THE FORM AND CONTENT IN THE ARCHITECTURE OF THE YEMENI TEMPLE GATE: THE GATE OF THE BARAN TEMPLE IN MA'RIB AS A MODEL

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Research Article

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ABSTRACT: Architecture has been considered one of the most expressive means for humans since the beginning of settlement. It carries two aspects, one of which is physical, which is the visible and tangible form. The other is non- physical, which is the intellectual content that the form reveals. Yemeni architecture in general and the architecture of temple gates in particular were shaped by the local environment and social culture. The Yemeni person tried to express his visions, beliefs, and perceptions in a unique architectural form that is distinct from others in an embodied and abstract form. The current research attempts to investigate the content that the architectural form of the Yemeni temple gates carried in form and details. The research focuses on tracing the relationship between the idea and the symbol of portal architecture from the stage of embodiment to the stage of abstraction. The research relies on descriptive and analytical approaches and comparative approaches to compare the gates with their counterparts in the kingdoms of ancient Yemen to determine the similarities and differences the extent of influence between the kingdoms. It aims to analyze the architectural form of the gate in a comprehensive and detailed manner to identify intellectual sources. The study reached an understanding of the architectural form of the temple gates and their contents. Yemeni thought was characterized by integration in embodiment and abstraction. The Yemeni architect turned to signs and symbols in order to give the form the character of embodiment through abstraction, while preserving the main features of the inspired form.

KEYWORDS: Architectural Form, Temples, Yemeni Architecture, Gates, Sheba, Ancient Yemen.

INTRODUCTION

The old Yemeni architecture as the spinal column represents the architecture of the Arabian Peninsula, with rich experiences, large capabilities, and its local environment. The six columns of the temple gate were represented in Marib, the so-called most important architecture of Yemen. It is an icon telling Yemen's history, such as the pyramids' history of Egypt and the portal of Babel's history of Iraq. The architectural gate, which is formed from several columns, had only four, six, and eight. It has become a symbol of the Yemeni kingdoms, which flourished in the second and first millennia B.C.

The columns of Yemeni temples are the largest witness to a building that has technical and highest-grown characteristics. They are more exercised and maintained because they are cut from alone stones and weigh several tons. Anyone cannot uproot the columns from archaeological sites and use them in new buildings. The truth is that the ancient Yemeni are linked to columns and monuments, where the beginning of the columns is rooted in the prehistoric period [1]. The columns called "Qaif" were set up as a domain for the protection of land and property limits [2].

The study addresses the architectural icon of gate columns in terms of the form, the fabrics, and the contents. They are not interested in the architects, ethnic and historical only, but are interested in all Yemeni categories and persons. Hence, previous studies related to the subject of research must be exposed to identify aspects that the present research must continue.

One historian believes that ancient Yemeni thought was characterized by its verticality. It is always oriented vertically in both material and non-material cultural products. In the Musnad script, vertical lines separate the words. One of the ancient linguists likened the letters of the southern writing to columns and pointed out that the ancient Yemeni mentality tended towards columns in the architecture, and it was reflected in the writing. Another one of the ancient linguists pointed out the
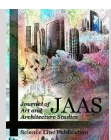
impact of ancient Yemeni architecture and the columns on the form of the geometry of Musnad letters [3].

Munir Al-Ariqi believes that the design of the ancient Yemeni temple, especially the external form of the architecture, is what the ancient Yemeni artists drew from, as they inspired the form and embodied it in all types of decorations that they used in other arts. The artists inspired most types of shapes of incense burners, most types of column capitals, especially conical ones, and various types of offering tables that were identical to the design of the temple in the facades and details of the decoration [4].

Christian Darl argues that the offering tables that were used in ancient Yemeni temples are only a miniature model of the form of ancient Yemeni temples. The ornamentation and decorations found on their facades are similar to the decorations used in ancient Yemeni temples [5]. On the other hand, Ali Tueaiman's study of the stone columns of the Kingdom of Sheba and the temple of Yaha in northern Ethiopia noted that the columns of the temple gates carried religious and cultural symbols and connotations that were prevalent in the civilization of the Kingdom of Sheba) [6].

