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“Physical Components of Persian Architecture” in Analysis of the Achaemenian Governments' Ideas

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ABSTRACT

This research evaluates the impact of Achaemenian Government on the formation and development of Persian architecture. The purpose of this research was to identify the relation between Achaemenian government and architectural features and explain the impact of Persian governments on the physical form of Persian architecture in the form of architectural instances. This study is theoretical with a descriptive method. The results of some of the authors show that Persian architectural style has been influenced by the dictatorship government of Achaemenian and political attitudes. Persians thought about global government and in this regard, they respected the culture and architecture of other nations and used them.

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INTRODUCTION

Aryans are identified into three main branches of the Medes, Persians, and Parthians. At the beginning, the Medes established a government who were residing in the west of Iran. In 605 BC, they overthrew the Assyrian government that this action had a great influence on the civilizations of that time. There are some traces of seventh and eighth centuries BC from Medes civilizations in the Nooshijan hills. In this monument, Chevron arcs (sharp arrow) were used which have been performed using Percussion arch method and they developed to the extent that the arcs were similar to Safavid period.

In 550 BC, a group of Aryans, Persians, led by Cyrus, overthrew the Medes and established Achaemenian government. The Persians gradually expanded their empire range, so that from 360 to 550 BC, Persian government ruled a large part of the territory of India, Central Asia, North Africa and the countries of the periphery, Red Sea, and the entire Balkan to the inside of Greece peninsula. Ancient architectural styles include Persian and Parthian architectural style that Persian style has been established during Achaemenid government and Parthian style has been established during the Parthian government. The summary of attributes and actions of ancient governments during Medes and Achaemenid period is expressed in Table 1.

Governmental, economic, religious system of Achaemenian:

Governmental system: centralized and with unified and strong leadership

Economic system: strong and financial reserves

Religious system: obedience of Ahura Mazda and trilogy gods and kings [2]

Table 1: Summary of attributes and actions of ancient governments during Medes and Achaemenid period, Source: authors

Government	Strain	Architectural style	Period	Geographic area	The most important governmental action	The most important architectural action
Medes	Aryan - Medes	-	From 605 BC to 550 BC.	West of Iran	Large influence on the civilizations of that time by	Using advanced Chevron Arch on the Nooshijan hills

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					overthrowing the Assyrian government	
Achaemenid	Aryan - Pars	Persian architecture	From 550 BC to 360 BC.	large part of the territory of India, Central Asia, North Africa and the countries of the periphery, Red Sea, the entire of Balkan to the inside of Greece peninsula.	Overthrow the Medes government, the Central Government of India to Greece	Establishing the first Iran codified method by benchmarking the Urartus' architecture Using the arts and technology of other obedience nations and integration it with local and national art and thinking

Expression of Problem:

The research problem is finding out the impacts of Achaemenian government thinking on the physical form of Persian architecture by recognition of the Achaemenian and the architectural features of that era.

Research questions:

Was the Achaemenian thought of the governmental, economic, and religious system effective on the physical form of Persian architecture? And the other is that whether the governmental thought of the Persians in the three systems had architectural works for adaption?

Hypothesis:

It seems that Achaemenian ideas in governmental, economic, and religious systems were effective on the physical form of Persian architecture and the architecture of this period can be explained in this period.

Research method:

This study is theoretical with a descriptive method. Information resources were in a library form by referring books and articles.

Literature:

In the book of "style of Iranian architecture" [1] and "History and architecture practices in Iran" [2], the styles of Persian architecture and architectural features have been studied.

Research purposes:

The purpose of this study was to identify the relation between Achaemenian Government and architectural features and explain the impact of Persian governments on the physical form of Persian architecture in the form of architectural instances.

Theoretical Basis:

Urartus Architecture:

The typical architecture of Persian architecture can be mentioned in northwestern Iran and East Anatolia or Turkey (Figure 1). The structure of Urartu building was made of beams and columns with marquee beds; buildings had rectangular plans and hypostyle halls were the specifications of this architecture. Decorative columns and building on the platform and using materials such as stone and wood were the other specifications of this architecture. The remaining examples of this architecture can be Hasanloo hill and castles around Van Lake in Turkey.

