# (Review Article<sup>\*</sup>) Urban Development and Architectural Manifestations of the Parthian Period of Iran (III BC-III AD centuries)

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### Abstract

The presented article explores the urban development and architectural manifestations of the Parthian period in Iran, spanning from the III century BC to the III century AD. During this era, the Parthian Empire emerged as a formidable power, influencing art, culture, and urban planning across a vast territory. Key cities such as Nisa, Ctesiphon, Hecatompylos, and others serve as focal points for examining innovations in city design that integrate Persian and other regional influences (Greco-Hellenistic, Roman, etc.). Architectural features, including monumental arches, extensive use of vaults, and decorative brickwork, reflect a synthesis of regional styles and advancements in construction techniques. The examination of archaeological findings, such as the remains of the Tagh-e Kasra archway and the layout of urban centers, reveals insights into the socio-political structure, trade networks, and cultural exchanges of the time. This article highlights how the Parthians not only inherited architectural traditions (from the Achaemenids and others) but also adapted and transformed them, resulting in a unique urban landscape that laid the groundwork for subsequent Islamic architecture.

Keywords: Urban development, ancient cities, architecture, Parthian Empire, Iran.

## Review

The Parthian period (247 BC–224 AD) marked a fascinating era in urban development and architecture, especially in regions like Iran and parts of Mesopotamia. One notable example is Ctesiphon, the Parthian capital, which presents innovative architectural elements such as the grand Tagh-e Kasra (Arch of Ctesiphon), constructed around the 3rd century AD. It is famous for its massive brick vault, which was an engineering marvel of its time and influenced later Islamic architecture. Another significant site is Nisa, an ancient Parthian city, whose urban layout included fortified walls, residential areas, and administrative buildings. The use of mudbrick construction and intricate decorative techniques, like frescoes and stucco, highlighted the blend of Greek and local architectural styles. The Parthians also established a few cities, like Hecatompylos, which functioned as vibrant trade centers connecting the East and West. The layout often featured wide streets and public spaces, emphasizing community and commerce. Overall, the Parthian period's urban development reflected a synthesis of different cultural influences, leading to unique architectural expressions that left a lasting legacy on subsequent civilizations (for instance, the circular layout, figurative arts, etc.). In fact, our article aims to present and reveal those issues in the context of relations, interactions, and

communications with regional neighboring countries (Mesopotamia, the Greco-Roman world, and Armenia).

The Parthian Empire, known as the Arsacid Empire, emerged in the mid-3rd century BC when the Parthians, an Iranian people, overthrew the Seleucid Empire. Its rise is attributed to the leadership of Arsaces I (247 BC - 217 BC), who established the dynasty around 247 BC. It was known for its feudal structure and skilled cavalry, which made it a formidable opponent against the Romans. The Parthians and Romans often clashed over territories in the Near East. In its turn, neighbor Armenia was a crucial buffer state, often caught between Roman and Parthian interests. The Parthians sought to install client kings in Armenia, in order to extend their influence there. This rivalry continued, with both empires vying for control in Armenia. In short, the Parthian Empire played a pivotal role in shaping the political landscape of the ancient Near East, marked by its complex relationships with Rome and Armenia, characterized by conflict, diplomacy, and cultural exchange.

As the history confirms, the Parthians skillfully utilized their cavalry, especially the famed horse archers, to expand their territory. At its height, the empire stretched from modern-day Turkey to Afghanistan, becoming a major player in the Silk Road trade. Thus, the Parthian Empire located on the Silk Road trade route between the Roman Empire in the Mediterranean Basin and the Han Empire of China, became a center of trade and commerce (Rawlinson, G., 2018).

The studies show that the Parthians significantly influenced Persian culture, architecture, and governance, setting the stage for the Sassanid Empire that followed. Their legacy is still evident in Iranian history and culture today. The establishment and expansion of the Parthian kingdom is reflected in the development of urban culture and the establishment of successive capitals.

The Parthian Empire, which flourished very intensively had several key capital cities that emerged as the empire expanded. The earliest Parthian capital was probably at Dara (modern Abivard; was a citadel erected on Mount Apaortenon), (Debevoise, N.C., 1938, P. 14-15) and one of the later capitals was Hecatompylos, that probably was near modern Damghan. Generally, the empire was governed by a small Parthian aristocracy, which successfully made use of the social organizations established by the Seleucids (312 BC-63 BC) and which tolerated the development of vassal kingdoms. The Parthians controlled most of the trade routes between Asia and the Greco-Roman world, and this control brought them great wealth, which they used on their extensive building activities.