The research problem

Architecture and its development represent a measure of the extent of the prosperity of civilizations. It was the truest means of human expression of ideas and beliefs. It has two dimensions, one of which is material, which is the apparent form, and the other is non-material, which is the essence or intellectual content. Yemeni architecture in general and the architecture of temple gates in particular were shaped by the local environment and societal culture. In which the Yemeni people tried to express their beliefs in unique architectural forms.

The studies that discussed the subject of temple architecture and the architecture of temple gates were descriptive archaeological studies. They did not pay attention to the artistic and intellectual aspects of the architectural form of temples, nor to the gates and their columns. They did not attempt to delve deeply into the motives and reasons that made the ancient Yemenis sanctify this form and repeat its construction in a unified style in all temples on the lands of Yemen. This clearly indicates that it represented a sacred thing that could not be changed or altered. Accordingly, the research problem is the presence of ambiguity in knowing what the architectural form of the ancient Yemeni temple gate

and its columns holds and contents, which have become a Yemeni symbol for the state, society, and history of Yemen.

Research objectives

Perhaps the lack of in-depth knowledge of this architecture led to ignoring and omitting its reality and searching for its entity out of place. This research goes beyond the concepts and formal characteristics of architecture by identifying its content and meaning. It aims to trace the gate design of ancient Yemeni temples to know their formation, functional, and structural architectural characteristics. It targets determining the sources of the architectural form and knowing the significance of the origins of the artistic forms influenced. In addition, it attempts to know the content, which is the architectural form of the gates carried. It focuses on tracing the relationship between the idea and the symbol of the form from the stage of embodiment to abstraction.

METHODOLOGY

- The study relies on a qualitative method to collect the information required for the study. It depends on collecting information from previous historical, archaeological, and architectural sources, as well as going to the research field for taking pictures and draws the plans. Field visits were also made to some Yemeni museums to obtain artistic pieces for analysis and comparison. In addition, the research relies on the following approaches: The comparative approach should be used to compare the temple architecture and gates with their counterparts in the Yemeni kingdoms to identify similarities, differences and to find out the extent of influence between the kingdoms.

- The analytical and descriptive approach should be used to analyze and draw a clear picture of the architectural characteristics of temple architecture and gates, as well as to analyze and compare the types of artistic production.

- An analysis of the architectural form of the cubic-shaped temple gate, from which the front of the gate protrudes from one of its sides. A comprehensive and detailed structural analysis of the gate and its columns to know intellectual sources in the embodiment and abstract forms.

Temples in ancient Yemen

Temples in ancient Yemen were considered houses of the gods. They were mentioned in Musnad inscriptions with the word "house," which means the house of the god. The temple is a building that contains the activities and rituals of worship. It represents the residence of the god and the ideal

place for manifestation. The temple consists of a main part (the sacred) which is considered similar in all the kingdoms of ancient Yemen. The sacred is designed in the shape of a rectangle with a gate protruding from one of its sides. Several columns support the roof. In special cases, these columns were not found, and they were only shrines. The courtyard differed from one temple to another and from one kingdom to another. It was of two types: either an open courtyard with corridors or a roofed one with several columns supporting the roof [4]. The plan of the temple is a rectangle from one side of which the gate protrudes axially with the holy of holies, which usually consists of three rooms and a central courtyard surrounded by porticos (Figure 1), or an offering table located at the top of the central courtyard surrounded by porticos (Figure 2). This model was generally used in planning temples. The temple's structural system relied mainly on columns, which were carved from a single stone to support the roof beams. The beams were fixed to the columns in an interlocking manner, and a protrusion emerged from the top of the column, carving out a place for it in the roof beams.
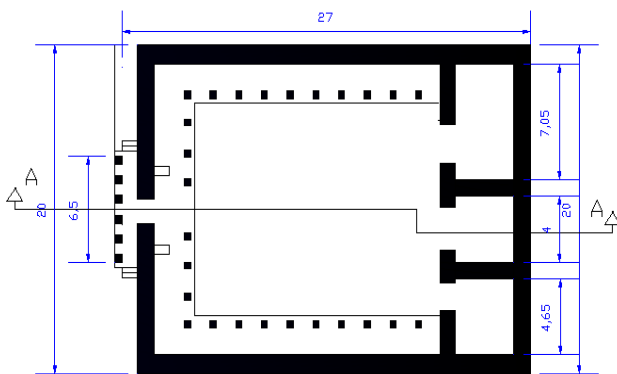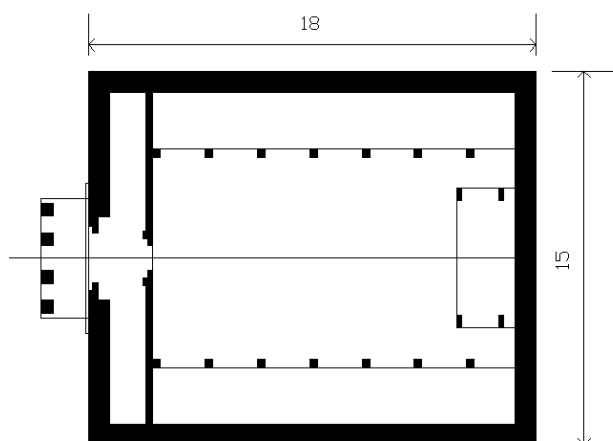

