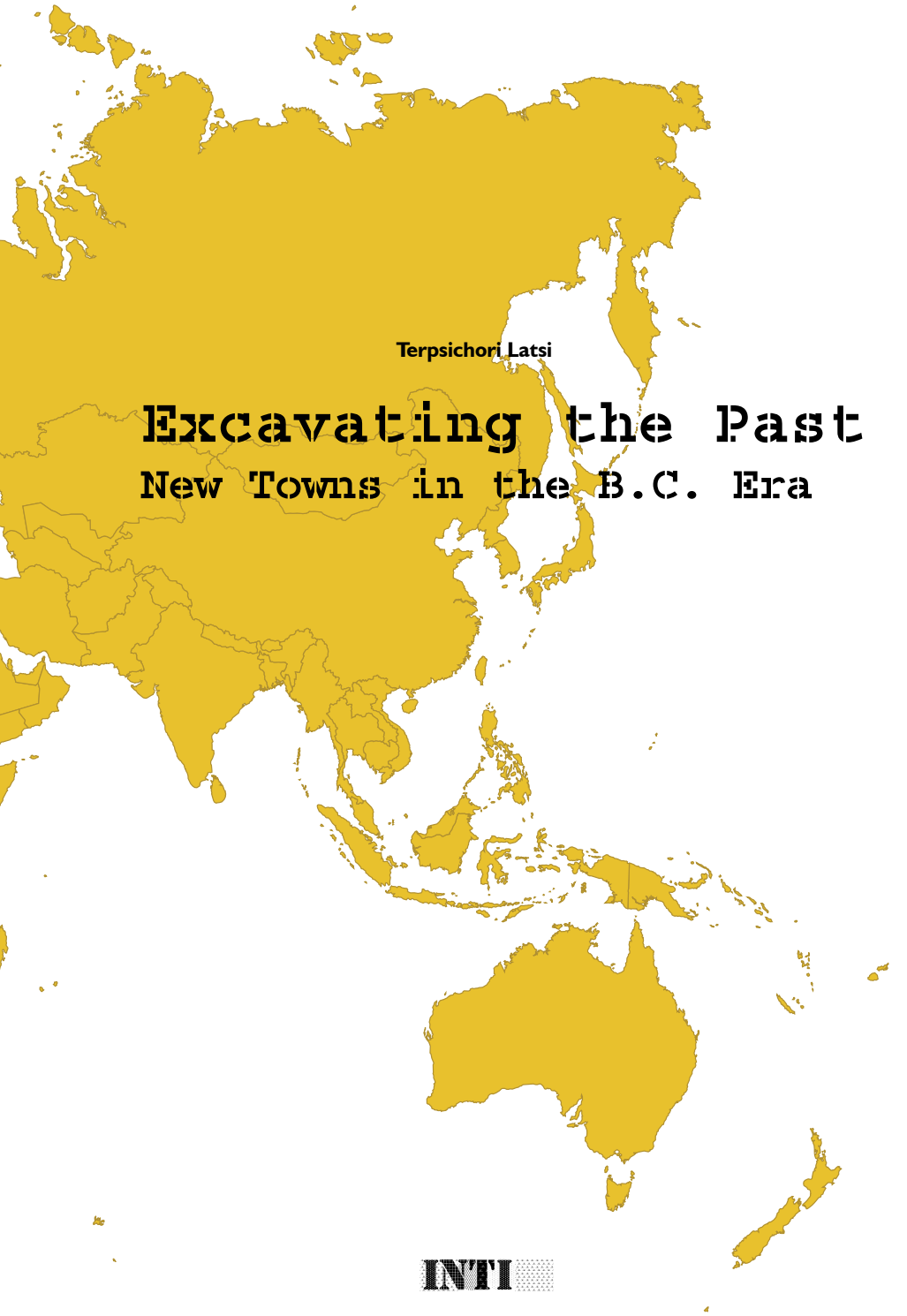
EXCAVATING THE PAST

New Towns in the B.C. Era

INTERNATIONAL NEW TOWN INSTITUTE


Massalia
Olynthus
Halieis
Catalhoyuk
Priene
Alexandria
Memphis
Al Lahun
Akhetaten
Nekhen
Caral



Terpsichori Latsi

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Introduction

Planned cities are organisms that reflect social phenomena as well as political and religious systems. They are vessels of life that manage to capture the Zeitgeist of each time and engrave it on the built environment. In recent years, a lot of light has been shed on contemporary cities. Ancient cities, however, remain largely shrouded in mystery. The richness of cultures and civilizations bequeathed to us in a built environment are hidden in ruins that must be decoded in order to understand the history of the transformation of these cities. The cities from Before the Common Era (BCE), span a period of a few thousand years and promise an enthralling urban narrative. From Latin America to the Middle East, this era saw the realization of some of the most important ancient New Towns. Some might argue that in order to understand a modern city's culture we simply need to observe which buildings dominate its horizons. However, due to globalization, major historical events and widespread ideological and cultural movements, we can identify an unexpectedly homogeneous mind-set behind contemporary New Towns. But the past, thanks to archaeologists who excavate and unveil the different layers of history, ensures the enhancement of our urban vocabulary and understanding.

For this short narrative, eleven ancient New Towns related to three civilizations have been chosen. These are examined following chronological order. However, the first city, Catalhoyuk, located in what is now Turkey, cannot be included in any particular civilization. Although only partially excavated, its importance lies in that it signifies the emergence of complex societies—despite the fact that this Neolithic settlement's official status as "Town" is still under discussion. Caral, the most important example of the Norte-Chico civilization in Latin America, is one of the oldest cities where the town planning also reflects the existence of religious, administrative and political power. These cities might not provide an overview of the period during which they were inhabited, but they do contribute some pieces to the puzzle regarding the reasons that drove the early creation of cities. They also reflect regional differences in town planning and the emergence of power, social hierarchy and division of labor.

One of the most important ancient civilizations, the Egyptian, could not be excluded from this story. Who isn't familiar with the monumental constructions of the Pharaohs' palaces and their mysterious pyramidal tombs? But while the Necropoleis have drawn so much attention, they were not the cities themselves, but rather spaces for the reception of the dead. By following the historical and archaeological records of Hierakonpolis, Memphis, Al Lahun and Akhetaten, we will try to understand the development of architecture and urban planning in ancient Egyptian cities over a

stretch of 2000 years. The pyramids indicate a strong ruling hierarchy that we will try to identify in the planning of the cities as well. It is also quite intriguing to examine the theories and ideas behind the contradictory forms of urban sprawl and compact grid found in almost all of these cities. And it is worth speculating on: what relationship did these cities' have to Egyptian culture and political or religious rule?

After the apogee of the Egyptian civilization, between approximately 800 BCE and 400 BCE, Greek New Towns sprang up like mushrooms, not only within the Greek region, but also along the whole Mediterranean coastline. It was not only overpopulation that resulted in these migration waves, but also the destruction of existing cities due to wars. In almost all the ancient Greek poleis, geography, economy, legislation, and the promise of war were the main agencies affecting the formation of the cities. When examining them, however, one cannot help noticing the harmony between the urban and architectural space as well as the unbiased continuity of the public in the private and vice versa. This continuity is an element that is found in almost all the cities presented in this narrative.
Meanwhile, during the 5th century BCE, Hippodamos of Miletus, a pioneer of urban planning, introduced a system that would be widely used from then on. Hippodamos drew up an ideal city, by first understanding the connections between the functional problems of the cities and the types of administration systems. This resulted in a grid plan comprising broad, straight streets cutting each other in such a way as to create rectangles, and, in the center, a wide open area which would gradually evolve as an agora space. His ideal city, which was divided into three spatial categories (sacred, public and private), addressed a society of almost 50,000 people whose men would be classified as soldiers, artisans and farmers. It is worth mentioning that while there has been a lot of debate about the grid system, and its association with Hippodamos' name, one will be able to observe that it was also employed (prior to his model), by diverse civilizations in many historical periods, reflecting different needs and power structures every time. For example, we find it in the Egyptian workmens' villages as an underlying structure ensuring minimum standardized living units, but also in Greece, serving isonomia (literally: "equality of political rights", an ancient Greek form of popular government) and setting out a uniform street orientation for better interior climates. One thing is for sure: during our exploration from the lack of any implied form of hierarchy to strong religious power and finally the emergence of democracy, the past can only surprise us with its diverse urban fabrics.

I would like to note that while these ancient New Towns' stories are based on the available sources, the majority of the cities discussed in this narrative are ongoing excavation sites. This short piece cannot claim to have covered every aspect of them, but it provides a solid introduction to these planned cities that can be enriched as more pieces of the past's puzzle are discovered and the dust is brushed off.

Excavation of Catalhoyuk.

Catalhoyuk

civilization: unknown
latitude: 37.666500
longitude: 32.828200
year: 7500 BCE until 5700 BCE
inhabitants: approximately 10.000
initiator: families of farmers

Catalhoyuk, a Neolithic and Charcolithic urban settlement which existed from 7500 BCE to 5700 BCE, was discovered by the British archaeologist James Mellaart in 1958. Since then, only part of it has been excavated, but it is deemed to be the largest and most important Neolithic settlement in Anatolia, with a population of at least 10.000 people.

Built on a mound of alluvial clay and on the bank of a (now dry) river, the settlement housed mostly farmers. The inhabitants of this agricultural village lived in mud-brick houses, which were stacked next to each other as closely as if they had been welded. Because of this proximity, there was no street pattern on the ground level between the dwellings, but the access to the interiors was provided by holes in the ceilings, which were reached through exterior ladders and stairs. The ground circulation was replaced by the rooftops where most of the daily activities took place when the weather allowed. It also appears that in later periods they had even built communal ovens on the rooftops. According to what archaeologists have discovered, the life cycle of a house coincided with the life of an extended family. Renovation of the houses was succeeded by partial demolition and rebuilding on top of the debris. Ultimately, this resulted in an 18m high mound that now consists of almost eighteen levels of settlement. These were the indicators that drove Mellaart to state that the vision of the builders of Catalhoyuk was “far removed

View over the roofs of Catalhoyuk.

from the disorderly and random agglomeration of freestanding huts and hovels characteristic of the Protoneolithic period in Palestine, the only region where settlements of this period have been explored *in extenso*."[1] According to Mellaart, "Orderliness and planning prevails everywhere; in the size of the bricks, the standard plan of houses and shrines, the heights of panels, doorways, hearths and ovens and to a great extent the size of the rooms. Hand and foot seem to have been the standards of measurement with four hands to a foot... Houses are invariably of rectangular plan and the lines of the walls are as straight as the eye could make them... Because of the habit of building one structure on top of the other, using the old walls as foundations, a certain homogeneity of plan was created."[2]

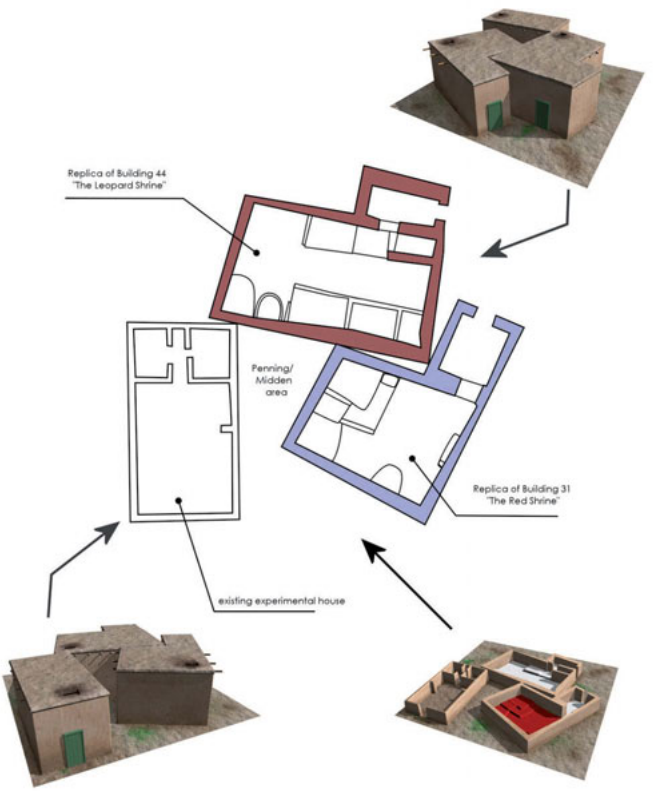
This homogeneity was probably reflected in the everyday life of the inhabitants of Catalhoyuk as they seem to have been quite egalitarian. The lack of public buildings and monumental constructions as well as the fact that this honeycomb complex consisted of relatively equal-sized domestic buildings shows a lack of hierarchy and no real social distinction. As the residents were mostly occupied with agriculture, there is no evidence of a real division of labor within the settlement.

