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Study of the Formation Process & Continuity of the Apadana Archetype in the Iranian Architecture

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ABSTRACT

Re-reading of archetypes is not only the way to percept its concepts and elements but also to recognize the Iranian architecture. Architecture archetypes are the structural experiences of space that originated from dynamic thoughts and collective unconscious, consequently they emerged in architecture over the years. Apadana is one of these archetypes that its signs can be found in palaces and ceremonial buildings up to the contemporary period. Forming of this archetype in the Iranian architecture is a successful experience outcome of composition the hypostyle hall and iwan (Porch) that each one was created individually in historical architecture's spaces. Also, its continuation states the existence of governments with stable cultural foundation that it has still remained in spite of their political collapse. This research has been executed using theoretical and visual studies and also historical, descriptive and comparative methods. The main purpose is to survey the influence and effectiveness of ceremonial-governmental architecture's pattern from historical to contemporary period. Findings have indicated that hypostyle halls were appeared in the Iranian architecture from the Urartian era and hypostyle iwans from the Median era. In addition, the combination of these spaces was manifested in the Pasargadae Palace for the first time. Later, this archetype with the same proportions repeated in the Susa and Persepolis palaces evolutionally than the Pasargadae Palace. The Apadana archetype in the Islamic period, especially in the Safavid era when building palaces were prevalent, manifested in royal palaces like the Chehel Sotoun. Attention to these archetypes in various historical periods is important, because spatial patterns can respond to designers' mental concern for creating appropriate architectural spaces.

Keywords: Archetype, Apadana, Palace, Hypostyle Hall, Hypostyle Iwan

INTRODUCTION

Re-creation means employing past experiences in process design with new words, using dynamic and appropriate methods in association with the paradigms, wants and needs available at any time that emerges in design with direct human intervention. Getting benefit from re-creation research (according to the current paradigm) changes to the scientific process. (Shahcheraghi, 2010). Employing the Apadana archetype in royal palaces is one of the Iranian architecture's experiences. This archetype is composed of a central space

with surrounding iwans. In this research, the formation of components, evolution and continuity of this archetype in the Iranian historical buildings has been studied, both before and after Islam.

EXPERIENCES OF URARTIAN & MEDIAN ARCHITECTURE

After the discovery and excavation in archeological sites such as Tepe Hasanlu, Babajan Tepe, Godin Tepe and Noshijan Tepe, it was possible to identify the Iranian

architectural features of the first millennium which was effective in architecture forming of the later periods (especially during the Achaemenid era). Consequently, it has taken a look at the Urartian & Median architectural features in their buildings.

URARTIAN ARCHITECTURE

Urartu is the name of a civilization that was living in Iran (west of Azerbaijan Province), east of Anatolia, northern Kurdistan and also around the Lake Van in the Armenian Highlands, before the migration of Aryans. (Ravandi, 1977) Their civilization had originated from the Assyrian and Babylonian civilizations. They ruled until the late seventh century BC., when the Armenian overthrew the Van government. Beam and column with flat ceiling was a feature of Urartian Architecture. Their buildings were in square form and their temples with hypostyle hall built on a platform. (Pirnia, 2008)

TEPPE HASANLU

A relatively high hill among the green plain shows off in 85 km south of Urmia Province, near the road which leads to Naqadeh and Oshnavieh (both in West Azerbaijan Province). This hill has the same name as a village located at its hillside and it is called Hasanlu. (Sarfaraz & Firouzmandi, 2009) A city has been discovered in Tepe Hasanlu belonged to the late eighth century BC. Hasanlu had thick walls and buildings like palace or temple. There were also Craftsmen's houses and workshops for pottery and metallurgy in this city. (Grantoski & dandamayo, 2006) These palaces or temples had specific architectural features such as hypostyle halls (two-column, four-column, six-column, eight-column) and long spaces around the central hall.

MEDIAN ARCHITECTURE

Medes is the name of Iranian kinfolk which inhabited in west of the Iranian Plateau or the region known as Media.