Figure 1. The temple of Wad Dho Masmam [7]

Figure 2. The temple of Athtar in Ma'in [7]

The temple generally consists of the following main elements:

The holy of holies: It represents the main architectural space in the composition of the temple. Its design differed according to the type of rituals that were being held and according to the type and number of gods to whom the temple was dedicated. It varied and developed over time. It consisted of an altar located in the center of the holy place. Then it consisted of three rooms located at the end of the axis of the temple, and then it combined the previous two types.

The courtyard: It is an architectural space located between the gate and the holy of holies, which is surrounded by porticoes whose roof is supported by columns. The courtyard is considered one of the main components of temples. The courtyard plays another functional role as part of the space for worship and the performance of rites and rituals [4]. The gate: The design of the gate in the temples took a unified pattern, as there is a main entrance to each temple, which is the only entrance. Sometimes the temple has more than one secondary entrance. It should be differentiated between two types of gates: the sacred temple gate and the sanctuary gate. The sacred temple has one gate fronted by a row of columns, on which the current research focuses.

Temple gates

The gate has a rectangular shape protruding from one of the temple sides. The gate is preceded by a row of columns that differ in number from one kingdom to another. In the Kingdom of Sheba, there are six columns except for the gate of the Awam temple, which consists of eight columns. In the Kingdom of Hadhramaut and the Kingdom of Ma'in, there are four columns. The gate is roofed with stone lintels extending over the tops of the columns that precede the gate. Then beams are placed perpendicularly over the lintels of the columns and the wall of the temple. This causes the shape to appear with a gradual slope backwards, resulting from the height of the columns from the wall. Therefore, the gate appears tilted backwards in the facade and section (Figure 3).

The design of the column row that precedes the temple has developed in terms of the dimensions and the formation of the components and structural elements. The column with a square or rectangular cross-section, which is without a capital, is the oldest type of column (Figure 4). It later changed and developed to include the crowns and bases [8]. In

general, the column consists of three parts: the base, which supports the column. It was made up of finger-like stones in which several centimeters were drilled according to the cross-section of the column. The body was transformed from a single stone column with a square or rectangular section. Then it developed because of the presence of ribs on the body. The capitals were developed without a capital, and then capitals began to appear as part of the column body, such as the columns of the temple of Baran.

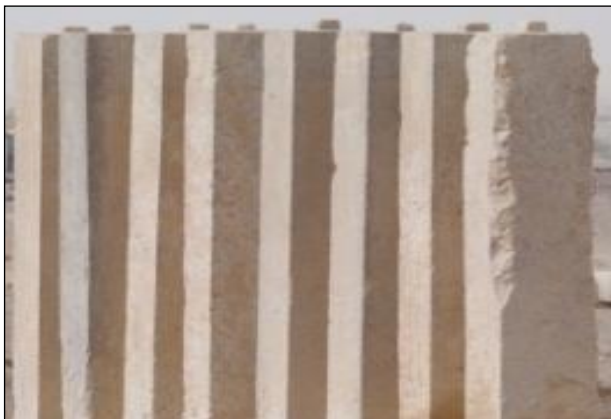**Figure 3.** The gate columns of temple of Ma'in [7]

Figure 4. The gate columns of the temple of Awam (Author)

Form and content in art formations

The study focuses on the Yemeni temple gate with a view to tracking the assets of architectural elements and fabrics that stand behind the form. The seeds of art formations and primary models are required to understand the form and content. There is no doubt that the environment is one of the sources of the configuration world through which they can go deep in detecting facts. The environment and its elements have affected the validity of Yemeni human beings. They looked impressed by their characteristics of superiority over humans and related them to the metaphysical world.