The relatively complex social and economic relationships in Catalhoyuk are the reason that archaeologists have since questioned Mellaart's reference to the area as a "Neolithic city". According

1 Biot Report #595, Catalhoyuk: Discovery of Massive 9000-Year Old Neolithic Settlement in Anatolia, SEMP: Suburban Emergency Management Project, 22 February 2009. Available from: http://www.semp.us/publications/biot_reader.php?BiotID=595 [accessed: 24th September 2010]

2 Ibid.

Two proposed reconstruction/ experimental houses of Catalhoyuk.



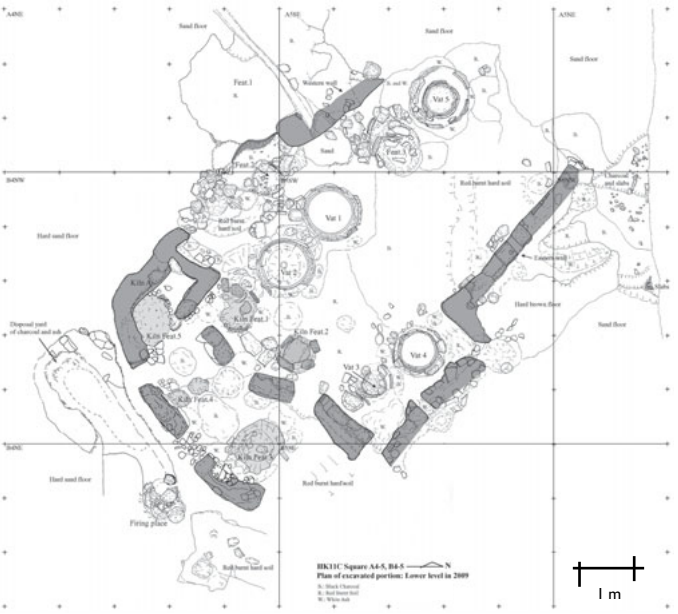
to Guillermo Algaze of the University of California, San Diego, "Catalhoyuk may be the largest Neolithic settlement in the Near East, but it's still just an overgrown village".[3] Another archaeologist, Mark Patton of the University of Greenwich in London, asserts that "A key defining feature of a town or city is that farmers don't live in them".[4]

However, with only small parts of the settlement excavated to date, many archaeologists expect there could be evidence hidden in other parts of the mound that could debunk the current conclusions about the life patterns of the inhabitants.

3 Michael Balter, The First Cities: Why Settle Down? The Mystery of Communities, Science Magazine **1998**, Vol.**282**. no.**5393**, p.**1442**, DOI: **10.1126/ science.282.5393.1442**. Available from: http://www.sciencemag.org/cgi/content/full/282/5393/1442 [accessed: 23rd September 2010]

4 Ibid.

Pottery and beer production area at HK11 Operation B.

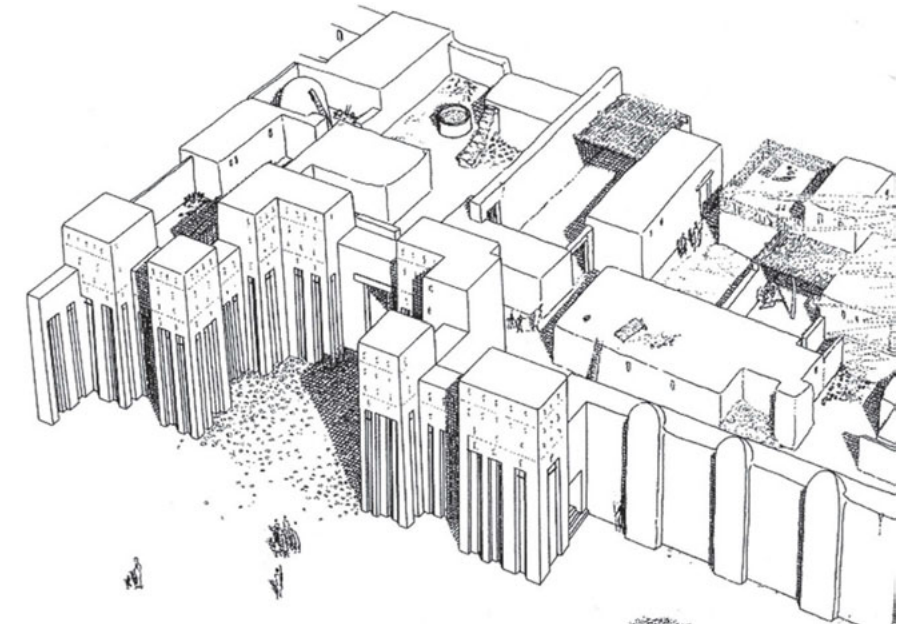


Nekhen (or Hierakonpolis)

civilization: Egyptian
latitude: 25.097222
longitude: 32.779444
year: approximately 3800 BCE
inhabitants: unknown
initiator: unknown

Nekhen, the "city of the jackal-headed souls", was located in Upper Egypt and remained a religious and political capital during the Predynastic period (3200 – 3100 BCE) and probably well into the Early Dynastic period (3100 – 2686 BCE). The city was founded around 3800 BCE and flourished about three hundred years later. Nekhen seems to have been a city that emerged due to the development of agriculture. According to evidence, after its foundation, many people migrated there from the surrounding areas, exchanging nomadic life for a more settled one.

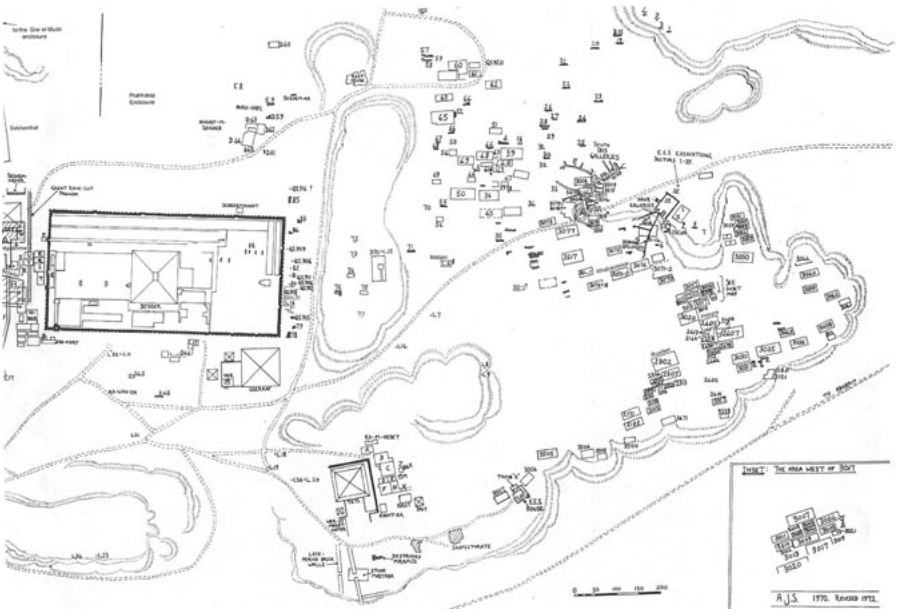
The mud-brick enclosure that had housed almost 7500 inhabitants stretched over two miles along the floodplain close to the Nile, and consisted of multiple neighborhoods. The houses belonged to potters, masons, weavers, other craftsmen and officials. One interesting discovery was a large installation for a wheat-based beer brewery, in which it is estimated that 300 gallons were produced each day. The most important discovery was the first Egyptian decorated tomb. The art on the painted walls consisted of figures and images that would re-appear in Egyptian culture for the next three thousand years.



Axonometric view of the Palace, from Dynasty I-III.

Hierakonpolis, the center of the cult of the falcon deity (*hieracon* in Ancient Greek), also housed a large ceremonial center, where Egypt's earliest temple was found. The temple occupied almost one sixth of the entire town area, but it also provided space for workshops where raw materials from all over the country were transformed into luxury goods.

Nekhen is important because it was (probably) the site where nomadic life first turned into a settled one, where the first columned buildings were erected, where the first signs of what was later established as Egyptian art were found, where the oldest known zoo has been found and also where the first decorated Egyptian tomb have been discovered. There is, however, still much more to be found from the archaeological excavations of this site.



North – middle plan of Saqqara, one of Memphis' necropoleis.

Memphis

civilization: Egyptian
latitude: 29.844667
longitude: 31.250917
year: 3.000 BCE
inhabitants: unknown
initiator: possibly Pharaoh Menes

Memphis, one of the most important ancient Egyptian cities, has been associated with the renowned figure of Pharaoh Rameses and famous monuments including the pyramids of Giza, Saqqara and the Sphinx. Ineb – Hedj (the original Egyptian name for the city, which also means "The White Wall") remained the capital for a long time due to its strategic location between Upper and Lower Egypt and at the apex of the Delta. Because of this prime location, Memphis could control trade with the entire Mediterranean region, as well as Egypt.

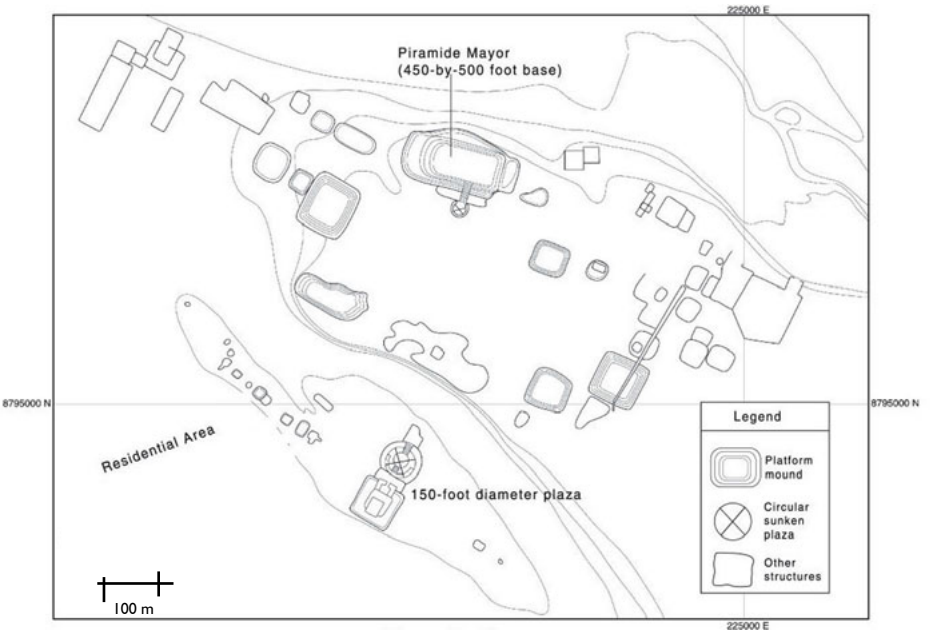
In his texts, the Egyptian historian Manetho[5] mentioned that the city was founded by pharaoh Menes, the first ruler to unite Upper and Lower Egypt. The same story had been reported in Herodotus's The Histories, where Herodotus wrote that the city was founded more than 2500 years prior to his visit, namely around 3100 BCE. Menes, according to many scholars, could simply be a legend, since it is possible that Egypt was united due to common culture, mutual needs and trading relationships. What seems to be undeniable, however, is that Memphis was indeed the first capital of a united Egypt. Its history started with the establishment of the 1st dynasty during the Old Kingdom, and its decline was incited by the arrival of the Romans (who favored Alexandria). However, little is known about the city's development since the 3rd Dynasty, when the complex of Djoser was built in one of Memphis's necropoleis, Saqqara.

5 Manetho was a priest that lived during the 30th Dynasty and was commissioned by Ptolemy II to write the Aegyptiaca, three books on the history of Ancient Egypt, as part of an effort to connect Egyptian and Hellenistic cultures.

Central Courtyard of the Temple of Isis on Philae, one of the main centers of commerce between Meroe and Memphis.

In Memphis, architecture (as in most of the Egyptian cities), focused mainly on monumental constructions related to religion and power. The pyramids of Saqqara and Giza are strong evidence of this mentality. As early as the 6th Dynasty, Memphis inherited lasting artistic architectural practices, which were promoted by the monumental constructions of previous rulers. All these construction periods included the designation of small settlements for the craftsmen and laborers.

Memphis was a megalopolis, which stretched over several kilometers. Its center was located around the temple complex of Ptah, whereas urban sprawl dominated its perimeter. Within its vast boundaries, temples were linked with the use of sacred *temenos* (holy ground dedicated to a god), while roadways and canals were employed to bridge the ports. Evidence shows that Memphis stood as, probably, the most important political and administrative center of Egypt until the Roman period. Even during later Dynasties, many Pharaohs, including Akhenaten and Thutmosis III (both from the 18th Dynasty when Thebes was the capital), held residences there, but they were only accepted as Kings of Egypt when they were crowned at Memphis.



Caral map of central zone.