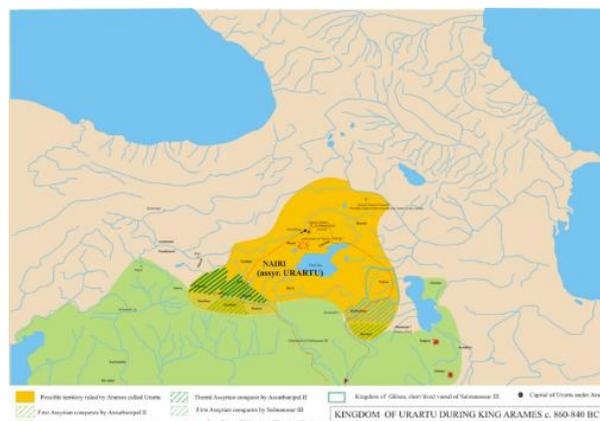


Fig. 1: Scope of Urartu Empire

Achaemenid architecture:

The Persians who lived in the vicinity of Urartus in their migration routes use their pattern and barsav them. Later Achaemenid used Urartu architecture in Pasargadae, Persepolis, and Susa Apadana. A style of architecture that created the architecture of the Achaemenid period was the first documented method of Iranian architecture which is known as Persian method. Like the Greek architecture, Achaemenid architecture had a special harmony and proportion and Achaemenid kings searched for trained and required artists and artisans in their all territory and vast empire in order to finish all great architectural and structural plans and programs that in fact was the manifestation of their power, dominion, and glory. In the meantime, Greek experts played a greater role.

The main buildings of that era were great and majestic palaces. The architecture history of these buildings probably began from the beginning of the seventh century BC. At this time, Iranian tribes converted into semi-urban from nomadism. Of course, these tribes were the Indo-Aryan tribes which are named Medes and Persians after establishment and Medes resided in the northwestern of Iran and Persians resided in Khuzestan region. Median gradually established the first Persian Empire led by Darius and chose a certain city that was Ecbatana or a concourse of people for being the capital. By the selection of Ecbatana as the political center, architecture of constructing palaces started by Medes in Iran that the evolved form of it were built during the Achaemenid era specially in Pasargadae, Susa, and Persepolis.

One of the important elements of the architecture at that era was artificial platforms that the fortified residence of the King was made on it and the collection of these tall buildings shows that architects have tried to build palaces and monuments of this period on these platforms with what a high courage and skill, so that they can be seen very beautiful and remarkably even close or far. Stone steps were made to climb the stairs that the important of which is 25 meters wide that have been generated by the large pieces of carved stones. Of course, they put rocks without mortar and stones were used in the foundation of buildings. Also, mortar was also not used in the walls. Usually, metal clasps were used to lock the stones, as well as the traditional Greek architecture.

Given the history of architecture in Iran, creating buildings on the platforms was not a new work, but also, in prehistory, as has been observed in silk hill, the chief's houses in the tribes were built on the platforms. But, shaving big stones and creation of stone buildings from carved stones was common in "Urartu" and "Atropaten".

Comparison between Urartu and Achaemenid architecture:

Foundation of Persian architectural style was retrieved from simple buildings which were in the West and North West territory of Iran, but a new phenomenon that occurred with the expansion of Persian rule was collaboration with various artists from different lands construction, architecture and other arts related to it. The main topic of Persian-Achaemenid architecture creates an intercultural-civilization architecture which is unique and unparalleled in those days. The witness of this issue is the text of the inscription that is quoted by Darius the Great, King of Achaemenid [1].

Two cases of Urartu architecture can be recognized in Persian architecture: 1. Hypostyle halls, 2. Kalaveh.

With the exception that the materials in hypostyle halls in Urartu architecture were wooden columns in the middle of halls and wooden beams on the ceiling. This kind of architecture was used for the first time in Susa during Achaemenid era in which, the wooden columns to stone column and walls and ceiling were made of bricks to moderate the heat of Khuzestan plain with the help of brick which is the heat sink. Thus, the Urartu architecture was imitated in such a way.

Persian architectural style features:

Persian architectural style is a narrative architecture. This means that every corner of Persian architecture provides more ancient history of the buildings. Achaemenid established the first method of Persian architecture using art and technology of other obedience nations and composition and integration it with local and national thinking and art especially the use of ancient architectural periods particularly in Urartu architecture and Barsav them in designing orthorhombic spaces hypostyle halls. Summary of Persian architectural style features are:

- Design and composition of the hypostyle hall and porches
- Cleanly shaven stones and join them with metal clasps
- Using carving, glazed tiles, jewelry in facades and decoration of building
- Tendency to create platforms and make them in some buildings
- Extension in the frame of buildings (length - width - height)
- Create a flat cover with wooden beams and columns in porches and Forums
- Using raw clay inside the thick walls
- Carpeting the floor of covered spaces by a mixture of chalk and clay Amra
- Being symbolic architecture to convey political, cultural and etc. purposes [2]

