

Search for the most Widely Used Components of Regionalism in the Works of Regionalist Female Architects; Pahlavi Era*

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ABSTRACT

Modernity arrived in Iran in the Pahlavi era and the prevalence of international style has led to the neglect of the identity of Iranian architecture. However, some architects have tried to preserve the authenticity of Iranian architecture in their works in alignment with the flow of modern architecture and have formed architecture according to the principles of regionalism. The present study aims to investigate which components of regionalism were most used to preserve the identity of Iranian architecture by female architects in the Pahlavi period. The main research question is, "What was the most used component of regionalism to link modern architecture and Iranian architecture in the works of female architects of the Pahlavi era?" The research focuses on the female architects' works published in the Magazine of Art and Architecture in 1975. The statistical population includes female architects' works including the identity of Iranian architecture. Since female architects of the Pahlavi era have been not well known in the history of architecture, studying and analyzing their works bring valuable and novel results in contemporary Iranian architecture. This makes such a study necessary. The present study is qualitative research carried out using historical-interpretive and descriptive-analytical approaches. The data are collected through library studies and then, analyzed through coding and case studies. The results indicate the use of geometry and proportions applied in Iranian architecture, climate compatibility, and the use of national elements are among the most widely used components of regionalism to link modern and Iranian architecture in the works of female architects of the Pahlavi era.

Keywords: Female Architects, Regionalism, Gender, Pahlavi Architecture, Contemporary Architecture.

* This article is derived from the first author's dissertation entitled "Investigation and Analysis of the Role and Position of Female Architects in Forming the Contemporary Architecture of Iran (1941-1978)", defended under the supervision of the second author and the advice of the third author in the Faculty of Architecture and Urban Planning, Islamic Azad University, Qazvin Branch, in 2020.

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1. INTRODUCTION

The years 1921 to 1941 can be considered the period during which fundamental changes occurred in the social and political history of Iran, due to the influence of the rapid progress in the West in various fields (Mokhtari Taleghani 2011, 29). Also, the beginning of modern architecture in Iran coincided with the beginning of the Pahlavi dynasty, and all the buildings built in Iran until 1941 are considered the first architectural developments in Iran (Bavar 2009, 59). The Pahlavi kings wanted to form a modern and western country to consolidate their power and change the face of society. To this end, they made reforms some of which were related to "female issues" to change the social face of women as an image of a modern state. For example, one can refer to the reform of "encouraging women to have social, political, cultural, and educational participation and undertake professional jobs (Tabibi 2014, 22). On the other hand, Iranian architects often founded buildings with architecture compatible with Iranian identity and culture. The present study aims to identify those components of regionalism most used to preserve the identity and authenticity of Iranian architecture in their modern works by female architects in the period during which modernity arrived and the international style emerged in Iran, before the formation of postmodern philosophy in the world. The main research question is, "What was the most used component of regionalism to link modern architecture and Iranian architecture in the works of female architects of the Pahlavi era?" To answer the question, the present study applies the approach of regionalism in architecture and its criteria to analyze architectural works.

"Regionalism is an analytical perspective prioritizes the specific identity of the region over the general global characteristics by emphasizing the preservation of the specific characteristics of the place" (Tzonis 2003, 10; Bayzidi et al. 2013, 2) and links the effects of global civilization with the special characteristics of a place (Bayzidi et al. 2017, 18). In

regionalism, the architect uses the cultural, climatic, and geographical characteristics of the region in the creation of architectural works to form a sense of place in his works (Mahdavinejad and Jafari 2013, 90). The regionalist architecture dates back to ancient Greece. "In their colony control policy, the Greeks used architectural elements to show the identity of a specific group in the region". In the 19th century, the term regionalism became one of the main theories of architectural criticism, and according to it, architecture should be built based on the specific characteristics of the place, such as climate, geography, vernacular materials, and traditions. In the modern era, the emergence of the industrial revolution, the formation of functionalist architecture, and the unification of architecture in the world led to the ignorance of cultural and social values. In Third-World countries, this problem was raised as a vital issue to preserve the cultural identity of the country's residents and create diversity in modern architecture (Mahdavinejad and Jafari 2013, 114). Although the arrival of modernity in Iran coincided with the Pahlavi period, the issue of identity has been emphasized in the international conferences on architecture held during this period.