Caral

civilization: Caral-Supe or Norte-Chico
latitude: 10.892
longitude: 77.5209
year: 2627 BCE – 2000 BCE
inhabitants: approximately 3.000
initiator: unknown

Caral, the center of the Caral-Supe civilization in Peru, came into the limelight in 2001, when the journal Science announced that urban life first occurred in the New World around 3000 BCE. Caral is one of the 18 urban settlements situated in the Supe valley in Peru. While the oldest city of Norte-Chico seems to be Huaricanga which existed around 3500 BCE, Caral, with its 626 hectare site was called "The Mother City of the Americas" by the archaeologist Dr. Ruth Shady Solis of the Universidad Nacional Mayor de San Marcos in Peru. For thousands of years, human ancestors lived in tribes or villages, so archaeologists use the notion of "The Mother City" in order to distinguish the first moment when humans decided to bond together in an urban settlement.

Based on the findings, there is the belief that around 2700 BCE many small villages united due to their success in agriculture and fishing, resulting in the creation of the Norte-Chico civilization. Media interest has been focused on Caral since 2001 because it reveals "the emergence of the first complex society in the New World".[6] The whole archaeological site of the Sacred City of Caral is, according to Unesco, more than 6 million hectares. What is most impressive, though, is that the core of the site, which covers an area of 150 acres, consists of six mound-pyramids, two sunken plazas and a large plaza in the middle connecting all the structures. Most archaeologists agree that the monumentality of these buildings and the planning of the city show that a new socio-political model had emerged.

6 BBC [British Broadcasting Corporation] News Online, "Oldest City in the Americas", Thursday, 26 April, 19:12 GMT. Available from: http://news.bbc.co.uk/2/hi/science/nature/1298460.stm [accessed: 1st October 2010]

The sunken plaza with the amphitheater in Caral city.

Irrigation canals and cotton fishing nets are some of the evidence indicating a possible food surplus that might have resulted in a complex economic model of trade. This probably created a strong, wealthy society with a large labor force. According to anthropological archaeologist Jonathan Haas[7], "This site just consumed labor… There's a surplus at these sites…and it's not going into storage of foodstuffs. It's going into construction."[8] The scale and the functions of the core of the site indicate a concentration of religious, administrative and political power. As Dr. Haas said, "The size of structure is really an indication of power" and noted that "It means that leaders of the society were able to get their followers to do lots of work."[9] While getting people to work so hard could have a dictatorial connotation, it seems that in Caral, they had a very different way to motivate workers: "Haas and Creamer believe that the city rulers encouraged the workforce during construction by staging celebratory roasts of fish and achira root [a sweet, edible root]…Alcohol is suspected of having been consumed, and music seems to have been played..."[10] From the excavations, so far, it is evident that the city was inhabited by approximately 3000 inhabitants, but the residential complexes are situated in different parts of the settlement according to the social classes they addressed: elite high-quality housing was located close to the pyramids, while low-quality housing was further from the center. Zoning was a key element in the planning of the city, manifesting hierarchy in power and social stratification. Caral seems to have had a state government with a centralized authority, complex social organization and division of labor.

7 Jonathan Haas is an anthropological archaeologist, adjunct professor at the University of Illinois at Chicago and currently works as the Curator of Anthropology (MacArthur Curator of the Americas) at the Field Museum in Chicago, US.

8 Henry Fountain, "Archaeological site in Peru is called Oldest City in Americas", The New York Times, April 27, 2001. Available from: http://www.nytimes.com/2001/04/27/world/archaeological-site-in-peru-is-called-oldest-city-in-americas.html [accessed: 1st October 2010]

9 BBC [British Broadcasting Corporation] News Online, "Oldest City in the Americas", Thursday, 26 April, 19:12 GMT. Available from: http://news.bbc.co.uk/2/hi/

While the city was planned in great detail, its location wasn't strategic and the lack of defensive walls or battlements shows that there was little danger of warfare. In his book Cities, historian John Reader mentions the belief that the reason people came together in cities was for defensive reasons, something that seems entirely unlikely to have happened in Caral. This gentle and peaceful society had possibly based its function on co-operation for the benefit of both the individual and the community as a whole.

Around 2000 BCE, Caral was abandoned. The reason remains unknown, but it is commonly accepted that a drought forced the inhabitants to move and settle in more fertile sites. According to Professor Winifred Creamer, an anthropologist at Northern Illinois University, "You can see irrigation to explain both the rise and the fall of the Norte Chico region. By 1800 BC, when this civilization is in decline, we begin to find extensive canals farther north. People were moving to more fertile ground and taking their knowledge of irrigation with them. The Norte Chico ultimately became something of a frontier zone between northern and southern centers of influence and political development."[11]

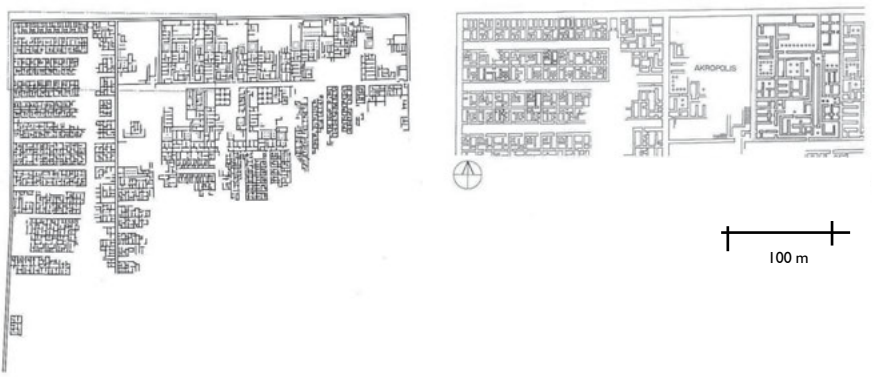
The importance of Caral not only lies in the fact that civilization emerged 1000 years earlier in the New World than was previously believed. Caral city is also deemed to be "a true cradle of civilization" with a strong impact on subsequent Andean communities for the following four millennia. Elements of its urban design, like the central plaza, but also its socio-political structure are later found in Chavin, Moche, Wari, Chimu and Incan settlements. As Dr. Haas asserts, "The cultural pattern that emerged in this small area in the third millennium BC, later established a foundation for 4000 years of cultural florescence in other parts of the Andes."[12]

science/nature/1298460.stm [accessed: 1st October 2010]

10 Philip Coppens, "Caral: The oldest town in the New World", first appeared in Frontier Magazine 8.3, May 2002. Available from: http://www.philipcoppens.com/caral.html [accessed: 1st October 2010]

11 Simon Hooper, "New Insight into Ancient Americans", CNN [Cable News Network] News Online, International Edition, Tuesday, 4 January, 2005, posted 11:26 GMT. Available from: http://edition.cnn.com/2005/TECH/science/01/04/norte.chico [accessed: 1st October 2010]

12 Ibid.



The plan of El Lahun.

Al Lahun (or El Lahun or Kahun)

civilization: Egyptian
latitude: 29.233333
longitude: 30.966667
year: 1897 BCE – 1878 BCE
inhabitants: unknown
initiator: unknown

One of the most important archaeological sites in Egypt, El Lahun, is the town associated with Senwosret II, the fourth Pharaoh of the Twelfth Dynasty. Like all the Pharaohs of this Dynasty, Senwosret also decided to build his own pyramid in Faiyum, close to the modern El-Lahun city. For the construction of the pyramid, which is known as Sesostris, a large workforce was needed, including laborers and artisans.

The workforce settled in a small town, called Kahun, approximately 800 meters away from the pyramid. This area was first excavated in 1888 by Flinders Petrie and its importance was immediately recognized since it was one of the few sites that provided evidence about the everyday life in ancient Egypt. Unfortunately, the fact that the material used for the houses was mudbrick and not stone (as in the temples), resulted in the demolition of many buildings during the process of the excavation.

The drawings from the excavation show that Kahun was rectangular in shape (384 x 335m) and laid out in a rectilinear plan. A mudbrick wall ran along three sides of the town, whereas another internal one, of the same thickness, surrounded about one third of the area. This spatial division revealed the existence of two social classes living

separately. One part of the town consisted of small houses of about four rooms, organized in rows, abutting each other at the sides and back. According to found documents, the house plans were not fixed, but rather adjusted throughout time to accommodate smaller or larger families. It also seems that there were stairs leading to the roof, providing an extra room for the houses. These small houses (about 120m^2), were primarily used by workers, soldiers, doorkeepers, singers, dancers and low-level scribes[13], as documented by the surviving texts.

The other part of the town housed the elite class and occupied an area of about 2520m^2. These houses were much larger, rectangular in shape and divided into a series of rooms of the same shape, which developed around a central courtyard (usually with a pool and garden). The walls around the courtyard seem to have been plastered and painted mainly in black, yellow, blue and white. Connected to the courtyard was a type of living room, around which the bedrooms were arranged. There are quite interesting details in the mansions which reveal how builders anticipated Egypt's hot climate. The courtyard, which needed to provide an appropriate environment for entertainment, faced north to benefit from the cool northern winds and at the same time to protect the house from dust (characteristic of the southern winds). The purpose of the windows was not to provide a view, but rather to allow air circulation, while maintaining a cooler temperature inside. This is why they were located quite high on the wall, almost next to the ceiling. Even the bedrooms were connected to smaller courtyards that provided them with light and air.

While this town seems at first glance to lack public facilities, both administration and production areas were located in the mansions. The residents of the small houses had to visit the mansions for their commodities: the workrooms found there provide evidence of bakeries, breweries, cattle sheds and butchering. Kahun was two days away from the capital city, so the elite were responsible for all the main functions of the town. The elite area was also connected to a mansion on the highest point of the town, which Petrie called the "acropolis". This mansion was considerably bigger than the rest and was believed to have been the temporary residence of the King when he was visiting the construction work or possibly the home and office for the mayor. This building was later occupied by the Romans and Petrie decided to stop the excavation of this part, as he believed that evidence of the original building would have been destroyed.

Apart from the urban and architectural details revealed with the excavation of Kahun, one major discovery was that the everyday belongings were left behind, which gave an insight into the customs and life of that period and to the possible nationality of the workers. Tools, pottery, jewelry, papyri, dishes, masks and boxes with buried babies, were some of the belongings which showed that many non-Egyptians probably also resided in Kahun. The design of some of

13 A scribe is a person who writes books or documents by hand as a profession and helps the city keep track of its records.

Pyramid of Senusret II at Al Lahun

the pottery was Phoenician or Assyrian, whereas the burial of babies beneath the house was a custom noticed at Ur. Even the building technique of some of the villas was also used in Mesopotamia. Meanwhile, in some of the papyri, Asiatic slaves were mentioned and this supports the belief that some of the residents were also of Semitic origin.

Kahun was abandoned after approximately 100 years of occupation. The fact that they left behind so many of their everyday belongings could be explained by a sudden departure. It was occupied during the Thirteenth Dynasty and again in the New Kingdom period (between 16th century BCE and 11th century BCE). As mentioned above, there is also evidence of Roman intrusion, identified by the pottery left behind and a coin of Theodosius.

Top view of the model depicting a neighborhood in Amarna city

Akhetaten (or El Amarna)

civilization: Egyptian
latitude: 27.661667
longitude: 30.905556
year: 1353 BCE – 1350 BCE
inhabitants: 20.000 – 50.000
initiator: Amenhotep IV (Akhenaten)