The Yemenis have used animal symbols and sometimes members of them as horns since the beginning of the 3000 B.C. in more than one scene showing the ibex horns or bull horns. The ibex received the greatest share of attention from Yemenis because they saw in its body and members holiness. In the era of kingdoms, it became the most commonly used icon in art formations and architectural elements. It has emerged as an art language in the three-dimensional formations and abstraction at the beginning of the 1000 B.C. in Al-Jawf and Marib [9]. The wide spread is due to its use as a symbol of the god in all Yemeni kingdoms, which represents the Venus planet [10]. The Yemenis have been careful and skilled in all situations. It was embodied in its role in protection, where it sits on rectangular bases (Figures 5- 6). In fact, what ancient man built was a reversion to represent the original works. Each building was a pattern of a universe, which became the optimal model, and all its constructive building was only repeated [11]. The assets telling the beginnings of things as agriculture, writing, buildings, and most of what man is doing and practicing simulate what the gods did. Every action is done by man, who is equivalent to primitive models for most activities in the life of society [12]. The ritual tools and offering tables used in Yemeni temples as a means of performance and worship represent a kind of physical and thought product. They were used for religious goals and were closely related to visions and beliefs. The offering tables were presented to the god as a witness to the presenter. They are placed after being submitted to a temple. The symbolic function lies in its form and design, so that all of them are produced in specific patterns [7].

The ritual tools are designed with different types and shapes, including a table used for fluid water and blood. Its design is in a cube, which has two types as its prominent front: the first type is either a bullhead or two bullheads on one of its sides (Figure 7). The second type is a form that has a prominent introduction on one of its sides from the ibex's rows and on its upper surface basin. There is no bank to remove fluid, indicating that they were not used for liquids. Its actual function was a symbolic function (Figure 8). Another type of table simulates the form of the temple (Figure 9) and features the last type of table as rich in decorations covering their four aspects, including decorations of Yemeni temples, doors, and windows [4].

Figure 5. Votive panels with Ibexes Row formations (Author)

Figure 8. The offering table with a Row of Ibexes (Author)

Figure 6. Panels with Ibex embodiment (Author)

Figure 9. The offering table model of temple (Author)

RESULTS AND DISCUSSION

The gate of the Baran temple in Ma'rib as a model

Baran temple is one of the ancient Sabaean temples, located on the southern side of the ancient city of Ma'rib, about 2.7 kilometers away between agricultural fields. The oldest mention of the temple dates back to the tenth century B.C. The temple includes several architectural facilities that were used as workshops for artistic works and rooms for worship. The temple was used from the beginning of the first millennium B.C. until the centuries A.D. [6].

Figure 7. The offering table with bulls and two heads (Author)

The sacred temple was designed in a cubic shape, with the gate protruding from the western side. It was built on a gradually raised terrace that reached the level of the gate, which was formed by six columns by means of a staircase. The temple has a large courtyard with a corridor of stone columns on three sides. The courtyard is entered through three entrances on the western, northern, and southern sides.

The six columns that front the gate of the Baran temple are considered the highest stone columns in ancient Yemen. Each column was cut from a single stone, and its height reaches 8.2 meters. The cross-sectional area of the column changes with height, and it tilts slightly backwards with increasing height [6].

A) Architectural Form from Embodiment to Abstraction

Architecture has a symbolic communicative function between man and his surroundings. On the other hand, humans use architecture to express their culture and beliefs through architectural elements. Form has been the primary means of communication between humans throughout history. Expression in form represents the reality of communication, and the meaning of form, if abstract, lies in the act of communication and similarity. It is clear by comparison that the form of the Yemeni temple is very similar and identical to the shapes of the offering tables (Figures 10-11). There is no doubt that they are models of the temple's design. The shape of the temple is a cube with the gate prominent in its front, embodying a row of ibexes in the three-dimensional model.