The research background can be presented in two parts: 1. The study of the role of women in the architecture of the Pahlavi era; and 2. The study of regionalism in the Pahlavi or contemporary era.

Regarding the role of women in architecture, one can say that the female architects of the Pahlavi period have remained unknown in the history of Iranian architecture so far, and this topic has been just addressed in a study entitled "Investigating the Role of Women Architects in Contemporary Iranian Architecture (1941 to 1968)" by Sanaz Khanbanzadeh et al. (2020). The results indicated that female architects in the Pahlavi era influenced the academic field and were influenced in the professional field (Khanbanzadeh 2020).

Regarding regionalism, the research background is as follows.

Table 1. Research Background on Regionalism in Architecture, 2019

No.	Research Title and Date	Author	Discussed Items
1	Application of Regionalism in Contemporary Iranian Architecture (Faizabadi 2016)	Mahmoud Faizabadi and Maryam Tousi	This article analyzed regionalism in the architecture of developing countries and provided solutions for regionalist design.
2	Investigation of Regionalism in the Pahlavi II Architecture (Hosseinnejad Karazma 2018)	Zahra.Hosseinnejad	The architects of the Pahlavi era tried to use the components of regionalism to connect the design context and their designs.

No.	Research Title and Date	Author	Discussed Items
3	Globalization and Regionalism in Contemporary Architecture (Bayzidi et al. 2017)	Iraj Bayzidi, Qader, Iraj Etessam, Farah Habib, and Sayyed Mostafa Mokhtabad Amiri	The results indicated that there is an interaction between globalization and regionalism, the result of which is the formation of a kind of linking architecture and region-global interaction in contemporary architecture.
4	Explanation of Regionalistic Viewpoints & their Evolution in Contemporary Architecture (Bayzidi et al. 2013)	Bayzidi, Qader, Iraj Etessam, Farah Habib, and Sayyed Mostafa Mokhtabad Amiri	This article explained the evolution of dominant regionalism approaches over time, which are defined in the form of physical, ecological, and semantic approaches.

Also, in the present study, there is no research hypothesis, because it uses historical-interpretive and descriptive-analytical methodology using which results are obtained based on the findings and analyses carried out in the research process.

2. METHOD

The present study is historical research on the works of female architects in the Pahlavi period. It uses a combination of historical-interpretive and descriptive-analytical methods and the required data were collected through library studies. To this end, first, the primary information about the works of female architects of the Pahlavi era was collected by reviewing journals, books, and studies published in the Pahlavi era and the theoretical foundations were developed. Next, according to the theoretical foundations, the findings were analyzed using open coding, and then, investigated in the case studies as follows. After examining the research data, common themes were extracted as codes, and then, they were used in the analysis of sample works of regionalist female architects of the Pahlavi era. Finally, the results were generalized to the whole population. The statistical population included the works of female architects in the Pahlavi era, which were presented in the Magazine of Art and Architecture. Investigating the works of these women indicates that their works follow two different styles. A group of female architects completely applied the principles of modern architecture in their works while another group, in their modern works, sought to preserve the identity and authenticity of Iranian architecture and to link modern architecture with Iranian architecture, which is something other than the architects' claims published in the Magazine of Art and Architecture. As a result, in the present study, the sample is limited to the works of female architects who considered Iranian architecture in their works. It includes 6 female architects such as Noushin Ehsan, Leila Farhad Motamed, Keyhandokht Radpour, Mina Samiei, Shahrzad Seraj, and Nasrin Faqih.

3. RESEARCH BACKGROUND

- Definition of the region: The term region means district and area. Regional characteristic refers to a place-based characteristic and it is a word implying geography. A region is a vast area characterized by cultural and natural criteria such as climate, terrains, cultural areas such as specific lifestyle, way of conversation, how materials are used in construction, and architectural styles (Bayzidi et al. 2013, 9; Canizaro 2007, 18).

- Definition of regionalism: Regionalism is a theory whose main approach is to reconcile the effects of global civilization and specific local characteristics. The goal of regionalism is to create diversity while taking advantage of global benefits (Bayzidi et al. 2013, 14). Climatic issues, cultural and social conditions, and local values are among the issues considered in regionalism (Bayzidi et al. 2013, 9). These characteristics finally give the architecture "flavor" and create a sense of place in the architectural work (Schultz 2003, 149).