From this viewpoint, the ancient city of Nisa (near modern Ashgabat) was very important for the Parthians, as it was their 'home base' (as a capital city) where the Parthian kings' treasuries and archives were kept, and Asaak (near modern Kushan) was the coronation city where Arsaces I was crowned, and where a fire temple was founded in honor of the latter, which burned for centuries (Scoff, W. H., 1914, p. 11). Additionally, Hecatompylos (modern Shahr-e Qumis) was significant in the early years of the Parthian Empire, acting as a vital center that connected various trade routes. Another notable city was The Hundred Gates (Sata-dvara), etc. (Scoff, W. H., 1914, p. 41).

It should be noted that after the Achaemenids, Ecbatan, and Babylon became part of the Parthian kingdom, they continued to remain administrative centers, and the ancient Assyrian city of Ashur (an acropolis of which was built in the Parthian period on ancient Assyrian ritual structures) and the ceremonial Hatra (in present-day Iraq) survived and flourished under the Parthians. The mentioned cities were later unfortunately captured by the Romans (around 116/117) and, in 260, by the Sassanid king Shapour I. During the latter's reign, Hatra and Ashur were no longer inhabited (Rawlinson, G., 2018, p. 218–221). Thus, each of these cities played a unique role in the development of Parthian power and culture, showing the empire's rich history and architectural achievements.

The notable city of Nisa (founded by Arsaces I, 247 BC–211 BC), which was reputedly the royal necropolis of the Parthian kings and served as an early capital, was crucial for trade and administration. Its ruins, featuring impressive fortifications and temples, reflect its strategic importance in the Parthian realm. Excavations at Nisa have revealed substantial buildings, many carved inscriptions, rock reliefs, ceramics and stucco works, frescos, an expressive treasury (jewellery items, coins), and Hellenistic art works. One fascinating aspect of Nisa is its impressive architectural remains, including the Fortress of Nisa, which features well-preserved mud-brick structures and a complex of temples. The site is notable for its unique blending of Greek and Persian influences, visible in its art and architecture. Another intriguing feature is the discovery of a large number of clay tablets inscribed with cuneiform script, shedding light on administrative practices and trade. Nisa also played a vital role in the Silk Road network, facilitating trade between the East and West. In fact, almost all the art and architecture at Nisa manifest a great intermingling of Western and Iranian styles.



Figure 1. A part of ancient site of Nisa Fortress (the photo was taken from the UNESCO// https://whc.unesco.org/en/list/1242/)

In 2007, Nisa was designated a UNESCO World Heritage Site, emphasizing its historical and cultural significance. If one is interested in the blend of cultures and the impact of trade in ancient times, Nisa is a really compelling example. Though this area is protected by UNESCO, but it still needs large-scale archaeological excavations.

According to the data obtained from the archaeological excavations, Nisa was built as follows: first the citadel itself with its powerful defense system, then the entire city expanding around it. Excavations here revealed a square area or hall (housing the royal treasury of the Parthian dynasty), a tower-shaped building, a circular temple, and other constructions. The city is famous for its Parthian fortresses. It is known that Parthian architecture adopted Achaemenid and Greek architectural elements but remained distinct from the two. Thus, its unique style is first Nisa, with its Round Hall, which is similar to Hellenistic palaces but different in that it forms a circle and vault inside a square space.

The Parthian fortresses of Nisa, located near present-day Ashgabat in Turkmenistan, are a fascinating glimpse into ancient Parthian architecture and culture. Indeed, they prove that Nisa was a major and flourishing city of the Parthian Empire. The Parthian fortresses of Nisa consist of two parts: Old and New Nisa. Overall, the Parthian fortresses of Nisa not only stand as architectural marvels but also serve as a testament to the rich history of the ancient Parthian Empire.