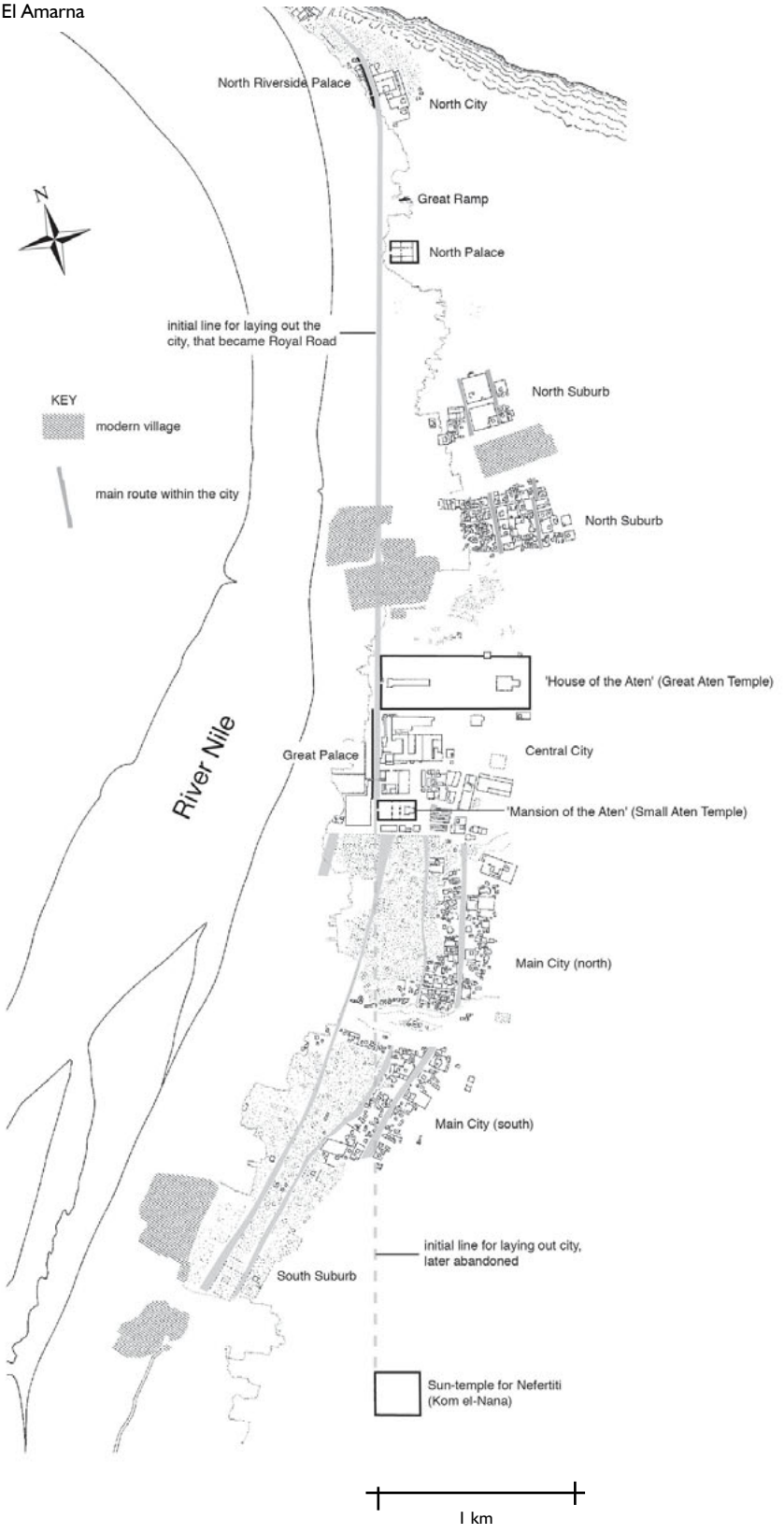
In 1353 BCE, Amenhotep IV (later known as Akhenaten), the husband of the widely known figure of Nefertiti, would become the Pharaoh of the Eighteenth Dynasty of Egypt. For 17 years, as long as he reigned, he managed to influence religion, art and customs in Egypt. The "first individual in human history"[14], as he has been characterized, was erased from the lists of Pharaohs by his successors, since they renounced his rather progressive initiatives.

Along with his wife Nefertiti, Amenhotep IV departed from the traditional religious views while at Thebes. They renounced polytheism and started worshiping a single God called Aten. In order to establish their religious reform, he ordered the construction of a new capital, called Akhetaten, to be Aten's "seat of the First Occasion, which he made for himself that he might rest in it." Amenhotep IV and Nefertiti also changed their names to Akhenaten and Neferneferuaten-Nefertiti, accordingly, increasing the importance of the cult of Aten.

Akhetaten (or "El-Amarna"), was inhabited for approximately 20 years by 20000 to 50000 people. Located in an amphitheatric site surrounded by cliffs and the Nile, Akhetaten stretched 13km in length and 5km in width. It was built quickly and the main focus was given

14 Kate Spence, "Akhenaten and the Amarna period", BBC Ancient History online, 17 February 2011. Available from: http://www.bbc.co.uk/history/ancient/egyptians/akhenaten_01.shtml [accessed: 18th February 2011]

Plan of El Amarna



to the Central City, which consisted of the Royal Palace, the Great Temple and some government offices. Akhenaten's description of the main buildings of the Central City was found in an inscription on one of the Amarna Boundary Stelae, which defined the boundaries of the city: "..I am making a House of the Aten for the Aten my father in Akhetaten in this place. I am making the Mansion of the Aten for the Aten my father in Akhetaten in this place. I am making the "Sunshade of Re" of the [great] royal wife…for the Aten my father in Akhetaten in this place. I am making a House of Rejoicing for the Aten my father in the island of "Aten distinguished jubilees" in Akhetaten in this place. I have made a house of Re-[joicing of the Aten] for the Aten my father in the island of "Aten distinguished in jubilees" in Akhetaten in this place."[15]

The Central City was traversed by the Royal Road that connected it with the North City. Along the western side of the road extended the Great Palace with the central architectural element of the courtyard highlighted by statues of Akhenaten running along it. The Great Palace was connected via a brick bridge with the King's residence across the road. The government offices mentioned above, along with police and military barracks, were located next to the King's house. It was there that the important Amarna Letters were found (300 in number). The center of religion, the Great Temple of Aten, was located at the northern part of the Road, on the east side. This large enclosure measured 760m x 290m and included many small temples, storehouses and priests' housing. Opposed to this complex, at the southern part of the road, another religious site was discovered. Maru-Aten, which resembled a resort with its gardens, pools, artificial island and kiosks, was simply another monumental building related to the worship of their god.

The Central City seemed to have been the most carefully planned part of Akhetaten. Much less attention was paid to the housing around it. The main suburban areas were found at the southern and northern part of the city. In these areas resided the population that was responsible for the administration of the Central City. The inhabitants (usually priests, soldiers, builders, sculptors and scribes), lived in neighborhoods that followed no fixed layout. Between these two areas and along the road towards the south, there were many houses, including the villas of the king's viziers and priests. Although there was no imposed plan for the houses, it didn't mean that the owners were free to build as they wished. It seems that they had to communicate with their neighbors and together reach an understanding of each one's wishes and rights. This was confirmed by a much later contract that was found, dating from 290 BCE: "*I make an undertaking that when I build my house, which is the western (border) of your house and which lies in the northern district of Thebes, in The House of the Cow and the borders of which are as follows: in the south the courtyard of Padineferhotep's house, in the north the house of Mrs. Tadineferhotep, between them the King's Road, in the east your house, touched in the south and north by walls of my house and serving*

15 H.W. Fairman, "Topographical Notes on the Central City, Tell el-Amarnah", Journal of Egyptian Archeology nr 21, 1935, p.136

as a retaining wall as long as I shall not lay any beams on top of it. In the west the house of Pabimut and the house of Djedhor... that is two houses with the King's Road lying between them.
I shall build my house from my southern wall to my northern wall to your wall, and I shall not insert any wood (beams) into your wall, apart from the wood of the building which had stood there previously. And I shall use it as a retaining wall as long as I do not insert any wood into it.
I shall lay my beams from south to north, covering the ground floor. If I want to build on top of it I shall build my walls mentioned above up to the wall of your house which will serve as a retaining wall. I shall leave the light-shaft opposite your two windows at a distance of one mud brick of the mud bricks which have been laid in the front of your house opposite your windows.
I shall build north and south of them (the windows) up to your wall and cover them with a roof from south to north...
If I do not act according to what has been said above, then I shall pay you 5 pieces of silver, that is 25 stater... If you hinder my building, then I will act according to what has been said above without leaving a light-shaft – without punishment."[16]

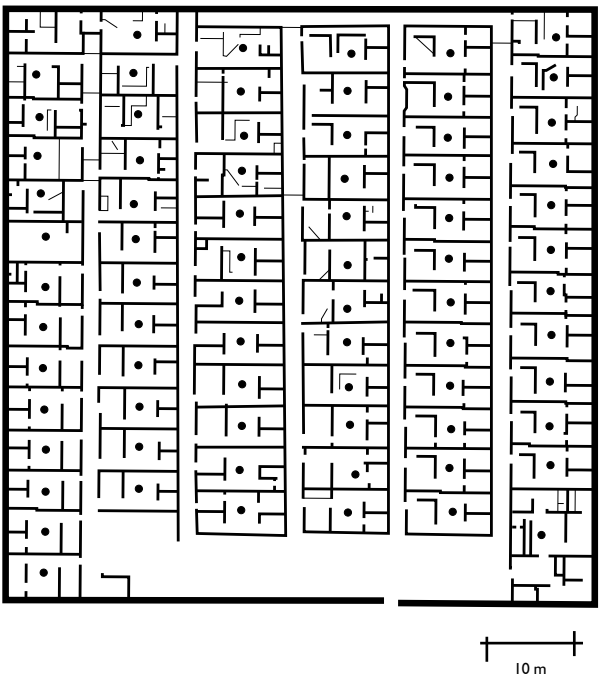
But there was another reality at the eastern outskirts of the Central City. A walled settlement marked the workmen's residential area during the city's construction. Here there was no sprawl, but a regular layout that resembles the one found in Kahun. The workers were living in flats of 60 - 100 m^2, the largest with a second floor. The plan shows six vertical rows of houses with the same housing unit repeated over and over. The streets between the rows were about two meters wide. No other function was found inside the settlement. Almost the entire enclosed space was used in such a way as to accommodate the maximum number of houses.

Amarna wasn't only the center of monotheism, but also the city where new styles of art were produced. These naturalistic paintings diverged from the traditional Egyptian art. It was also the first time that the royal family was depicted participating in many activities while being affectionate to each other. Through many of these paintings it seems that Nefertiti wasn't only the Great Wife, but Akhenaten's co-regent, ruling along with him. Her prominent position could also be indicated by the fact that the Royal Palace was separated from the King's house, namely, the Royal Family from the second wives and children of Akhenaten.[17] Both the freedom and the responsibilities enjoyed by Nefertiti seem to have been quite unusual for that time, but the progressive attitude of Akhenaten could probably be explained by the fact that his mother, Tiye, was the first Egyptian queen with her name recorded on official acts, since she was an intelligent, strong character and trusted to deal with the foreign affairs when her husband ruled. It seems that she had also moved to Amarna at one point and served as Akhenaten's political adviser.

16 Contract between Taheb, daughter of Padineferhotep, and Pamerakh, son of Djehutiirdis. 290 BCE. Translation from "Pharaos Volk" by T.G.H James.

17 In ancient Egypt, Pharaohs had the right (or possibly religious obligation), to marry more than one woman. However, only one would be the Great (Royal) Wife and she would reside in the Royal Palace, whereas the other wives would live in the King's house. It seems that usually the one building was next to the other, but in Akhetaten, the main road divided them and the movement from one to the other was facilitated through a bridge.

The workers' settlement at Akhetaten.



Amarna, and all the ideals it envisioned, lasted only about two decades. Akhenaten died after having reigned for 17 years and probably the last two to three years Nefertiti or his daughter ruled as Pharaoh. But as the materialization of the new religious reform, the city was soon abandoned by his successors and the names of the Royal Family were removed from monuments. His temples were dismantled and the stones were used for other building projects. The city was deserted, never inhabited again and the next Pharaohs tried to erase Akhenaten's family from the historical record of Royal families. But the discovery of the city by the archaeologists, and the evidence that came with it, place Akhenaten among the most important rulers of ancient Egypt. His ideas, when brought to light, attracted the attention of many scientists (among them Sigmund Freud), who believed that Akhenaten's monotheism was probably the bedrock of Christianity.

Model of the ancient city of Massalia (Marseille).

Massalia (or Marseille)

civilization: Greek
latitude: 43.296386
longitude: 5.369954
year: 600 BCE
inhabitants: over 1000
initiator: Protis (leader of the Phocaen Greeks)

Between 800 and 400 BCE many Greek colonies were established in the Mediterranean region. One of the most important colonies from this period was Marseille, or as it was then called, Massalia. In ancient Greece, it was common to create myths for great events, and Massalia has its own legend explaining the town's founding. In 600 BCE, a group of Greeks from Phocaea (a Greek colony in Minor Asia) were sent to find a site to create a new city in order to relieve Phocaea from overpopulation. Protis was chief of this expedition and they eventually reached the area of (what would become) Southern France, and more specifically, the cove of Lacydon. The site belonged to a Lingurian tribe whose king was Nannus. Protis asked Nannus' daughter, Gyptis, to marry him and this is why they say that the city was born out of love. The couple moved to the hill in Lacydon, signaling the inception of Massalia's history.

Occupying an area of 125 hectares, Massalia was, like almost all Greek colonies, a fortified port city. The Phocaeans took advantage of the amphitheatric morphology of the cape, situating the port at its southern end. The settlement extended along the Lacydon port, providing a southern orientation for the houses and the public buildings. Orientation was an indispensable planning tool for all ancient Greek cities. The hippodamian system had not yet been

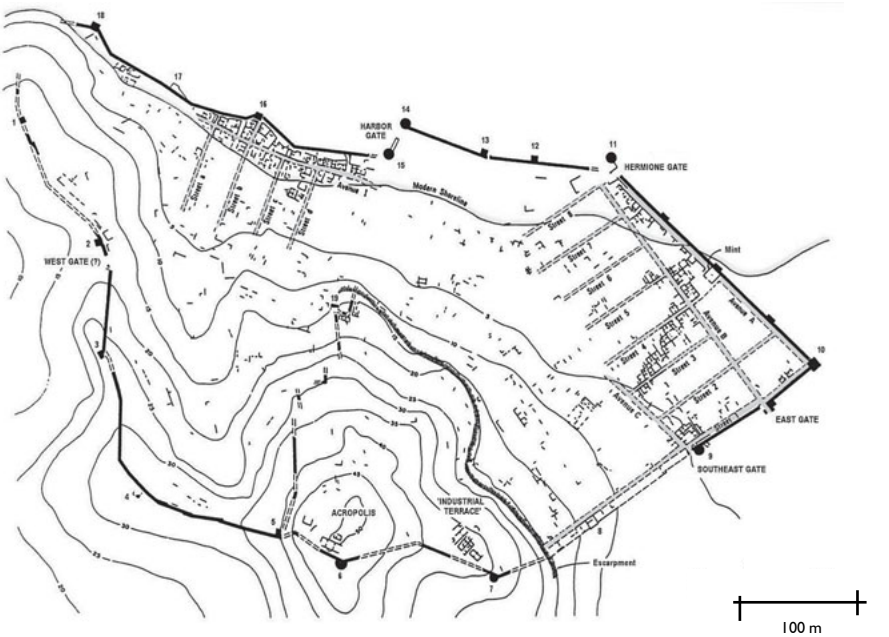
introduced, but one can see from the model of Massalia that the urban layout was based on the grid. By observing the model, we can also identify one main road dividing the city in two. The road, which was parallel to the port, stretched from the main entrance of the city to the agora space located at the other side.