- Regionalism in architecture: Regionalism is an attempt to return what modernism removed from architecture, in other words, it is an attempt to maintain and create continuity between the present and past building forms in a given place (Abel 2008, 301). In architecture, regionalism is an approach that is formed to deal with the uniformity of modern architecture, and at the same time, it originates from modern architecture. That is, the architect uses modern materials in his works while applying the features of the place such as climate, culture, tradition, and local values to preserve the identity of the region, making the spirit of the place be seen in modern architecture and the uniformity of modern architecture be lost (Mirmoghtadaei 2004, 46).

- Regionalist theoreticians' views and thoughts: Theorizing regionalism begins with the ideas of Vitruvius. However, it was put forward in the form of a theory in early 1925 by Louis Mumford (Akbari et al. 2017, 332). According to Mumford, "regionalists try to link regional characteristics with global components such as technology and

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critical thoughts" (Faizabadi 2015). In his point of view, there is an interaction between regional and global issues. He used the thought of Martin Buber, a German philosopher. According to Alexander Tzonis, regionalism only aims to create diversity and difference while taking advantage of global benefits, and in critical regionalism, architecture should evoke meaning, not feelings and emotions (Faizabadi

2016). In his point of view, regional architecture has been created by a distinct tradition that accepts local ecological and living conditions and vaguely criticizes global architecture (Bayzidi et al. 2013, 9). In their study, Bayzidi et al. have presented a table to express the opinions of regionalist theorists, as briefly revealed in Table 2.

Table 2. Theorists' Views and Thoughts of Regionalism

Theorist	Views and Theories
Vitruvius	* Introduction of regional architecture as an indicator for specific group identity in "Ten Books on Architecture".
Lewis Mumford	* Regionalism is in line with modernization and has a meaning beyond the physical attention to distinctive features of a place.
Alexander Tzonis	* It is an approach to design that prioritizes the specific identity of the region over the general global characteristics.
Liane Lefaivre	* Architecture should reflect relative characteristics and be independent of the affective views of the region, tradition, and history.
Kenneth Frampton	* Reconcile and balance the effects of global civilization and local characteristics
Schultz	* Give the architecture "flavor" and create a sense of place
Chris Abel	* It is an attempt to maintain and create continuity between the present and past building forms in a given place
William Curtis	* Authentic (modern) regionalism, attention to place and technology, the combination of modern teachings and local tradition. * Inauthentic regionalism, historical additions on a modern shell.
Ken Yeang	* Establish a bridge between technology and culture.
Canizaro	* Regionalists try to link regional characteristics with global components such as technology and critical thoughts
Ozkan	* What was opposed by regionalist architects is not modernism, but the tendency towards international style.
Colquhoun	* Emphasize the need to pay attention to the cultural, geographical, and climatic characteristics of a specific region

(Bayzidi et al. 2013, 11)

3.1. Criteria and Components of Regionalism

Regionalist architecture has 5 main characteristics as follows:

- Vernacular materials: the use of vernacular materials used in Iranian architecture in the past, such as bricks (Akbari et al. 2017, 335). However, modern materials have been sometimes used in regionalist buildings, but the purpose of regionalist architecture was to establish interaction between modern and local architecture (Foroutan et al. 2013, 335).
- Vernacular construction: construction technologies applied in Iranian architecture in the past, such as vaults, domes, etc.
- Having regional or national elements in architecture: the use of architectural archetypes applied in Iranian architecture in the past, for example, central courtyard pattern, porch, vault, etc.

- Climate compatibility: the building form is created compatible with the climatic conditions of each region, such as the use of gable roofs in rainy areas
- Geometry and proportions of vernacular architecture¹: the use of geometry and proportions that have been frequently seen in the plans and facades of buildings based on Iranian art (Akbari et al. 2017, 335).

3.2. Theoretical Framework

In the present study, to analyze the works of some regionalist female architects of the Pahlavi period, regionalist female architects and their works were first introduced. Then, according to the regionalist architecture components aforementioned, their works were analyzed. Figure 1 shows the theoretical framework.