One of the most striking features of Nisa is the Upper Fortress, characterized by its massive mudbrick walls and intricate layout. The site includes impressive structures such as grand halls and storage rooms, indicative of its role as a royal residence and administrative center. The large, circular towers were likely used for defense and to signal the presence of enemies. The Lower Fortress, while less well-preserved, reveals remnants of a vibrant marketplace and residential areas, showing the daily lives of its inhabitants. Notably, both fortresses feature intricate frescoes and pottery fragments, which provide insights into the artistic styles and cultural exchanges of the time.

As a result of archaeological excavations carried out in two parts of the ancient site, a luxuriously decorated architecture with buildings with residential, governmental, and religious functions was discovered. The excavations carried out today can neither completely nor unequivocally shed light on the urban planning and architectural transformations of this eastern city, but at least they can help us better understand the complexity and variety of cultural features that the excavations at Nisa have revealed (Invernizzi, A., 1997, pp. 107-119).

Based on the studies, we can state that the city has experienced three phases of construction. During the first one, the thick brick walls were erected. Next, the buildings were arranged, first with corner rooms and then with central rooms. In the last stage, the brick columns of the peristyle courtyard removed and small rooms were built again. Thus, the following notable buildings were found in the built environment of ancient Nisa:

Nisa Fortress: This complex included a series of fortifications with impressive walls, demonstrating advanced military architecture. The site has remnants of both residential and ceremonial buildings. The influence of Hellenistic culture is noticeable here. The wall pillars and chapiters have been preserved, with ornaments and decorations made in the Hellenistic style.

The Temple of the Fire God: This structure illustrates the Zoroastrian influence in the region. Its layout and the presence of altars indicate it was a place of worship and community gatherings. It was a magnificent circular temple (17 m in diameter and 17 m high) divided into two parts by a bypass corridor, dominated by white and red colors.

The Royal Tombs: These monumental graves, showing intricate burial practices, provide insight into the funerary customs and social hierarchies of the Parthian elite.

Palatial Complexes: The remains of palatial structures, adorned with frescoes and decorative ceramics, highlight the artistic achievements of the Nisan civilization.

Regarding the artwork of Nisa, such as the marble statues and carved scenes on ivory rhyton vessels, is unquestionably influenced by Greek art. Thus, exploring those buildings reveals the rich cultural and political life of ancient Nisa, reflecting its role as a vital center in trade and governance during its time.

During their rule, the Parthians managed to extend the border of their empire to the Tigris and, opposite Seleucia, built a fortress at Ctesiphon. And when they succeed in capturing Seleucia, it joins Ctesiphon to become the massive capital of the Parthian kingdom. Thus, one of the most significant capitals was Ctesiphon (Tisfun in Iranian or  $K\tau\eta\sigma\iota\phi$ in Greek), located near modern-day Baghdad (Iraq), on the left bank of the Tigris. It became a major cultural and political center, especially in the 1st century AD. Ctesiphon's iconic structure, the Tagh-e Kasra (Arch of Ctesiphon), exemplifies its architectural prowess. Since the 3rd century BC, it has been the military stronghold of the Parthian state and then the seat of the Parthian kings.

History confirms that Ctesiphon, once a thriving metropolis of the Parthian and later Sasanian empires, was originally founded as a trading post. Ctesiphon grew rapidly due to its advantageous position on trade routes connecting the East and West. Due to its long-lasting survival, its historical significance stems from its role as a political and cultural center. The city became the capital of the Parthian Empire around the 2nd century BC. Its urban formation was characterized by impressive structures, notably the Tagh-e Kasra, an iconic archway that remains one of the largest brick arches in the world. Let's note that during their ruling period, the Parthians passed through wars with the Romans; at the same time, internal strife and the rise of the Sassanid dynasty in the 3rd century AD led to the decline of the Parthian Empire, culminating in its fall around 224 AD. Appearing under the Sassanid (224–651 AD), Ctesiphon flourished further, expanding its infrastructure with palaces, markets, and religious edifices. (Farrokh, K., 2007, pp. 124–125)

Regarding the city's layout, it was typical of Persian cities, featuring a central axis and a grid-like pattern of streets, enhancing accessibility and commerce. The city was renowned for its cosmopolitan atmosphere, attracting various cultures and merchants, which fostered a vibrant exchange of ideas and goods. However, its prominence declined after the Muslim conquests in the VII century and after the founding of Baghdad (762), leading to the gradual abandonment of its once-grand structures.