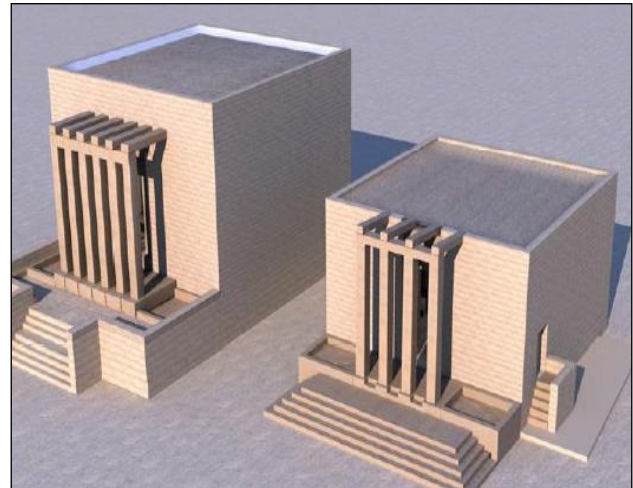**Figure 10.** An offering table embodies the shape of Yemeni temple [7]

Figure 11. The models of the Nekrah temple resemble the offering table [13].

Therefore, the shape came to meet the visions and beliefs. This shape represented the typical model that the Yemeni architect adopted, repeated, and copied in all regions and at all times. It is proposed that the ancient Yemeni architect stuck with the form and did not try to change it because this form carries philosophical concepts and visions. It was a rectangular shape, from which emerged a rectangular front that was symbolically employed by a row of ibexes to symbolize divine protection, as the ibex is a symbol of the god who protects buildings.

B) Form and Content of the Baran Temple Gate

In fact, there is no function of the columns in the gates of Yemeni temples for improving and facilitating the process of entry and exit. If the aim was purely functional, two columns carrying the roof of the gate in order to protect it from the sun and rain would have formed the entrance. The distance between the columns would have been relatively large to allow passage through them, or the distance between the two central columns of the six columns would have been large in order to make movement easy and allow a person to enter and exit comfortably and easily.

The distance between the columns is approximately equal for all temple gates, which reflects the symbolic and expressive function. When comparing the offering table (the model of the temple) and the gate of the Baran temple (Figures 12-13). It becomes clear that the columns in front of the gate are only an abstraction of the row of ibexes, especially the legs of the ibexes. The rest of the ibex body was embodied abstractly. The horizontal beams were placed on the columns, and the frieze embodied the faces of the ibex. The beams graduated

backward embody the curvature and knots of the horns (Figures 16-17). Therefore, every two columns in the gate are two legs of a single ibex. The gate preceded by eight columns is an embodiment of four ibexes the gate preceded by six columns is an embodiment of three ibexes and the gate preceded by four columns is an embodiment of two ibexes.

Baran temple were erected. In addition, the sections of the columns of the temple gate gradually decrease in thickness from top to bottom, and the straightness of the columns at the top tends backwards (Figure 15). This is to mimic the legs of the ibex's row in that they bend backwards and change the thickness of the cross-section of the legs and this is evident in the three-dimensional representation on the offering tables.

Figure 12. Front Façade for Offering Table Explains the Legs of Ibexes Row (Author)

Figure 14. Embedding and Decline to the Platform under the Ibexes Row (Author)

Figure 13. The Gate Columns of Baran Temple – Five and the Sixth Broken (Author)

Figure 15. Decreased Column and Bending Back the Gate of Baran Temple [7]

It is noticeable in the offering tables, or what can be considered models of temples, that rows of ibexes usually stand on a high-tiered platform (Figure 14). It can be seen in an abstract form in the tiered platform on which the gate and columns of the