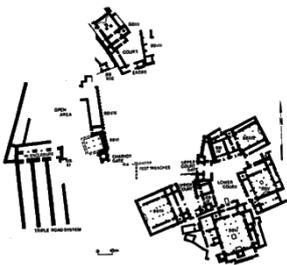


Figure 1- Tepe Hasanlu Plan (Dyson, 2007)

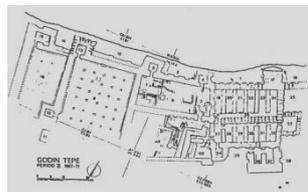


Figure 2- Godin Tepe Plan (Sarfaraz & Firouzmandi, 2009)

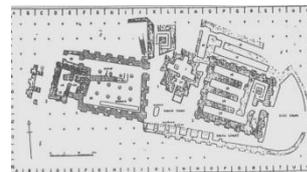


Figure 3- Nosh-i Jan Tepe Plan Sarfaraz & Firouzmandi, 2009)



Figure 4- Baba Jan Tepe Plan (Authors, 2013)

Hegmataneh was the capital of Media which later was renamed to Ecbatana. They believed in valid imitation and knew it to be better than inaccurate renovation. "Apparently, the nomadic Aryans has gotten ideas from the Urartian architecture, while passing the Lake Urmia." (Pirnia, 2008)

GODIN TEPE

This enormous site is located approximately about 12 km east south of Kangavar (a city in Kermanshah Province), between the Kordestan and Lorestan Province. The second period of its buildings was discovered after the continuous excavations. A great hypostyle hall was built behind the fortress in this period that is corresponding to the seventh century BC. (Sarfaraz & Firouzmandi, 2009) There were 30 columns (5×6) inside this hall that their pedestals have still remained. This hypostyle hall, which opened to the surrounding environment from one side, is the superior architectural space of the Godin Tepe.

NOSH-I JAN TEPE

This archeological site is located 60 km in south of Hamedan Province and also about 20 km in the west of Malayer County (a city in Hamedan province). Nosh-i Jan Tepe has 80 m length, 30 m width and 37 m height. It's composed of two parts: natural and artificial. (Sarfaraz & Firouzmandi, 2009) There is a hypostyle hall in west side of this hill's temple. This hall has three rows of four columns (totally 12 columns) which have tolerated the heavy load of hall's ceiling and covering. So, hypostyle hall is the main architectural feature of this building.

BABA JAN TEPE

This archeological site is located in Noorabad in Delfan plain with a distance of roughly 170 km from the Lorestan Province. (Sarfaraz & Firouzmandi, 2009) Two-column iwan and long spaces surrounding the central hall are the main architectural features of this complex.

EXPERIENCES OF ACHAEMENID ARCHITECTURE

Achaemenid dynasty was established in 550 BCE by conquering Cyrus the Great to Astyages, the last king of the Median Empire.

APPEARANCE OF THE APADANA ARCHETYPE

Monuments of Pasargadae complex are the early experiences of achaemenid architecture. This complex is composed of spaces in the form of Apadana. It seems this pattern has been evolved from the Urartian and Median

architecture. For the first time, Hypostyle halls were made in palaces (or temples) of the Tepe Hasanlu. These halls, which were closed spaces, had structural function in order to cover the space span. Western hall of the Nosh-i Jan Tepe was a closed space like the Tepe Hasanlu's halls. Despite this process, hypostyle hall in Godin Tepe was a semi-open space that the south side of its hall had a closed connection with surrounding environment. Another space, which its combination with hypostyle hall caused the formation of Apadana archetype, is hypostyle Iwan in the spaces' entrance. Firstly, this feature was appeared in the eastern side of Baba Jan Tepe.

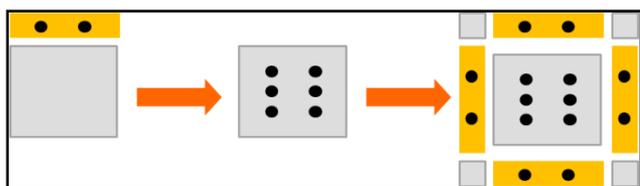


Figure 5- Formation of the Apadana Archetype Authors, (2013)

EVOLUTION OF THE APADANA ARCHETYPE

The apadana archetype first appeared in Pasargadae palaces, and then evolved in Susa and Persepolis palaces. Below, this evolution process has been discussed.

APADANA ARCHETYPE IN PASARGADAE

Total buildings of Pasargadae, the Cyrus's residence, have been constructed in an area with a length of 2.5 km. This site is located about 43 km far from the Persepolis. Pasargadae, the place of Achaemenid kings, was built by the order of Cyrus II in 559 to 550 BSc.