Most of the public buildings were usually located close to the agora and the theater space. The acropolis was related to the main sanctuaries of the city: the temple of Artemis (Ephesion) and the temple dedicated to Apollon Delphis. Archaeological excavation continues today, slowly revealing the many different historical layers of contemporary Marseille.

Massalia's Greek past, which was believed to be a myth, was confirmed relatively late. When part of the city was bombed by Germans in 1943, the ensuing disruptions made excavations even more difficult. Meanwhile, despite the fact that "toute la ville grecque était là sous nos pieds. Il y avait là l'équivalent de Pompéi",[18] the impact of the war, along with the Marshall treaty, forced the city to make a fast reconstruction.

Marseille's importance as a trading port city was confirmed through the excavations. For many years the city retained strong economic links with Greece, as well as Phocaea. From the moment that Phocaea was destroyed by the Persians, though, the main focus was given to establishing good trading relationships with the Romans and the western Mediterranean region. After allying with the Roman Republic, the city's economy thrived through exporting Roman goods to France and new products (as well as slaves), to Rome. Despite the alliance, however, the city was involved in civil war, resulting in its subordination to the Roman Empire in 49 BCE.

18 "The whole Greek city was there, under our feet. There was the equivalent of Pompeii". Laurent Ribadeau Dumas, Marseille, cité grecque. Published on 25/02/2010, 23:05. Available from: http://culture.france2.fr/patrimoine/dossiers/marseille-cite-grecque-22320253.html [accessed: 20th May 2011]



The plan of Halieis' site with the remains and excavated areas.

Halieis

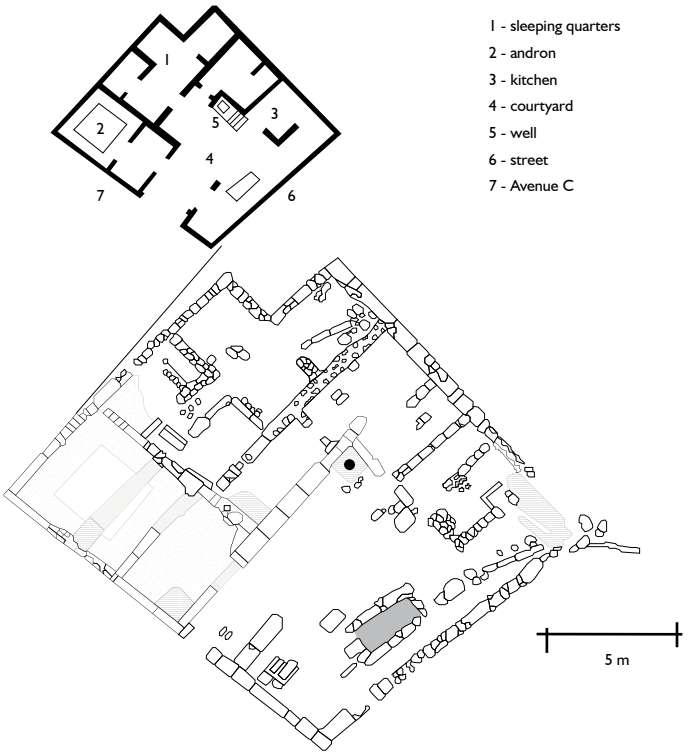
civilization: Greek
latitude: 37.325
longitude: 23.1
year: 465 BCE
inhabitants: approximately 2500
initiator: Tirynthians

"In reality every polis is in a natural state of war with every other, not indeed proclaimed by heralds, but everlasting; and if you look closely, you will find that this was the intention of the Cretan legislator; all institutions, private as well as public, were arranged by him with a view to war." (Plato, Leg. 626a-b)

The organization of the Greek city was usually based on the legislation created for it. But the fact that war was a premise taken into consideration everywhere in Greece is evidenced by the ever-present fortification wall. The well-known Danish archaeologist P. Flensted-Jensen underlines this: "...I would still be inclined to argue that a substantial circuit wall was the sine qua non of the Greek polis."[19] The fortification wall, an indispensable tool for every polis, was also an important characteristic of Halieis, a town in Argolida, in the south of the Peloponnese. While the region seems to have been inhabited almost 50000 years ago, in the area of Halieis the earliest findings date from 3000 BCE. According to Herodotus, its residents were the Tirynthians, who were routed out of their city in 465 BCE by the Greeks of Argos. Later, the Hermiones seized the large village that took its name from the main occupation of the new inhabitants: fishing (Halieis – Alieis; Greek: αλιείς or "fishermen").

As mentioned above, part of the city of Halieis pre-dated the planned area, although there are only a few architectural elements

19 P. Flensted-Jensen, M. H. Hansen, T. H. Nielsen, L. Rubinstein, Polis and Politics: Studies in Ancient Greek history, Museum Tusculanum, Aarhus, Denmark, 2000.

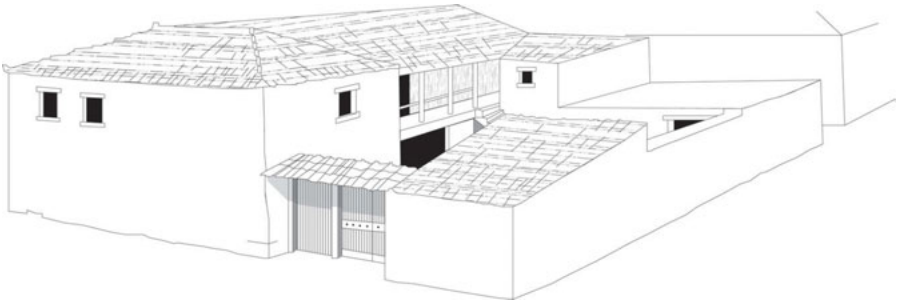


Plan of House 7.

that do not belong to the Classical era (the fortification of the early Acropolis is one). The city walls were first constructed during the 7th century BCE, but due to wars and occupations, they were rebuilt and expanded many times, resulting in a total length of almost 2km that included nineteen towers and five major gates. Due to its geomorphology, the urban enclosure of approximately 18ha is divided into an Upper and Lower Town.

The Lower Town comprises the regular plan of Halieis city and is an important example of town planning of the Classical period. It is estimated that the area was inhabited by approximately 2500 people in 450 - 500 houses. It was adjacent to the port's fortification walls, which included two towers with a circular plan and an opening between them that could be barred with a beam.

Part of the Lower Town and the port are now submerged due to rising sea levels. However, the excavations have so far revealed three areas with housing districts in the eastern part of the city and three housing blocks further north. Close to the Southeast Gate (numbered 9 in the excavation plan) a single residence was completely recovered, now known as "House 7". Housing in ancient Greece is the most important element providing evidence of the community's social organization. With most of the Classical and Hellenistic cities following a regular plan while having different legislation influencing



Reconstruction image of House 7.

their daily life and mentality, the interior residential space exposes the main differences in social organization. Isonomia (equality under the law) was the reason for isometria, a type of standardization in planning, by "extending the idea of equality to house parcels and field systems, gardens and burial plots."[20]

Most experts have tried to group the housing plans in Classical Greece into specific categories for better understanding. The prostas type (a house plan typical of Piraeus) and the pastas type (typical of Olynthos) are just some of the categories that have been enriched with the hearth-room houses, the peristyle ones, etc. The pastas and the prostas refer to the porch and the difference lies in that the prostas gave access to only one room, whereas pastas opened up to a series of rooms. In Halieis, this porch exists in one or the other form, whereas the main element associated with the entrance was the prothyron. The architectural element of prothyron refers to a lowered doorway that ensured a sheltered hall and is found in nearly all the houses excavated at Halieis. House 7, which provides extensive information, was built on a plot of 231m^2. As a typical example of vernacular architecture, natural stone was the main material used for the construction, with un-mortared ashlars (stone work) along the front and mud-mortared ashlars for the inside and rear walls. The structure of the pitched roof was based on a timber framework and was covered with terracotta pan and tiles. However, the traces of staircases that imply the existence of a second floor (for some houses), would imply that part of the roof might have been flat.

The prothyron (which literally means: pro (πϱο) + thyra (θύϱα) or "before the door") was connected to a courtyard that comprised 23% of the house area and had a multi-functional character. This courtyard was found at the southern part of the house, so that

20 Bradley A. Ault, "Living in the Classical Polis: The Greek House as Microcosm", The Classical World, Vol. 93, No. 5, The Organization of Space in Antiquity (May -Jun., 2000), pp. 483-496. Available from: http://www.jstor.org/stable/4352441 [accessed: 1st November 2010]

"sunshine during winter will steal in under the verandah, but in summer, when the sun traverses a path right over our heads, the roof will afford an agreeable shade, will it not?".[21] By reading the floor plan of House 7, one can observe that there is no real continuity between the rooms, but they are rather segmented, deployed around the courtyard. At the northern part of the yard, there was the andron and its anteroom. The andron and the gynaikon were two rooms referring to men and women accordingly and were found in the majority of the ancient Greek houses. However, they differed in use and importance. In Halieis, the almost square andron of 21.5m^2 provided space for seven couches (klines), while the off-center door indicated a specific amount of privacy.

On the one hand, the andron could be the proof of a distinction between women and men, but its importance was related to the fact that it represented the koina (common public functions) in the domestic sphere. The transition of gatherings for political discussion from outside the public space of the city into the domestic one, was the representation of democracy within the realm of the house. It seems that these sympotic ("coming together") moments were the only ones when the andron in Halieis' houses was used mainly by men. It is very interesting to note this fluidity in the boundaries between private and public space in terms of function. While the house represented the private space within the city and the prothyron marked this transition, the public space of the agora also made an appearance in the andron. In the end, the anteroom was just the "intermediate space between the domestic and sympotic realms".[22]

As in the ancient city of Olynthos, in Halieis there is evidence of a domestic economy based on food and textile production. However, in Halieis the small shops along the streets were probably not an important organizational principle. According to the classicist M. H. Jameson, "On a small scale, the private house shows the democratization of aristocratic values, which was in so many ways characteristic of the city-state".[23] Nevertheless, the fact that Halieis had its own coinage along with the size and the importance of the (now submerged) port of the city indicate that after the domestic economy, another economy had developed mainly based on trading and fishing.

While Plato mentioned that the legislation of the ancient Greek cities was based on the premise of war, it is evident that even the planning and organization followed the same presumption. Cities were usually developed in areas chosen for their prominent or strategic position. The city of Halieis was valued for its hidden port and the strategic position of the acropolis and this is the reason why it was occupied by the Athenians and the Spartans during the Peloponnesian war (431 BCE – 404 BCE). However, this was not the reason for its historical end; the city was abandoned for uncertain reasons after 300 BCE and was never reoccupied.

21 Xenophon, Memorabilia 3.8.9-10

22 Bradley A. Ault, "Living in the Classical Polis: The Greek House as Microcosm", The Classical World, Vol. 93, No. 5, The Organization of Space in Antiquity (May -Jun., 2000), pp. 483-496. Available from: http://www.jstor.org/stable/4352441 [accessed: 1st November 2010]

23 M. H. Jameson, "Private Space and the Greek City," in Murray and Price (0. Murray and S. Price, eds., The Greek City from Homer to Alexander (Oxford 1990), pp.171 – 195

Plan of Olynhtus city including the South and North hill.