- Introversion, especially in Persepolis and Susa
- Linking sub-sectors such as kitchen with hidden ways to the main sections
- Beautification of landscapes surrounding buildings and collections with pool and waterfront and campus
- Using curved marquee in basements
- Create foundations with rubble stone
- Physical appearance of outside the buildings with curved stones and physical appearance of the inside the buildings with glazed tiles [4]

Findings:

Classification of Persian architectural style features:

According to the classification of the characteristics of Persian architecture, the magnificent of this style completely depends on the centralized and strong economic and governmental system that can be seen in three dimensions; symbolic architecture, using art and technology of the other obedience nations, using carving, using glazed tiles and hanging jewelry (Table 2).

Table 2: Classification of Persian architectural features in the governmental, economic, and religious systems, Source: authors

Period	System	Effective factor	affected – Architecture components
Achaemenian - Persians	Governmental system	Centralized and unified and strong leadership	Using arts and technology of other obedience nations and integration it with local and national art and thinking Symbolic Architecture to induce political, cultural and etc. purposes Tends to create platforms and create them in some buildings
	Economic system	Strong with financial reserves	Use carving, glazed tiles, jewelry in facades and decoration of building Create a flat cover with wooden beams and columns in porches and Forums Cleanly shaven stones and link them with metal clasps
	Religious system	obedience of Ahura Mazda and trilogy gods and kings	-

Emanation of Achaemenian thinking in architecture:

A. Governmental system, Centralized and unified and strong leadership:

Symbolic Architecture to induce political, cultural and etc. purposes using grandeur-orientation in architecture and decorations. (Figure 2)

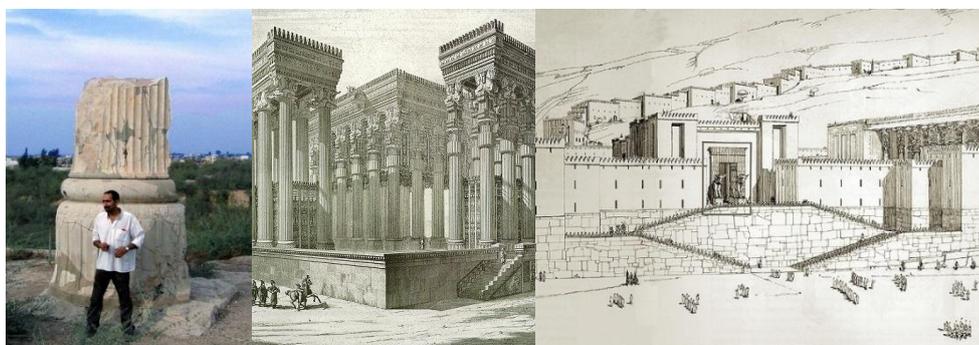


Fig. 2: Persepolis, Persia, grandeur-orientation in architecture and decorations [2]

B. Emanation of global thinking of government:

Respect the culture and religion of the obedience nations: Lotus flower bud in the hands of Achaemenid kings was a sign of friendship and interaction with the surrounding nations. Using arts and technology of other obedience nations: Winged bulls with human heads were an idea from Assyrian architecture. (Figure3).



Fig. 3: Persepolis, Persia, respectively Lotus flower bud in the hands of Achaemenid kings, sign of friendship and interaction - United gates, winged bulls with human heads, the idea of Assyrian architecture

C. Strong economic government with financial reserves:

Use carving, glazed tiles, jewelry in facades and decoration of building: "In the Achaemenid era, arrangement of palaces was done using colored glazed bricks" [5]. Create a flat cover with wooden beams and columns in the halls and porches. Timber transportation costs from distant areas. In the Persian architecture, baldachin was with beam and hypostyle halls, main components of creation and unique space. The wood could be easily used to cover openings of 5.2 to 5.3 Gaz, but, in the architecture of Persepolis, the opening between two columns was about 6 Gaz (6.40 meters) and that was the largest wood covered opening in the world at that time. Such a wood was not found in those days and the wood used in palaces of Persia was from Jabal Amel Lebanon which came first to Susa and then went to Persepolis and was used (Figure 4).