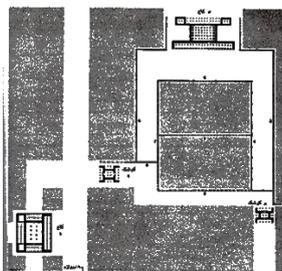


Figure 6- Location of Apadana Palaces in Pasargadae (Stronach, 2000)

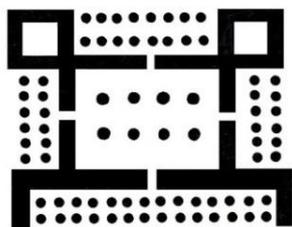


Figure.7 Apadana in Pasargadae(Authors, 2013)

This place was the first and second capital of the Achaemenid kings; Cyrus II and his son, Cambyses II. (Sarfaraz & Firouzmandi, 2009) "The architecture of these palaces and its surrounding view, was designed as structures with open landscape and had open view from all sides and surrounded by the vast gardens" (Stronach, 2000) The buildings of this complex are composed of two pavilions and two palaces. Combination of hypostyle iwan and hall has first seen in Pasargadae complex. Later, this common pattern was named Apadana. Apadana was made of a central hall and four hypostyle iwans. Entrances to the central hall were placed in the middle of all longitudinal sides of the iwans. In

addition, this space has two square rooms at the endpoints of a longitudinal side and circular columns.

APADANA ARCHETYPE IN SUSA

The ancient Susa, capital of the Elam Empire, is located on the current path of Andimeshk (a city in Khuzestan Province) to Ahwaz (capital of Khuzestan Province). The importance of this archeological area is more dependent on seeing the old time of Iran in its four hills; Apadana, Acropol, Royal city and Craftsmen city." Apadana Palace is the most outstanding building, which is remained in this area from the Achaemenid era. It was built by the order of Darius the great on the hill with the same name. (Sarfaraz & Firouzmandi, 2009) This building built on an artificial platform, was similar to the Apadana archetype in Pasargadae. There were three hypostyle iwans around a central hall, and two small square rooms at the north and east corners. Furthermore, the central hall has 36 columns and also, every hypostyle iwan has 12 circular stone columns.



Figure.8 Ancient Hills of the Susa (Sarfaraz & Firouzmandi, 2009)

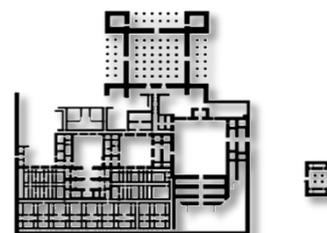


Figure .9 Plan of the Susa Palace (Authors, 2013)

APADANA ARCHETYPE IN PERSEPOLIS

Darius decided to build another capital in Persepolis, his native land. So, they began to build a huge and magnificent building on the hillside of the Rahmat Mountain, which were situated in vast plains of Marvdasht, in the center of Fars and has a history of seven thousand years and ancient civilization. Persepolis was a ceremonial capital and palace that Achaemenid Empire inhabited there in times of peace and comfort, in late winter and early spring while celebrating Farvardegan. In the rest of the year, they gathered in Ecbatana, the ancient capital of the Median Empire in summer, and in Susa or probably Babel in winter. (Ghirshman, 2011) Apadana Palace or Palace of Darius the great was the most significant palace of Persepolis.

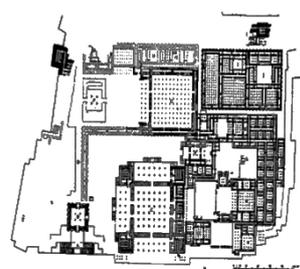


Figure.10 Plan of the Persepolis (Sarfaraz & Firouzmandi, 2009)

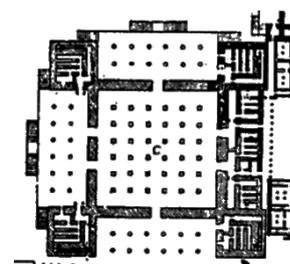


Figure.11 Apadana in Persepolis (Sarfaraz & Firouzmandi, 2009)

This palace was placed on top of the Persepolis platform. Pattern of this palace is similar to the Apadana in Pasargadae and Susa and has hypostyle hall and iwan. Its central hall has 36 square stone columns, while each iwan situated in three directions of the east, west and north has 12 stone circular columns. There were also some rooms and corridors in the four corners of this space.

open space with a central small pool was placed in front of the entrance iwan (western iwan). In addition, two hypostyle halls were built on the eastern side and so, this space has become like a traditional iwan. The next phase is adding a loggia or twenty-column hall with a gable roof in the eastern part of the building. (Hillenbrand, 2010)