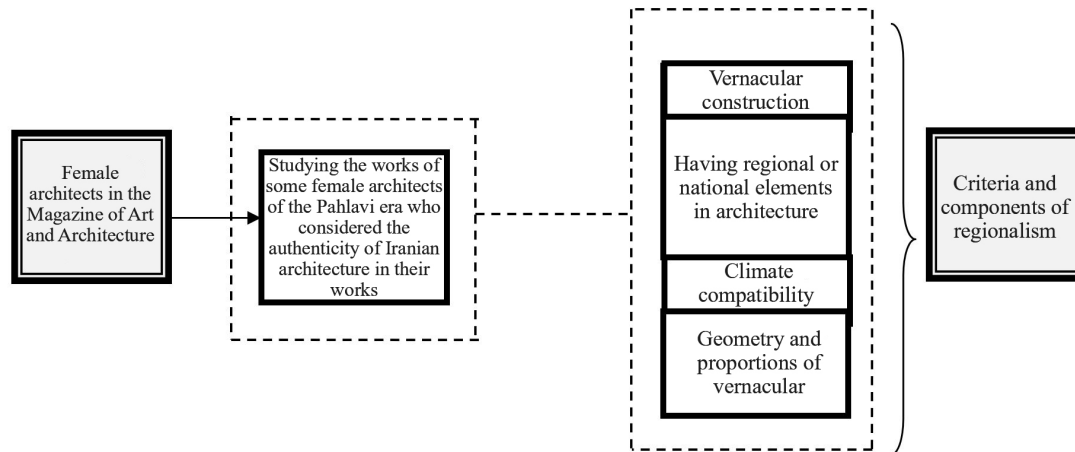





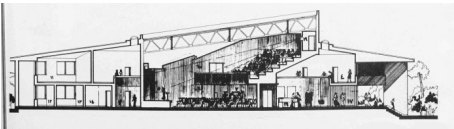
Fig. 1. A Theoretical Framework for Studying Regionalism in the Works of some Female Architects of the Pahlavi Era

3.3. Introduction of Regionalist Female Architects and their Works

According to the available references, this section

briefly introduces female architects of the Pahlavi era and their works. Table 3 present a summary of the works of these architects.

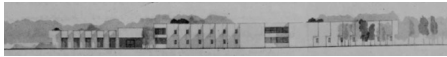
Table 3. Introduction of Regionalist Female Architects and their Works

Noushin Ehsan		
Introduction: She was born in 1944 in Tehran, studied architecture at the College of Fine Arts in 1963, immigrated to America in 1968 to continue her studies and work, became an assistant professor at New York University and a visiting professor at Harvard University, returned to Iran in 1974 and established the Badbadak private office (Eshraq 1976, 33; Tabibi 2014, 147)		
Rasht City Hall		
Elevation of Rasht Hall  (Eshraq 1976, 34)	Floor Plan of Rasht Hall  (Eshraq 1976, 35)	Floor Plan of Rasht Hall  (Eshraq 1976, 35)
Section of Rasht Hall  (Ibid)		

This building, the main space of which is an amphitheater, was designed to be a center for the gatherings of the citizens, and the main characteristic of the building is the use of a gable roof to be compatible with the climate.

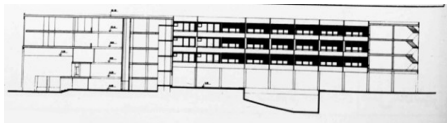
Mahshahr Hotel

Elevation of Mahshahr Hotel



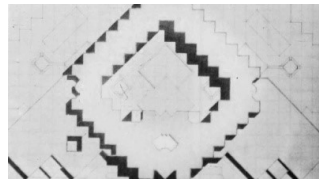
(Eshraq 1976, 40)

Section of Mahshahr Hotel



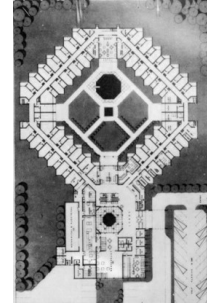
(Eshraq 1976, 41)

Plan of Mahshahr Hotel



(Eshraq 1976, 41)

Plan of Mahshahr Hotel



(Eshraq 1976, 42)

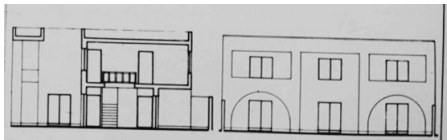
According to its architect, one of the important features of this building is the preservation of the Iranian spirit and inspiration of the caravanserai form (including a central courtyard with rooms surrounding it), which is a suitable pattern compatible with the climate of Mahshahr. Moreover, the east-west direction of the land provides daylight for the rooms.