Ctesiphon is mentioned in the historical-geographical works of Greco-Roman and Armenian historians. For instance, the Greek historian Strabo reports that during the early Parthian period, Seleucia-Ctesiphon served as the administrative center of Babylonia as well as a trade hub for those passing through the Persian Gulf (Strabo, 1930, p. 83). When the Parthians conquered the lowlands of Mesopotamia, they moved their capital from Hekatompylos to Ctesiphon. As reported by Strabo, Tacitus, and others, Ctesiphon remained the winter residence of the Parthians until the end of their reign (224). In his turn, Dio Cassius reports that Tisbon was repeatedly invaded by the Romans, conquered, and plundered, particularly by the troops of Trajan and Septimus (Dio Cassius, 1916, p. 303). In fact, due to its importance, Ctesiphon was considered a major military objective for the Roman Empire in its eastern invasions.

Armenian historians such as Movses Khorenatsi and others also provide fascinating insights into Ctesiphon, the capital of the Parthian and later Sasanian empires. Khorenatsi, in his V-century work, mentions Ctesiphon in the context of its strategic importance and grand architecture. He high-lights the city's role as a political and cultural center, emphasizing its wealth and the splendor of its palaces. (Thomson, R.W.,...1978) Another notable mention is from the VII century historian Sebeos, who describes Ctesiphon's fall during the Arab conquests, illustrating how the city, once a beacon of civilization, faced significant upheaval. (Greenwood, T., 2002, p. 367) These accounts not only depict Ctesiphon as a center of power but also reflect the intertwining of Armenian and Persian histories, especially during times of conflict and cultural exchange. Considering the above, it should be noted that, unfortunately, the information about the Parthian period of Ctesiphon is scarce and mostly extracted from the works of the above-mentioned historians.

Currently, the city is a ruin. The history of the city and its ruins has been studied and described by archaeologists, explorers, and travelers of different periods. M. Streck (1900–1901) was the first to collect the data and make the first interpretations. The regional systematic topographic research was started by E. Herzfield between 1903 and 1911, then by the American expert L. Waterman in 1927. During the 20th century, German and Italian expeditions also worked here, whose findings helped clarify the general topography of the site and the initial layers. Due to the extensive nature of the city and the complexity of the issues raised, however, many circumstances still await further research and excavation, and some conclusions and views that cannot be accepted unequivocally need re-examination. According to the data from archaeological excavations, it can be concluded that, due to a number of circumstances, this area has not been fully excavated by archaeologists up to date.

Today, Ctesiphon's ruins serve as a testament to its historical significance and urban sophistication, reflecting a blend of Persian architectural innovation and cultural diversity (Streck, M., 1917, p. 42–46). Anyways, this capital of the Parthian Empire, is renowned for its remarkable architectural achievements. Here are a few significant buildings from that era:

The Tagh-e Kasra (Arch of Ctesiphon or Ivan-e Kasra): This monumental archway is the most iconic structure remaining from the Parthian period. Built in the 3rd century, it features a massive brick arch, which expresses advanced engineering techniques. The vaulting technique demonstrated showcases a remarkable use of brick and mortar techniques, with a ribbed vault that provides both strength and aesthetic appeal. The interior features intricate plasterwork and decorative motifs, including floral designs and geometric patterns typical of Sassanian art. As a structural innovation, the use of a pointed arch was ahead of its time, allowing for greater stability and the capability to support the massive structure. This innovation found its way into later Islamic architecture, particularly in mosques.

This building served as a royal palace and demonstrated the grandeur of Parthian architecture. Its cultural significance showed that it was a central venue for ceremonies and state functions, demonstrating the empire's architectural prowess.



Figure 2. Tagh-e Kasra or Ivan-e Kasra

It should be mentioned that the key feature of Parthian architecture was the ivan, an audience hall supported by arches or barrel vaults and open on one side. The use of the barrel vault replaced the Hellenic use of columns to support roofs. Although the ivan was known during the Achaemenid period (550 BC - 530 BC) and earlier in smaller and subterranean structures, it was the Parthians who first built them on a monumental scale. The researchers have found the earliest Parthian ivans at Seleucia, which are attributed to the early 1st century AD. Monumental ivans are also commonly found in the ancient temples of Hatra and may be modeled on the Parthian style.