CONTINUITY OF THE APADANA ARCHETYPE IN THE ISLAMIC ARCHITECTURE

In the Islamic architecture of Iran, great palaces which are in a fairly good condition have remained only from the Safavid era. Similarity between the Safavid and pre-Islamic palaces of Iran (Pasargadae and Susa) is the dominance of the gardens. (Hillenbrand, 2010) This point is also observed in some Safavid palaces like the Chehel Sotoun and Ayeneh Khane. Among these palaces, evolved pattern of the Chehel Sotoun is similar to the Apadana archetype. This palace is located in the western part of the Safavid Daulat Khaneh (government house) and used as a royal hall. The Chehel Sotoun Palace is built in three phases of following construction: This building is a rectangular hall in its original form that is covered with three domes. Four rooms are located in the four corners of this place. There are also two iwans in order to access the central hall. Secondly; a large

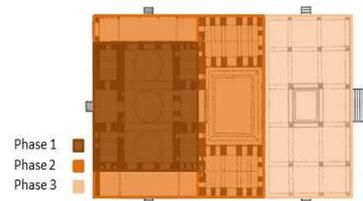


Figure.12 Construction Process of the Chehel Sotoun Palace (Authors, 2013)

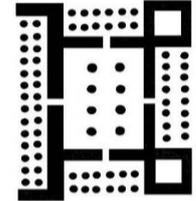
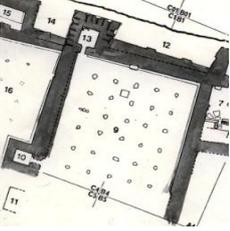
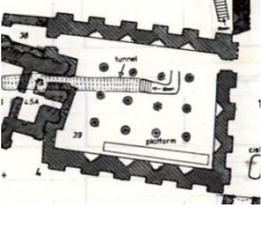
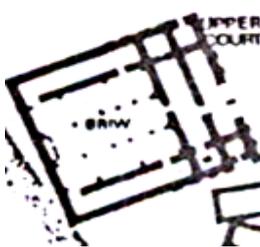
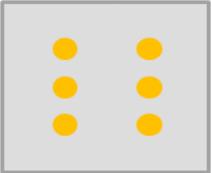
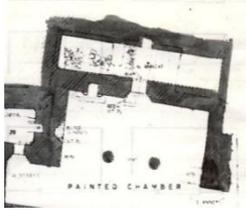
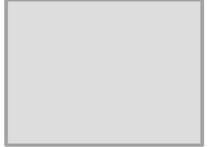
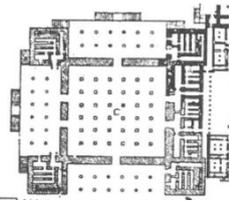
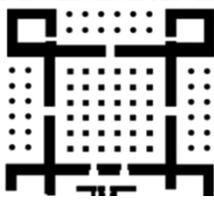
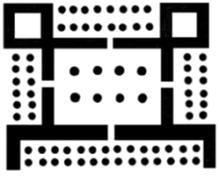
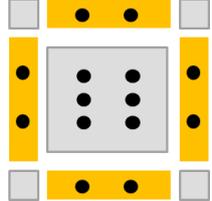


Figure.13 Apadana in Pasargadae (Authors, 2013)

CONCLUSIONS

Apadana archetype is one of the structural experiences of space in the Iranian architecture which was continued and evolved over the years. This pattern is the successful result of combining hypostyle hall and iwans.

Table 1- Evolution of the Apadana Archetype (Authors, 2013)

Median Architecture		Urartian Architecture		Original pattern	
					
Godin Tepe	Nosh-i Jan Tepe	Tepe Hasanlu	Hypostyle Hall Pattern		
			Hypostyle Iwan Pattern		
	Baba Jan Tepe				
Achaemenian Architecture					
					
Persepolis	Susa	Pasargadae	Apadana Archetype		

Hypostyle hall that gets its origin in architectural traditions of the local Iranians has been remained in the Urartian architecture in Tepe Hasanlu Median architecture by affecting this local architecture has succeeded to establish hypostyle halls in some hills, like Godin Tepe and Nosh-i Jan Tepe. Perfection and excellence of these hypostyle halls were observed later in the Achaemenid architecture. Other space is hypostyle iwan that firstly emerged in the Median architecture as two-column iwan and spaces around a central

hall in Nosh-i Jan Tepe. So, it can be concluded that the composition of hypostyle hall in the Urartian architecture and hypostyle iwan in the Median architecture has made the Apadana archetype in Pasargadae. Later, the Apadana archetype was evolved and continued in Susa palace and Pasargadae. This pattern is also followed in the Islamic architecture, especially in the Safavid palaces, like the Chehel Sotoun Palace.

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