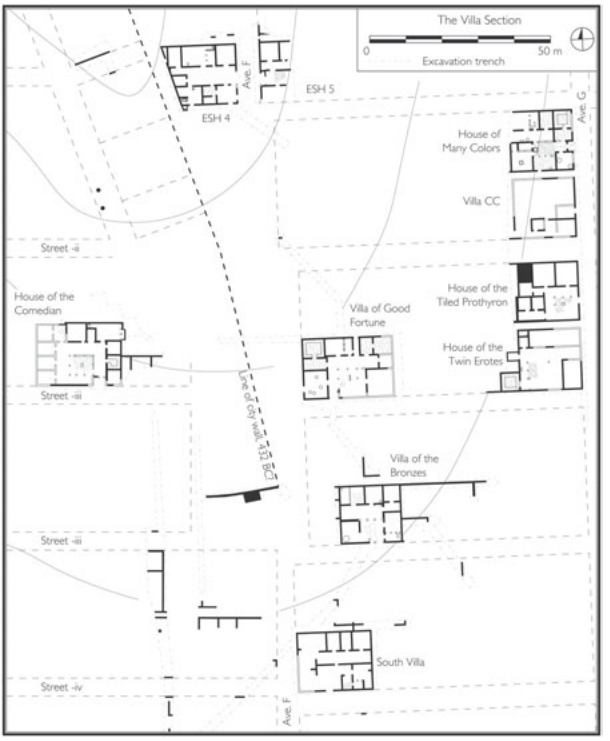
Olynthus (or Olynthos)

civilization: Greek
latitude: 40.29246767887667
longitude: 23.34270715713501
year: 432 BCE
inhabitants: approximately 15000
initiator: unknown

Olynthus is an ancient city in Chalcidice and according to mythology it was founded by Olynthus, the son of Heracles (the Greek demigod better known by his Roman name, Hercules). The urban site is divided into South Hill and North Hill. The South Hill was first inhabited during the Neolithic period but the settlement was abandoned during the Bronze Age. According to Herodotus, in the mid-seventh century BCE, the South Hill was again inhabited by the Vottieans. This town was destroyed by the Persians in 479 BCE and turned over to the Greeks of Chalcidice. It then became a Greek polis as well as a member of the Delian League (an association of Greek city-states under the leadership of Athens).

In 432 BCE King Perdiccas II of Macedon encouraged coastal towns near Olynthus to break from the Delian League and unite together creating a synoecism (συνοικισμός) in order to revolt against Athens. Although the other cities were not abandoned, there was an increase in population that could not be accommodated by the existing settlement of Olynthus. The necessity for a larger, but also better-organized and more defensible city resulted in the expansion of Olynthus in the form of a new settlement lying on the North Hill.

Plan of the Villa Section in Olynthus.

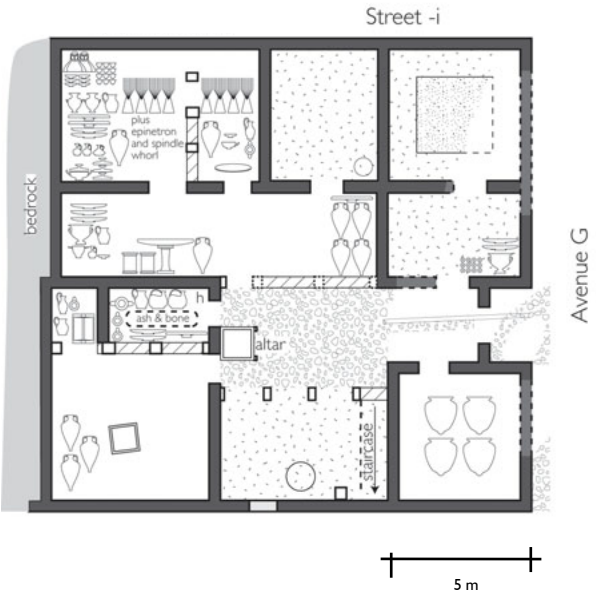


As with most of the classical Greek cities, Olynthus' new plan was based on the grid system, and more specifically on the hippodamian model (This model was created by Hippodamus of Miletus and referred to a gridiron planning system associated with specific administration systems). The fortified classical city of Olynthus has been described as "an extreme example of a modular urban plan".[24] The orthogonal street pattern is based on geographic orientation. As seen in Olynthus' plan, the grid is oriented towards the cardinal points. The rectangular blocks created by the intersection of the streets consisted of ten houses each: two rows of five houses with an alley between them. It is remarkable that the homogeneity of the orthogonal street pattern is also found at the scale of the housing blocks and dwellings.

There have been many speculations regarding why everything appears to be so standardized. The grid, even before Hippodamus, was seen as a good organization system, easily extendable and appropriate to the Greek climate as it could ensure the same southern orientation for all dwellings, in order to provide sun during the winter and shade during the summer. Observing the town plan of Olynthus, we can see that almost everything is "standardized" with a fixed size (with the exception of the blocks and the houses abutting the fortification walls). Although the reason is unclear, some scholars attribute this homogeneity to isonomia[25] ("everyone equal before the law") and the fact that most of the houses were built simultaneously. The excavations have shown that there was only one rooftop running

24 Michael E. Smith , "Form and Meaning in the Earliest Cities: A new approach to Ancient Urban Planning", Journal of Planning History, Vol.6, No.1, February 2007 3-47, DOI: 10.1177 / 1538513206293713, 2007 Sage Publications [accessed: 20th October 2010]

The plan of Olynthus House of Many Colors.



25 Isonomia was firstly mentioned in an ancient Greek skolion and was later defined by Herodotus. But Pericles' (Athens, 431 – 404 BCE) Funeral Oration gives a better explanation of the actual inequalities and how they were balanced with isonomia. Regarding democracy, he stated: "We have a constitution [...] And it is called democracy, because administration is in the hands of the many not the few, for everybody in their private disputes are equal before the law, while as to their position in public life each one is preferred for one of the public offices, according to their performance recorded in these, namely one's public career rather depends on the individual merit and not on his social class, neither one, again, who might be poor but has the ability to provide a service to his homeland, is prevented in doing so because he is unknown. We live as free people, and as citizens in public life and as individuals in private one, in our aspirations of everyday life, in which we are not looking at each other with suspicion, we don't get angry with our neighbor when he does whatever he likes, nor do we get dismal, which might not harm the others, but is nevertheless unpleasant. But while in our private life we associate without disturbing each other, in our public life, as citizens, out of respect above all, we do not contravene the laws, we obey the ...holders of public offices and laws [...]" ("Ἔχουμε δηλαδὴ πολίτευμα [...] Καὶ ὀνομάζεται μὲν δημοκρατία, γιατὶ ἡ διοίκηση εἶναι στὰ χέρια τῶν πολλῶν καὶ ὄχι τῶν ὀλίγων, ἔναντι δὲ τῶν νόμων εἶναι ὅλοι ἴσοι στὶς ἰδιωτικές τους διαφορές, ἐνῶ ὡς πρὸς τὴν θέση τους στὸν δημόσιο βίο κάθε ἕνας προτιμᾶται γιὰ ἕνα ἀπὸ τὰ δημόσια ἀξιώματα ἀνάλογα μὲ τὴν ἐπίδοση τὴν ὁποία σημειώνει σὲ αὐτά, δηλαδὴ ἡ δημόσιά του σταδιοδρομία ἐξαρτᾶται μᾶλλον ἀπὸ τὴν ἀτομική του ἀξία καὶ ὄχι ἀπὸ τὴν κοινωνικὴ τάξη, ἀπὸ τὴν ὁποία προέρχεται, οὔτε πάλι ἕνας, ὁ ὁποῖος εἶναι μὲν φτωχὸς ἔχει ὅμως τὴν ἱκανότητα νὰ παράσχει κάποια ὑπηρεσία στὴν πατρίδα του, ἐμποδίζεται σὲ αὐτὸ ἀπὸ τὸ γεγονὸς ὅτι εἶναι ἄγνωστος. Ζοῦμε δὲ σὰν ἐλεύθεροι ἄνθρωποι, καὶ σὰν πολίτες στὸν δημόσιο βίο καὶ σὰν ἄτομα στὸν ἰδιωτικό, στὶς ἐπιδιώξεις μας τῆς καθημερινῆς ζωῆς, κατὰ τὶς ὁποῖες δὲν κοιτᾶμε ὁ ἕνας στὸν ἄλλον μὲ κακυποψία, δὲν θυμώνουμε μὲ τὸν γείτονά μας, ὅταν κάνει ὅ,τι τοῦ ἀρέσει, οὔτε παίρνουμε μία φυσιογνωμία σκυθρωπή, ἡ ὁποία μπορεῖ νὰ μὴν βλάπτει τὸν ἄλλο, πάντως ὅμως εἶναι δυσάρεστη. Ἐνῶ δὲ στὴν ἰδιωτική μας ζωὴ συναναστρεφόμαστε μεταξύ μας χωρὶς νὰ ἐνοχλεῖ ὁ ἕνας τὸν ἄλλον, στὴν δημόσιά μας ζωή, σὰν πολίτες, ἀπὸ σεβασμὸ πρὸ πάντων δὲν παραβαίνουμε τοὺς νόμους, ὑπακοῦμε δὲ στοὺς ἑκάστοτε κατέχοντες τὰ δημόσια ἀξιώματα καὶ στοὺς νόμους, πρὸ περισσότερο σὲ ἐκείνους ἀπὸ τοὺς νόμους, ποὺ ἔχουν θεσπιστεῖ γιὰ ὑποστήριξη τῶν ἀδικούμενων, καὶ σὲ ἄλλους, οἱ ὁποῖοι ἂν καὶ ἄγραφοι, ἡ παράβασή τους φέρνει πανθομολογούμενη ντροπὴ στοὺς παραβάτες.") **Thucydides,** History of the Peloponnesian War – Pericles' Funeral Oration, **2.34 – 2.46. Translated by the author**

along the side of a block for all the five houses of that row. However, according to Cahill, although the houses had fixed sizes and followed the same principles in their plans and the city seemed extremely organized, "variation and "messiness" were prevalent. He believes that "Greek cities had to balance such social ideals as isonomia with social realities of inequality".[26]

The similarities, then, in the architectural layout, didn't mean that the spaces were used in the same way by everyone. As Aeschines had said, "For it is not the lodgings and the houses which give their names to the men who have lived in them, but it is the tenants who give to the places the names of their own pursuits. Where, for example, several men hire one house and occupy it, dividing it between them, we call it an "apartment house" (συνοικία), but where one man only dwells, a "house" (οικία). And if per chance a physician moves into one of these shops (εργαστήρια) on the street, it is called a "surgery". But if he moves out and a smith moves into this same shop, it is called a "smithy"; if a fuller, a "laundry"; if a carpenter, a "carpenter's shop"; and if a pimp and his harlots, from the trade itself it gets the name of "brothel"."[27] Architectural layout, according to ancient Greeks, was not a constraint, because in the end the space would be defined simply based on the way it would be used.

In Olynthus, more than 100 houses were excavated, providing a detailed documentation on the original designs of houses and blocks. The houses of the North Hill settlement belonged to the pastas type, which was quite common in Classical Greece. The houses, as also seen from the plan, were squares with an average width and length of 17.2 meters. In the horizontal axis, the pastas divided the house into two almost equal parts, with the one comprising the north rooms, the bath and the kitchen, and the other the shop, the andron, the anteroom and the courtyard. It is obvious that the functions of the house developed around the pastas and the courtyard, which was usually located in the southern half of the house, due to the Greek climate. According to Xenophon, "It is pleasant to have one's house cool in summer and warm in winter, is it not? ...Now, supposing a house to have a southern aspect, sunshine during winter will steal in under the verandah, but in summer, when the sun traverses a path right over our heads, the roof will afford an agreeable shade, will it not? If, then, such an arrangement is desirable, the southern side of a house should be built higher to catch the rays of the winter sun, and the northern side lower to prevent the cold winds finding ingress; in a word, it is reasonable to suppose that the pleasantest and most beautiful dwelling place will be one in which the owner can at all seasons of the year find the pleasantest retreat, and stow away his goods with the greatest security."[28]

Although the new settlement of Olynthus lay on the North Hill, many people still lived in the South. The two settlements were connected by the new urban plan through the Agora space, or as Hippodamus had defined it, the open space that could gradually

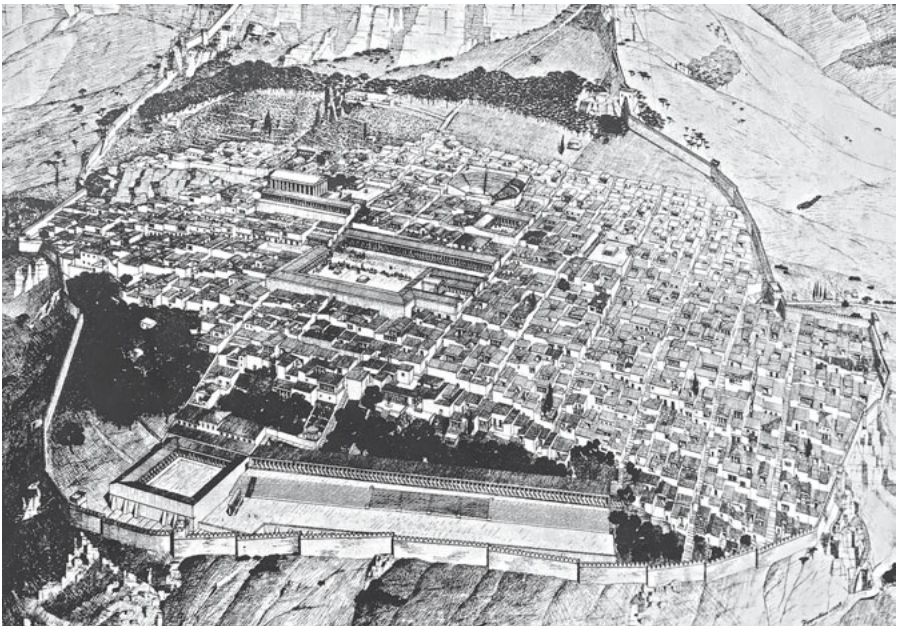
26 Nicholas Cahill (2001), Household and City Organization at Olynthus, New Haven, Conn.: Yale University Press. Available from: http://www.stoa.org/hopper/text.jp?doc=Stoa:text:2003.01.0003 [accessed: 20th October 2010]

27 Ibid. Aeschines, 1.123-4, cited by Cahill

28 Xenophon, Memorabilia 3.8.9-10

evolve into the Agora. Many public buildings and shops still existed in the South settlement, whereas, later on, there was an expansion of the North Hill outside the fortification wall, called the East Spur Hill. The expansion followed the grid system, but it was rotated 2-3 degrees. Although they continued the system of the blocks consisting of ten houses in two rows of five, there existed open spaces between some of the houses. This area is named "the Villa section" by archaeologists, as it seems that the house plots were larger than those in the North Hill plan.