It is logical for the ancient Yemeni architect to try to embody the ibex's horns on the gates, but construction laws and structural forces were an obstacle to achieving that. In addition, the building material itself, represented by stones, had the most important role. The architect resorted to abstracting some architectural elements of form to achieve the

idea and content to express the visions and beliefs. He erected the ceilings of the gate to decrease in height gradually as they moved backwards. Therefore, the rear thresholds became lower in height than the front thresholds to achieve the curved and arched shape of the ibex horns, which tilts and decreases to the back in an abstract way to serve the idea (Figures 16-17).
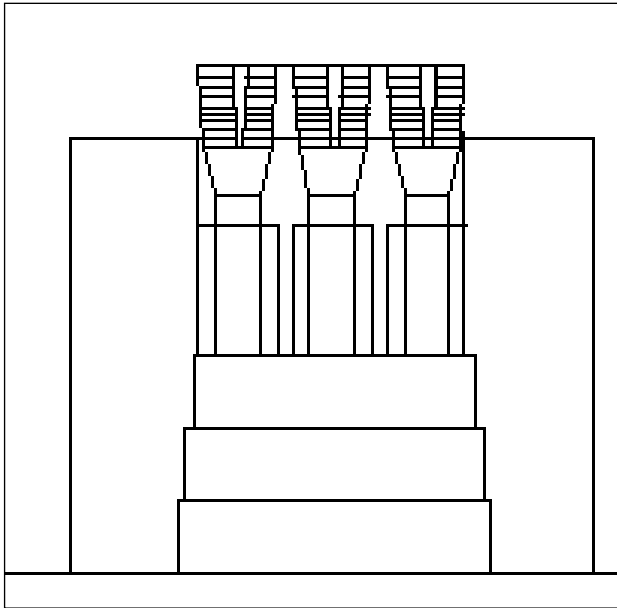

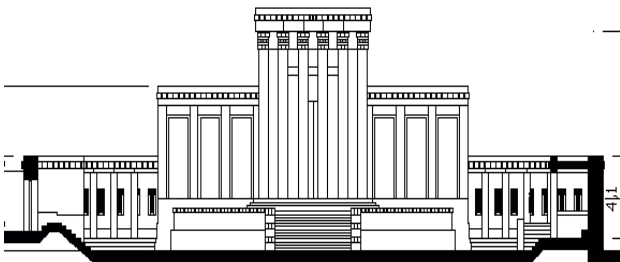**Figure 16.** Façade of the offering table (Author)

Figure 17. Imagine façade and section from courtyard of the Baran Temple (Author)

CONCLUSION AND RECOMMENDATIONS

The study dealt with an important topic related to Yemeni history and heritage. It focused on studying the architectural form as a vessel containing intellectual contents in the gates and columns of Yemeni temples, which have become a national symbol of Yemen par excellence.

The gate of the Baran temple in the ancient city of Ma'rib was adopted as a model. The study concluded with a set of results as follows:

• The study concluded that the formal structure of the ritual materials was in specific stereotypical shapes, which confirms that they are the embodiment of intellectual visions and perceptions. They were used for symbolic purposes and were presented by the worshiper to the worshiped as embodied symbolic gifts.

• It was concluded that every two columns in the gates of Yemeni temples represent two legs of a single ibex in an abstract form. The gate with six columns consists of three ibexes, the gate with eight columns consists of four ibexes and the gate with four columns consists of two ibexes.

• The ancient Yemeni were distinguished by adopting intellectual integration in the structure of form and content through embodiment and abstraction in an attempt to clarify visions and perceptions. The architect turned to symbolic and abstract suggestions in order to remove the characteristic of frank, superficial expression through abstraction while preserving the main features of the form that was inspired.

• The ancient Yemeni architecture was characterized by harmony and compatibility between form and content in the process of embodiment and abstraction. The characteristics of form embodied in the architectural masses and the structural and formal characteristics of the symbol were consistent with the essential characteristics of the content and thought values.

• The artistic characteristics of ancient Yemeni architecture were characterized by the use of horizontal lines for architectural formation in ceilings and horizontal decorative formations, while the use of strict and strong vertical lines in columns and walls.

• The study recommends preserving ancient Yemeni architecture because it represents a cultural heritage. It gives society belonging and connection with cultural history and generates a sense of familiarity, and aesthetic emotion and strengthens national identity.

• The study emphasizes on architects the importance of inspiration from the urban heritage of Yemen, deducing the intellectual foundations produced by architectural styles and adapting them to the spirit of the times to produce modern architecture that expresses the spatial and cultural specificity.

DECLARATIONS

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Competing interest

The author declares that there is no competing interest.

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