The Palace of Khosrow: Although primarily attributed to the Sassanid period, elements of the original Parthian palace can be seen in the ruins. This building is notable for its vast halls and intricate decoration, which influenced later Persian architecture.

The Temple of the Sun: This temple exemplified Parthian religious architecture, with its circular composition and use of vaulted ceilings. It emphasized the importance of Zoroastrianism during the Parthian era.

Thus, the above-mentioned buildings reflect the innovative construction methods and cultural significance of Ctesiphon during the Parthian period, blending Persian traditions with Hellenistic influences (Schmidt, J.H., 1934, p. 17–18).

In the period discussed, one can find the influence of the Parthians in the fantastic ancient city of Dura Europos.

Due to the possibilities of the terrain, this city was walled, had a regular network of streets divided into equal districts, an agora built with public buildings was placed in the center of the city. In terms of urban planning, this city was of the Hellenistic type, which, falling under the rule of the Romans, underwent certain changes. In essence, Dura Europas largely combined the principles and features of Hellenistic and Roman urban planning.

It is an extremely important ancient site, whose location on the edge of the frontier of empires has contributed to the fusion of various cultural traditions, most of which, unfortunately, have been buried under the ruins of the city. Ancient Dura controlled the passage of the river between the newly established cities of Antioch and the Seleucid cities spread along the banks of the Tigris. (Leriche, P., 2010, p. 26-27) As studies show, its reconstruction as a large city remodeled after the Hippodamian model, with rectangular blocks and intersecting streets that circled around a large central agora, took place around the 2nd century BC. Dura Europa owes its development to its role as a regional capital.

Indeed, it was one of the most fascinating cities of the ancient world and a Hellenistic, Parthian, and Roman border town. It was indeed one of the most luxurious Hellenistic cities in the Middle East, founded in 300 BC. In northern Mesopotamia, about 400 km east of the present-day Syrian city of Homs.

After the capture of Dura-Europos by the Parthians, little changed in the everyday life of the city, except that the eastern influence increased in the Greco-Macedonian families. From the Parthian period, a palace and the ruins of numerous temples with frescoes and reliefs have been preserved. The frescoes found in various buildings exhibit a blend of Hellenistic styles with Parthian motifs. One notable example is the depiction of a Parthian cavalryman, characterized by their distinctive attire and the use of vibrant colors, which illustrates the influence of Parthian aesthetics on local art.

Some researchers consider that the city fortifications (i.e., the walls and towers) display Parthian defensive architecture, notable for their thick mudbrick construction and strategic layout, designed to withstand sieges. The use of bastions is a hallmark of Parthian military architecture.

In this city, one can find a number of elements that underscore Dura Europos as a critical site for understanding the interplay of Parthian influences amid Hellenistic and Roman cultures, creating a unique architectural and artistic legacy. Thus, this strategic city, located on the Euphrates River, was significant for trade and military purposes. The fall of Dura Europos marked a notable shift in control over the region, highlighting the ongoing tensions between the Parthians (later the Sassanids) and Romans during that era. (Hopkins, C., 1947, P. 251-259) After the Sassanid Empire conquered the city in the 3rd century, it became a strategic military and administrative center due to its location.

Today, Dura Europos serves as a key site for understanding the cultural interactions of early civilizations and the evolution of urban life in the ancient Near East. Its layered history is a testament to the resilience and adaptability of its inhabitants amidst shifting political landscapes. In terms of cultural context, this city had a cosmopolitan society.

It should be noted that the Parthians mostly introduced the circular layout in urban planning, which was also followed by the Sassanids. Therefore, at present, the ruins of some ancient settlements and architectural complexes with circular planning attributed to the Parthian and Sasanian eras can be seen in the territory of both Iran and Iraq. For example, the Parthian ceremonial

city of Hatra, located in Iraq, was also built in a circular pattern, albeit somewhat irregularly, with scattered rather than perfectly designed circles.

Thus, Hatra was a flourishing city during the Parthian Empire, particularly from the 1st century BC to the 3rd century AD. Its strategic position along trade routes made it a melting pot of cultures, blending Hellenistic, Roman, and local influences. The city layout of Hatra was distinctive, characterized by its massive defensive walls and impressive temples. The walls, made from a unique blend of mudbrick and stone, stood about 20 meters high in places and encircled a central area filled with impressive architecture.