Olynthus flourished during the 5th and 4th century BCE and eventually reached a population of 15000. It became the most important city in Chalcidice, creating its own League. Olynthus became a trading center. Two avenues (Avenue A and Avenue B), ended in the Agora space, providing high connectivity to the market even for the non-residents. Avenue B also seems to have been an economic artery, since the houses along it had dedicated 1/3 of their space to shops or workshops, giving evidence of household trade and manufacture. This high trading activity could also be justified by the fact that Olynthian coins were found in many places, showing its power and importance. However, its economic influence and power with the creation of its own League was resented by Philip B ("Φίλιππος Β ο Μακεδών", the Greek king of Macedon from 359 BCE until his assassination in 336 BCE) and Olynthus requested help. Dimosthenis, a Greek philosopher from Athens, with his speech "Olynthiaki" (Ολυνθιακοί), persuaded the Athenians to send help. The soldiers, however, arrived too late and the frictions between Olynthians and Philip B resulted in the destruction of Olynthus in 348 BCE. It was never inhabited again.



Reconstruction image of the city of Priene.

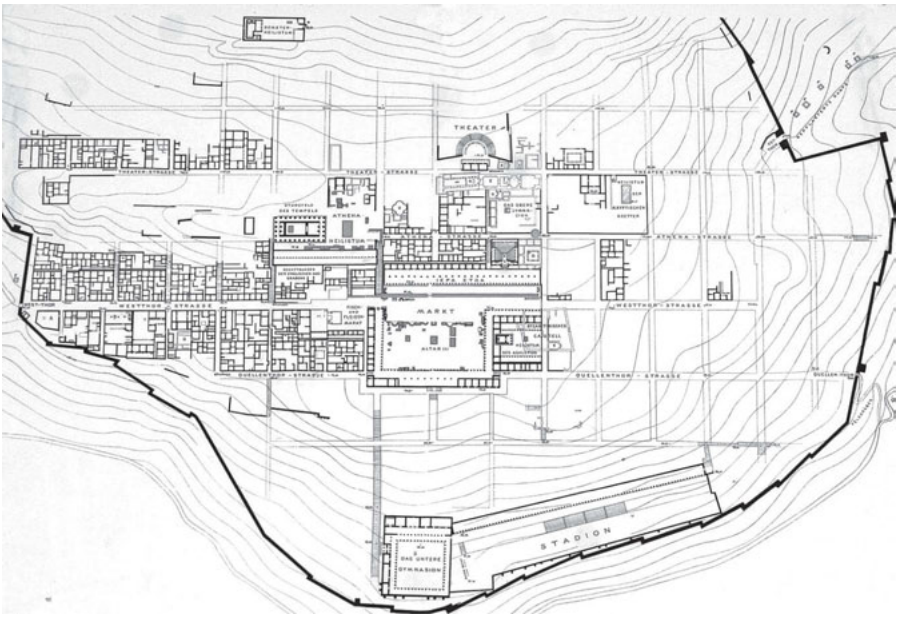
Priene

civilization: Greek
latitude: 27.297778
longitude: 37.659722
year: 350 BCE
inhabitants: 6000
initiator: Aipytos

Although records indicate that the ancient city of Priene was founded in the 11th century BCE, the visible remains date from the 4th century BCE. Priene was originally founded by Greeks from the city of Thebes, and priority was given to the port. Exhausted soil and multiple earthquakes appear to have been responsible for forcing the city to move every few centuries, in order not to lose the function of the port. The most important change, however, took place in the 4th century, after Priene was liberated from the Persian Empire by Alexander the Great and his Greek troops. According to inscriptions, it is evident that Alexander gave a political constitution to Priene after liberation, but his involvement in the planning of the new city cannot be proved. However, based on some sources, he and the satrap Mausolus[29], decided to plan a new deep-water port city based on the model of the Greek island towns. This plan was facilitated by the geography of the region and the city was eventually located on the seaside escarpment.

Later, Priene once again changed location, but also planning system. One century earlier, in the neighboring city of Miletus, Hippodamus had introduced a rational grid system. The hippodamian system gradually gained more and more importance in ancient Greece and was also employed for almost all the new cities planned during the Hellenistic period. There has been much debate on the gridiron planning system, trying to date the period of emergence and the

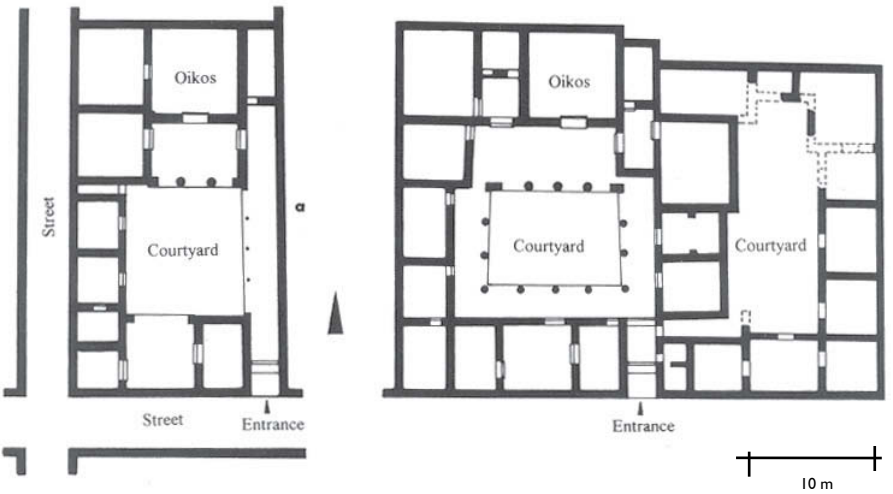
29 Mausolus was a Persian satrap (governor). He remained mainly an independent ruler.



Plan of Priene city.

civilization that should be credited for it. It seems, however, that for many eastern civilizations the grid was actually an important planning tool for thousands of years.

Following the hippodamian layout, Priene was divided into four districts: the religious, the political, the cultural and the commercial. Although there were four temples and one sanctuary to Egyptian gods dispersed throughout the city, the main religious area was in the center and was occupied by the temple of Athena Polias. Athena's temple was built as a gift by Alexander the Great in 334 BCE, who resided in Priene while fighting for Miletus. Athena Polias was considered the goddess of the city and its protector. The temple's architect was Pythis (also known as Pytheos), one of the two Greek architects that designed the Mausoleum of Halicarnassus, which is listed among the seven wonders of the world. The cultural zone was, as one would expect, associated with the function of the theater. Priene's theater, with a capacity of 5000 people, was built between the 4th and 3rd century BCE and is one of the best and most well preserved Hellenic theaters. As was the case with almost all the ancient Greek theaters, it was sculpted into a hill, in order to provide good acoustics. The Athenian political model introduced during the Golden Years of Pericles, was expanding all over Greece, and it was spatially confirmed through the administrative buildings located close to the Agora. The new, liberated city of Priene, then, could not lack



Floor plan.

the Bouleyterion (Βουλευτήριο) and the Prytaneion (Πρυτανείο). The Bouleyterion served as the space where the town counselors could meet, whereas the Prytaneion, located next to it, was the seat of the elected city administration.

In order to understand the city's culture and the important activities of its residents, an analysis of the functional zones is essential. However, a very important element of the city's plan was the street layout itself. The first step was to layout the streets and then fill the accessible ground with buildings. As we can see from the city's plan, despite the fact that the city extended up to the hill with its acropolis, the street plan was laid out only on the southern part of Priene. A cliff divided the city in two, resulting in an acropolis that could hardly be accessed and was therefore used like many others in ancient Greek cities, with more emphasis given to the main city area.

By observing the contour lines of the area, one can see that even the southern part was all but flat. The north-south streets of the grid plan were short, and due to the steep incline they were arranged with stairs. The main streets were oriented from west to east, connecting the gates of the city. The grid is denser on the east side of the city and wider on the west. In the center, where the site also becomes flatter, two blocks were removed and space was provided for the agora. The streets around the agora were reserved for pedestrians and a big flat terrace was created to connect them. Meanwhile, close to the agora, there was a big opening for the oldest building in the city, the temple of Athena. The east-west streets, and especially the main one crossing the open space of agora, were all paved and could be traversed by wheeled carriages.

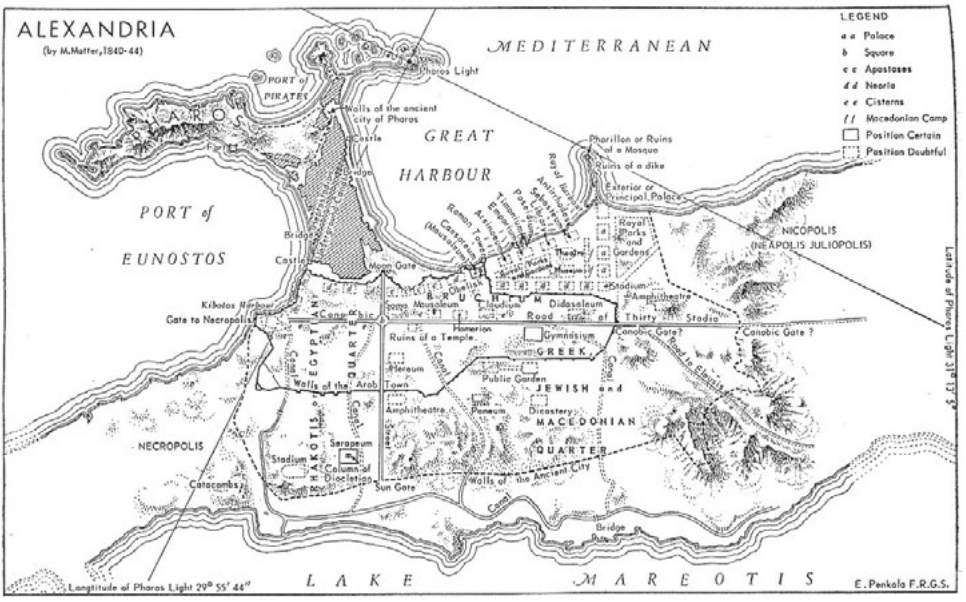
Because of the geomorphology of the site, Priene seems to have been approached mainly from the west, through the neighboring harbor town of Naulochus. Today, tourists can approach the area by the east road, and they can still admire the remains of a city built from marble. One can still see the paved streets, the stairways, some doorframes and well-preserved monuments. Another important surviving element is the water distribution and sewage system. Due to its location next to the sea and the Maeander Delta, along with the advantage of the site's inclination, water was abundant and was easily channeled through the city, following the grid layout.

The houses in Priene followed the prothyron style. This meant that the entrance was slightly recessed in order to form the sheltered prothyron. After crossing the main door, one would enter a rectangular courtyard with its prostada (προστάδα) which was the anteroom connected to one room. In most of the houses, there was a colonnade on one, two, or even three sides of the courtyard. All the houses had a southern orientation in order to provide better light as well as a good climate inside the house during the whole year. On the ground floor, one would find the main functions of the home with the rooms, the storerooms and, possibly, the spaces for the slaves. This part of the house usually expanded in two levels. At the northern part of the house was the andron (ανδρώνας). This space was a room with couches (κλίνες) where the function of symposion (συμπόσιον) could take place. Symposion was the gathering of men for eating and drinking, sometimes as part of political debate inside the house, or simply for entertainment reasons for which they were, usually, accompanied by hetaeras.[30]

The rooms on the second floor of the house had openings to the courtyard in order to provide better light and ventilation. The windows were usually located high on the wall and had no windowpanes, while the height of the rooms was about 5 - 6m. A very important observation was that, while in most of the Greek cities toilets were located outside the house, in Priene, one third of the houses had indoor toilets proving—along with the wide use of marble—that it was quite a wealthy city.

