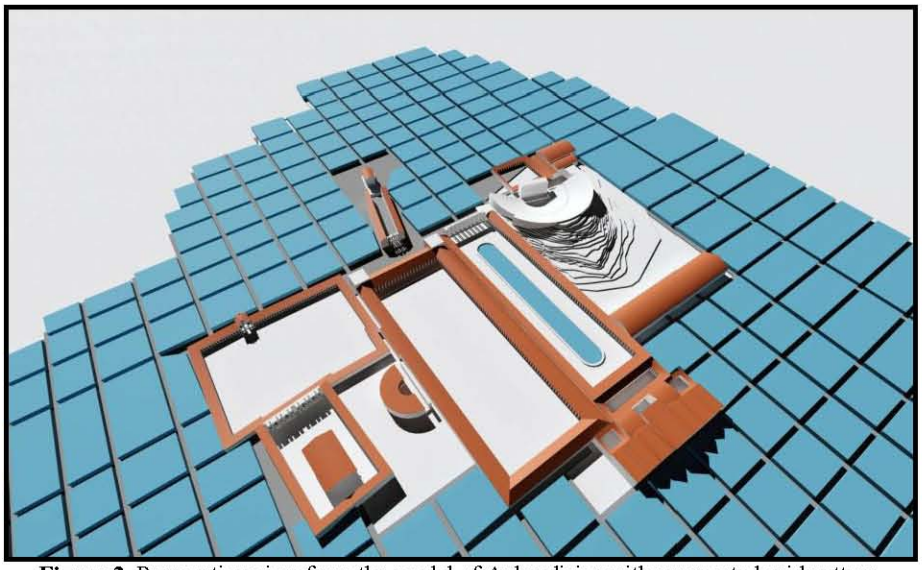

Figure 2. Perspective view from the model of Aphrodisias with prospected grid pattern

Figure 3. Perspective view from the model of the Sebasteion

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