Figure 3. Hatra (the photo was taken from the UNESCO// https://whc.unesco.org/en/list/277/)

Thus, Hatra was built on a plain site in the Parthian tradition, placed in the section of caravan routes. It had a three-part defense system: one wall made of stone, two walls made of brick, and a

defensive moat between them. The palace and ritual center were located in the middle. The main wall was supported by buttresses. The outline of the city walls was like an irregular polygon that looks more like an oval.

Hatra was famous for its four ivans and the Summer Palace. In fact, the city had a palace and a ritual complex. Stone, lime, and brick were used in constructive arts.

Currently, the ruins of stone structures and parts of palaces have been preserved almost to their entire height.

The Hatra fortress was very powerful, fortified with a large stone wall. The whole space was divided into three large paved courtyards, in which there were gardens and pools.

All three courtyards had stone pavilions similar to the vaulted ivans but smaller in size. One of them is conventionally called the Summer Palace, although it faces east. There are buildings attached to the courtyard walls that open onto the courtyard.

In fact, the main structure consisted of two vaulted ivans, with rooms on both floors. In the Parthian period, the construction of ivans became an important part of architecture, which became one of the most central architectural accents of palace structures. This circumstance has clearly found its manifestations in the city of Hatra. (Al-Salihi, W., 2023, P. 174-176) Of the four ivans here, one was used for the audience hall, the other for the residential area, and later two more were added.

One of Hatra's most remarkable features is the Temple of the Sun, a massive structure that reflects the syncretism of religions, showing both Zoroastrian and Greco-Roman elements. The temple's intricate carvings and detailed friezes depict various deities, highlighting Hatra's importance as a religious center. The city's layout also included a marketplace, residential areas, and various public buildings, all designed to facilitate trade and community life. The urban layout, with its wide streets and open spaces, allowed for gatherings and public events, enhancing Hatra's role as a vibrant commercial center. Hatra's cultural richness is evident in its art and architecture, which influenced later Islamic architecture, making it a crucial part of the historical narrative in the region. The city's resilience against Roman sieges until 217 AD further cements its historical significance.

Excavations have revealed decorative art samples, as well as wall columns, sculptural decorations, human and animal sculptures, and exquisitely created motifs. The entrances in Hatra are reminiscent of the famous triumphal arches in Roman architecture, with columns and architraves, impressive Corinthian capitals, and ornate belts.

The history of this northern Mesopotamian city spans over five centuries. The site is currently under the protection of UNESCO. Unlike Ashur and Dura Europas, Hatra is dominated by stone and limestone architecture.

#### Conclusion

The ancient Parthian cities, such as Ctesiphon and Hecatompylos, stand as testaments to a rich tapestry of cultural exchange and architectural innovation shaped by interactions with Greco-Roman, Mesopotamian, and Armenian civilizations. These cities were not just political centers; they became melting pots of ideas and styles. For example, Ctesiphon's famous arch, reminiscent of Roman engineering, integrated local materials and techniques, creating a unique architectural identity. Moreover, the Parthians adopted features from Mesopotamian ziggurats, reflecting their reverence for prior cultures while simultaneously asserting their independence.

The interactions with Armenian cities facilitated trade and cultural diffusion, as evidenced by the blending of artistic motifs in pottery and textiles. Ancient Parthian and Armenian cities shared architectural styles and cultural influences. They featured planned urban layouts, fortified walls, and organized streets, emphasized defense and trade. They were cultural centers, with Persian, Greco-Roman, and Hellenistic influences in arts, architecture and urban devlopment context. The cities of both countries thrived as trade centers along the Silk Road, showing their adaptation and success in their respective built environments and the geopolitical context.

Although the Greek culture of the Seleucids was widely adopted by peoples of the Near East during the Hellenistic period, the Parthian era witnessed an Iranian cultural revival in religion, the arts, architecture.

In conclusion, the urban development of Parthian cities illustrates a dynamic interplay where the adoption and adaptation of architectural practices led to vibrant urban centers that were both innovative and reflective of their diverse influences. This synergy not only enriched Parthian culture but also left a lasting legacy on the architectural landscape of the region.

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