Leila Farhad Motamed

Introduction: She was born in Iran, immigrated to England when she was 6 years old, got her master's degree in architecture from a university in London, returned to Iran in 1964, established "Sardar Afkhami and Colleagues' Office", was responsible for the design of residential houses.

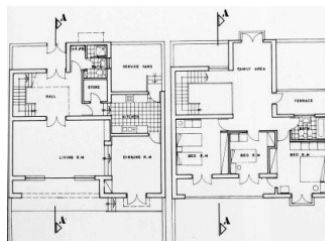
Residential houses of Aryamehr University of Technology, Isfahan

Southern Elevation and Section of the houses of employees of Aryamehr University of Technology (Type 5)



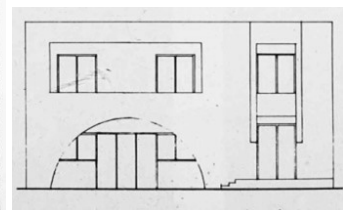
(Eshraq 1976, 73)

Typical Plan (2) of the houses of employees of Aryamehr University of Technology



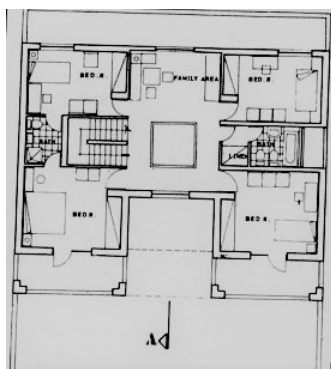
(Eshraq 1976, 73)

Elevation of the houses of employees of Aryamehr University of Technology



(Eshraq 1976, 72)

Typical Plan (5) of the houses of employees of Aryamehr University of Technology



(Eshraq 1976, 73)

According to its architect, this design attempts to preserve the native state and architecture specific to the Iranian people. This complex seems to serve as a neighborhood and the houses have brick facades. moreover, the architect tried to keep the identity alive in the building (Eshraq 1976, 72).

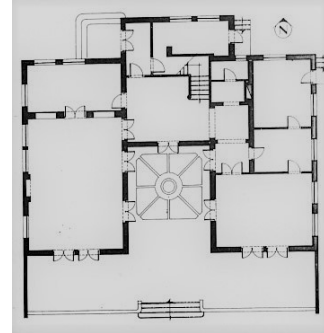
Leila Farhad Motamed's House

Photos of Leila Farhad Motamed's House



(Eshragh 1976, 71)

Plan of Leila Farhad Motamed's House



(Eshragh 1976, 70)

The architect, in her work, aimed to achieve Iranian architecture and preserve architecture from the invasion of foreign culture. In this work, she also tried to establish a completely Iranian spirit (Eshragh 1976, 71).

Banoo Consulting Engineers (Keyhandokht Radpour, Mina Samiei, Shahrzad Seraj)

The company was established in 1972 and started its activity in 1975

Keyhandokht Radpour: She was born in Iran, started to study architecture at the University of Tehran in 1954, dropped out of the university after 1.5 years and immigrated to America, obtained a master's degree in architecture from a university in America, returned to Iran in 1963, and established the Banoo office.

Mina Samiei: She was born in Iran, immigrated to Austria and obtained her degree in architecture, returned to Iran, worked in the Supreme Council of Urban Planning for 3 years, and established the Banoo Office.

Shahrzad Seraj: She was born in Iran, immigrated to Austria in 1960 and obtained her degree in architecture, worked in the Organic Company, immigrated to Germany and worked for 2 years, returned to Iran, and established the Banoo Company.