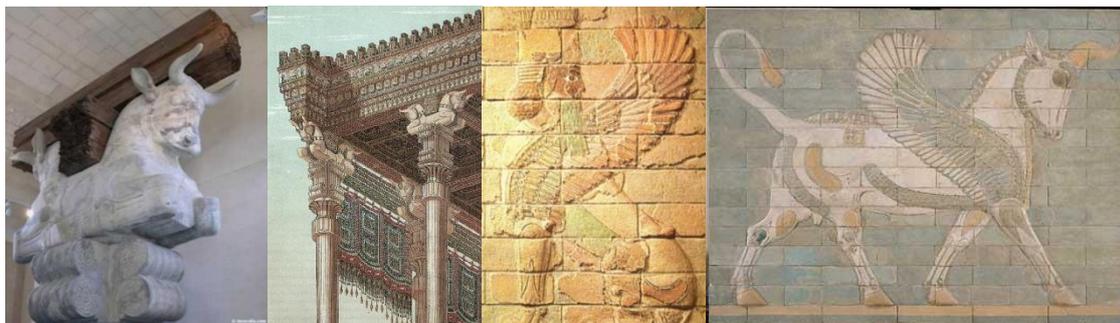


Fig. 4: Respectively, the inner walls of the palace of Susa –reconstruction facades and decoration of building- flat cover with wooden beams

Conclusion:

The architectural style which had led to the creation of architecture works in the Achaemenid period is the first method of Iranian architecture that is known as Persian style. Foundation of Persian style has been taken from simple structures in the West and Northwest regions and other areas. But, the new problem that occurred with the power of the rule of the Persians was collaboration of various artists from different lands. It is obvious that a country as large as Iran at the Achaemenid period should do this with the various territories under their control.

The results revealed that the Persian architecture style was affected by the strong Persian government and their political attitudes and they showed it in symbolic architecture to induce political, cultural and etc. purposes using grandeur-orientation in architecture and decorations. Persians thought about a global government and in this regard, they respected the culture and architecture of other nations and used them. On the other hand, the strong political system created a strong economic system that can be seen in carving, glazed tiles, jewelry in facades and decoration of building. [3] (Figure 5).

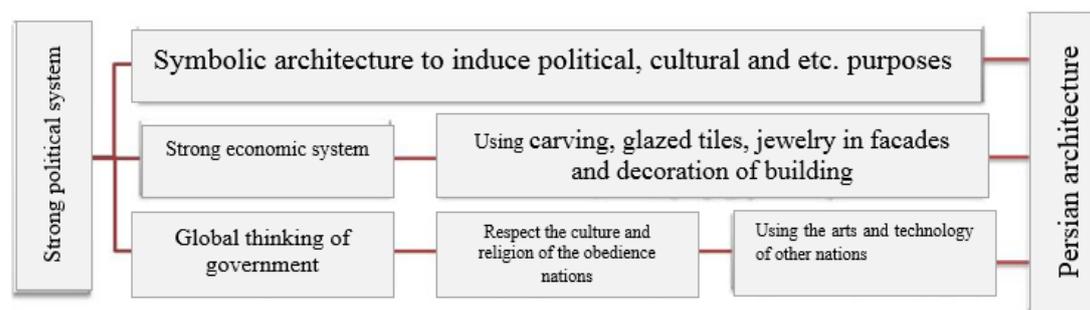


Fig. 5: Impacts of governmental thinking of Achaemenian on the Persian architectural style, Source: authors

In total, according to what is stated the most important effective factor on the ancient Iranian architectural forms in the Persian style was the strong and centralized political and economic system that has been expressed in Table (3).

Table 3: Impacts of governmental thinking of Achaemenian on the Persian architectural style, Source: authors

Government	Architectural style	The most important governmental action	The most important effective factor on architecture	The most important architectural action
Achaemenian	Persian architectural style	overthrow the Medes government, establishing the central government of Iran from India to Greece	Centralized and strong political and economic system	Establishment of the first Persian codified method by benchmarking the Urartus architecture Using the arts and technology of other obedience nations and integration it with local and national art and thinking

REFERENCES

- [1] Pirnia, M.K., 2001. Stylistics of Iranian Architecture, Iran, Tehran: SoroushDanesh Publications.
- [2] Rasouli, H., 2005. History and architecture practices in Iran, Fourth Edition, Iran, Tehran: PeshotanuPublications.
- [3] Rismani, A., 2014. Memorial Institute of Sadrolmoteallehin in Regards to Appearance of Mollasadra Thoughts of the Architectural Space, (Thesis), to obtain a degree (MSc), Iran, Shiraz: Islamic Azad University of Shiraz.
- [4] Memarian, Gh. H., 2008. Iranian Architecture, Iran, Tehran: SoroushDanesh Publications.
- [5] Nasr, T., 2007. onArt and Islamic Art, First edition, Iran, Shiraz:Navid Shiraz Publications.