The port city of 6000 inhabitants didn't last long. According to Pausanias (2nd century CE), the Maeander "had silted over the inlet in which Myus stood" resulting in a city-wide migration to Miletus. However, it is now described as the most astounding example of an ancient Greek city remaining whole but tainted by the touch of time.

30 In ancient Greece, the female companion could be divided in three categories: hetaere (εταίρες), pallakae (παλλακίδες) and gynaekes (γυναίκες). As Demosthenes noted in his oration Against Neaera, "We have hetaere for pleasure, pallakae to care for our daily body's needs and gynaekes to bear us legitimate children and to be faithful guardians of our households". (Demosthenes, Oration 59.122) One could say that hetaere were the most respected women, since they were highly educated and sophisticated courtesans. There is a common misconception that they were prostitutes, a characteristic that is, normally, attributed to pallakae. However, hetaere were the only women that could take part in the symposia and their opinion was heard and respected. They also were the only really independent women who had to pay taxes. While they were completely different from the pallakae, some of them could have, indeed, sexual relations with their patrons.



Map of Alexandria city ca. 1840.

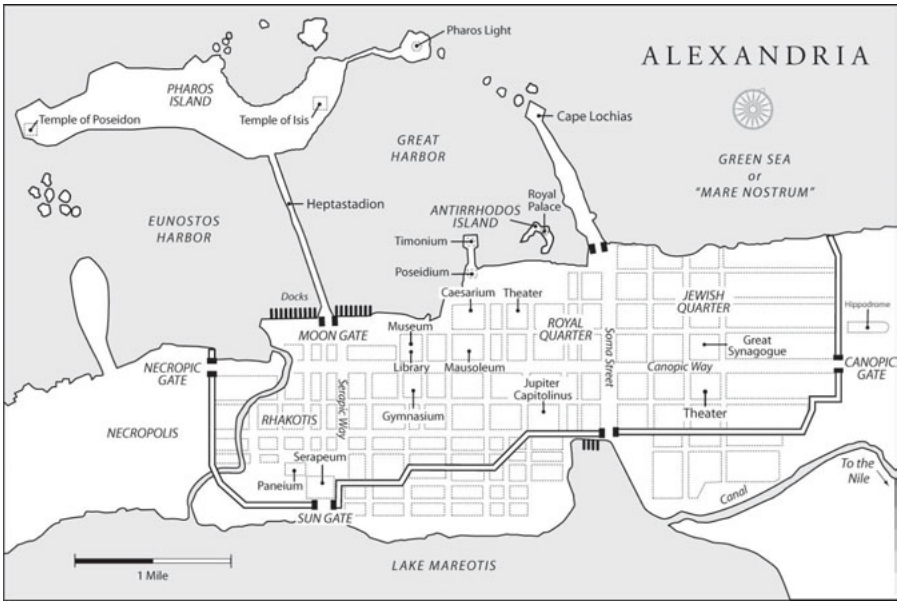
Alexandria

civilization: Greek
latitude: 31.198
longitude: 29.9192
year: 332 BCE
inhabitants: 75000 – 500000
initiator: Alexander the Great

Before the advent of Alexander the Great, a city called Naucratis, lying along the Nile, was officially turned over to the Greeks in 570 BCE. Its significance stemmed from the fact that due to its location it was a large market port, financially collaborating with nine eastern Greek cities. Alexander the Great wanted to replace Naucratis with a large Hellenistic center, part of his empire, and create a link between Greece and the Nile Valley. He ordered the establishment of Alexandria in 332 BCE. In order to be distinguished from the rest of his namesake cities, it was known as Alexandrea ad Aegyptum (in Ancient Greek: Ἀλεξάνδρεια ἡ κατ' Αἴγυπτον).

Alexander assigned Deinocrates of Rhodes as urban planner and Sostratus of Cnidus as the city's architect. Deinocrates is one of the most famous ancient Greek planners, after Hippodamus of Miletus. Early in his career, he was an architect known mainly for the reconstruction of the temple of Artemis – one of the seven wonders of the world – in collaboration with Paeonius of Ephesus. He later approached Alexander the Great, and suggested to build a city for him on Mount Athos in Chalcidice, Greece. His proposal was, however, ultimately rejected by Alexander. Sostratus, on the other hand, would be the architect responsible for another "wonder of the world", the lighthouse of Alexandria on the island of Pharos. Deinocrates, helped by Cleomenes of Naucratis, nomarch[31] of the Arabian district of Egypt, and Crates of Olynthus, hydraulic engineer

31 Nomarch (from the Greek νομάρχης), was a provincial governor or the ruler of nomos (νομός = what is now called prefecture).

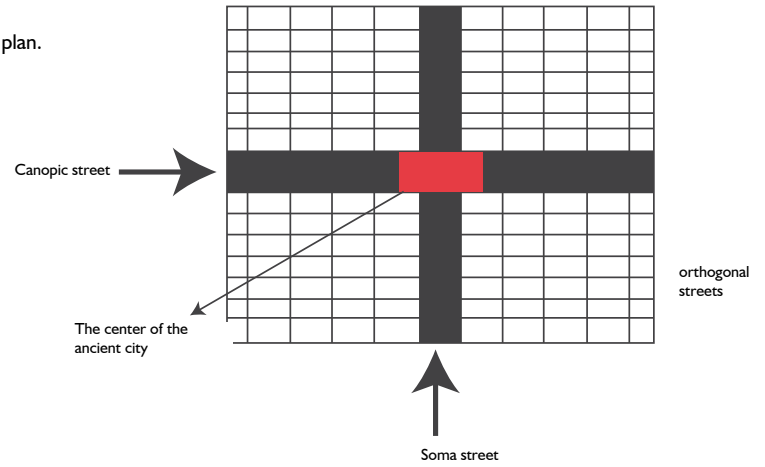


Map of Alexandria city with the main structures and arteries.

responsible for the waterworks, laid out the city plan based on the hippodamian model (which became more widely used during the Hellenistic period).

Alexandria was built in close proximity to an existing small city named Rhacotis that provided labor, accessibility to large ships and water supply through a canal. The most important characteristics of the city's plan, apart from the grid, were its two main axes: the east-west Canopic way and the Soma street, which had a width of 25m to 70m, while marble colonnades on the sideways reinforced their linearity. The Canopic way connected the Necropolis and the Canopic Gate, while the Soma street stretched from the Moon to the Sun Gate. The Gates were part of the fortification structure of the city which, according to some, was defined by Alexander himself, along with its borders, size and the location of important public buildings. The urban enclosure of Alexandria with a total wall length of 15.8km was then the third largest one after Athens and Syracuse. Within the wall, the archaeological findings show that the urban grid was purposely rotated 25 degrees off the main axes, allowing the city to be exposed to northern winds. Another important element of the city's plan and infrastructural construction, was the causeway built to connect the Pharos island to the main city area, also designed by Deinocrates. While Alexandria followed the Greek urban pattern of the grid plan, the blocks designed for the city were of slightly different

Alexandria's hippodamian plan.



size—roughly 10m^2 smaller than the typical Hellenic[32] block. The original city plan stretched over an estimated area of 840ha, while the population, during the Hellenistic period, may have varied between 75000 – 500000 inhabitants.

Although Alexander had great plans for his namesake city, he didn't manage to visit it again during his lifetime. Despite this, the city later (332 BCE – 30 BCE) exceeded his expectations, becoming the most important Greek city of Egypt and a large center of commerce between Europe, Arabia and India. Its most important period was that of the Ptolemaic dynasty (305 BCE – 30 BCE) with an emphasis on infrastructural and cultural development.

Alexandria's history is divided into many periods and was influenced by various civilizations and historical events. As mentioned above, the Hellenistic period ended in 30 BCE and was followed by Roman Annexation and the Byzantine period (30 BCE – 641 CE), Early Islamic Period (639 CE – 1250 CE), Mamluk Sultanate of Egypt (1250 CE – 1517 CE), the Ottomans and Muhammad 'Ali Pasha (1517 CE – 1882 CE) and the final period of British Occupation, Egyptian Independence, and Contemporary Alexandria (1882 CE – 2009 CE).

There has been great effort to explore the history of Alexandria through excavations. Due to many wars and earthquakes, however, parts of the ancient city have been irretrievably lost. The lack of space for excavation and the fact that part of the city lies underwater, create other obstacles. The new city is built on top of the ancient one, and this also raises the cost of excavations despite assistance from the local Archaeological Society and many individual Greeks.

32 "Hellenic" is the right word to refer to anything Greek, since the official name of the country is the Hellenic Republic and from the ancient years until now it is still called Hellas (Ελλάς or Ελλάδα) in Greek language. "Hellenistic", on the other hand, refers to a specific period when the Greek civilization reached its zenith with Alexander the Great expanding its influence in the ancient world beyond the boundaries of Classical Greece. The period of Hellenistic civilization lasted from 323 BCE until 146 BCE.

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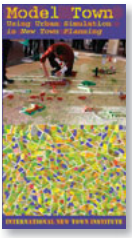

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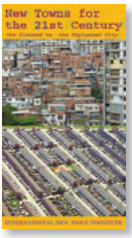

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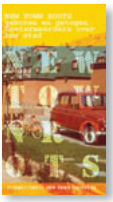

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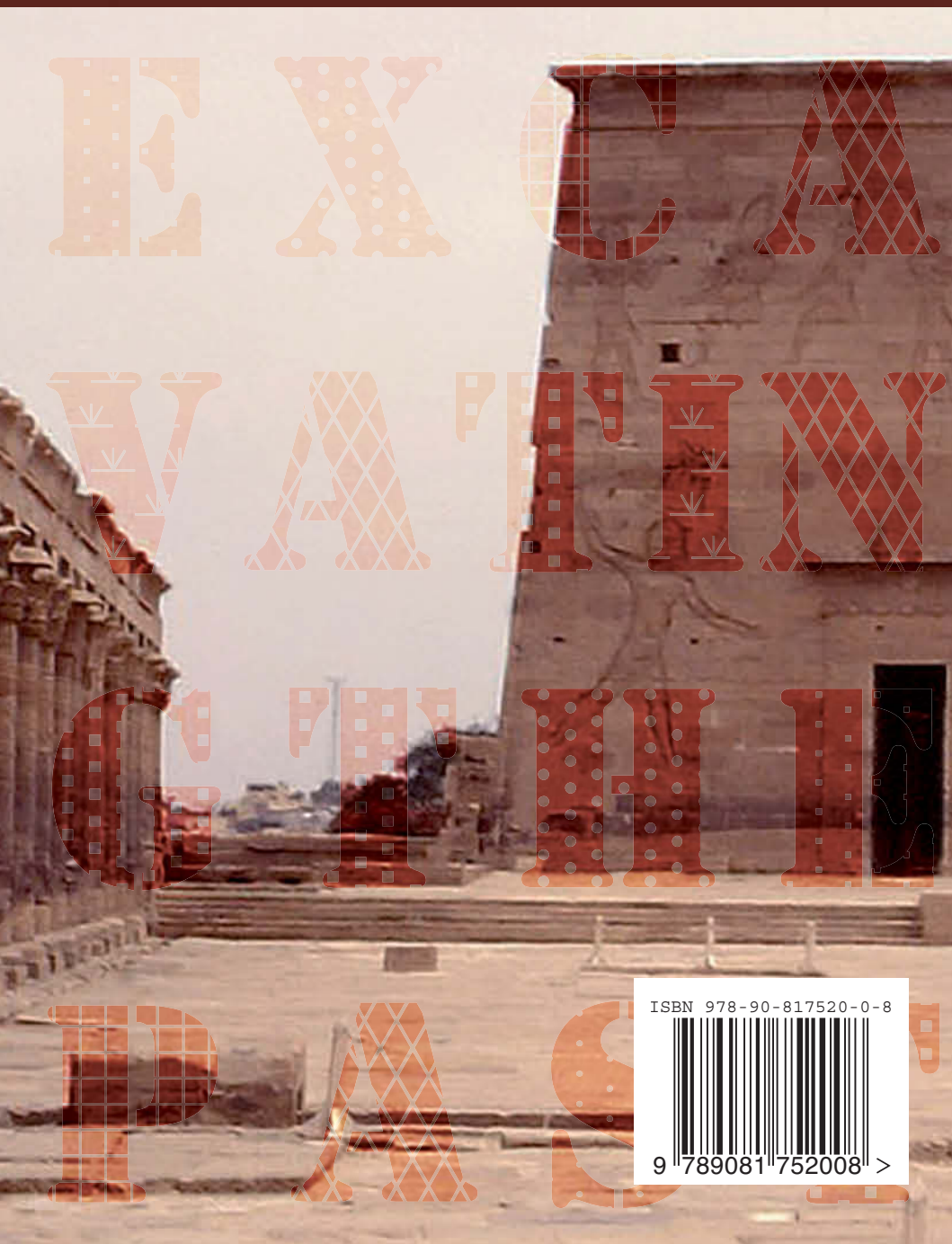

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