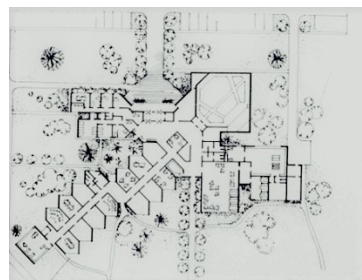
Payam Summer Camp

Elevation of Payam Summer Camp



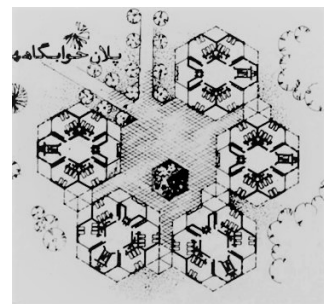
(Eshragh 1976, 77)

Plan of Payam Summer Camp



(Eshragh 1976, 77)

Plan of Payam Summer Camp



(Eshragh 1976, 77)

The perspective of Lotfabad's Library



(Eshragh 1976, 79)

The perspective of Gaz's Library



(Eshragh 1976, 81)

The perspective of Serakhs's



(Eshragh 1976, 81)

Payam Summer Camp

Elevation of Family Welfare Center, Kermanshah



(Eshragh 1976, 80)

Nasrin Faqih

Introduction: She was born in Iran, obtained her doctorate degree in architecture from the University of Venice in 1960, obtained a master's degree in environmental design from a university in America in 1974, returned to Iran, and established the Sardar Afkhami and Colleagues Office

According to its architect, one of the features of the design is attention to Iranian authenticity and identity in the creation of architecture (Eshraq 1976, 91).

Chaharbagh-Walkway transformation plan in the Organic Consulting Engineers Company




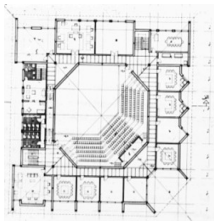
(Eshragh 1976, 87)


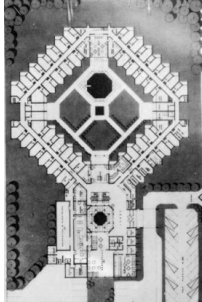
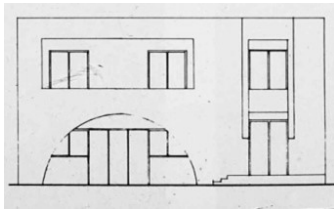
4. FINDINGS AND ANALYSIS




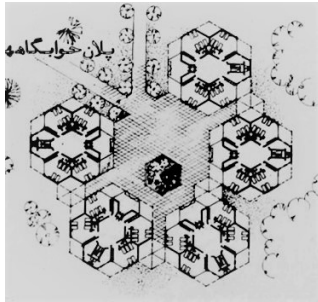


In this section, the works of female architects are




analyzed according to the regionalism criteria and components extracted from the research background.

Table 4. Analysis of the Female Architects' Works in the Pahlavi Period according to Regionalism Criteria

Architect	Work	Analysis of Regionalism Characteristics	Regionalism Criteria and Components
Noushin Ehsan	Elevation of Rasht City Hall	The use of modern materials (concrete and glass) in the building, which are the characteristics of modern architecture.	Vernacular Material
		-	Vernacular Construction
	Plan of Rasht City Hall	-	Having Regional or National Elements in Architecture
		Using a gable roof to be compatible with the climate	Climate Compatibility
		Using square and rectangular, but in a more complicated way than modern architecture ²	Geometry and Proportions used in Vernacular Architecture

Architect	Work	Analysis of Regionalism Characteristics	Regionalism Criteria and Components
Noushin Ehsan	Elevation of Mahshahr Hotel 	The architect used modern materials such as concrete and glass, which are the characteristics of modern architecture.	Vernacular Material
	Plan of Mahshahr Hotel 	- The Iranian caravanserai as a concept in the volume design, and the central courtyard pattern in the plan design, were considered two Iranian elements to link modern architecture and Iranian architecture. Considering a central courtyard and arranging rooms surrounding it to solve climatic problems in Mahshahr.	Vernacular Construction Having Regional or National Elements in Architecture Climate Compatibility
		Unlike modern architecture, which is characterized by simple geometry, the complex geometry of the square was used in the design of this building to create the authenticity of Iranian architecture. -Using the concept of the caravanserai for the volume design and the central courtyard for the plan design. - According to her, one of the characteristics that the architect has tried to revive in the modern building is to preserve the Iranian spirit, which can be seen in the design of the form and plan.	Geometry and Proportions used in Vernacular Architecture
Leila Farhad Motamed	Elevation of the residential houses of employees of Aryamehr University of Technology 	The use of bricks, as Iranian vernacular materials, in the construction of this complex. - - The use of an arched porch in the complex facade -The use of the central courtyard plan	Vernacular Material Vernacular Construction Having Regional or National Elements in Architecture
		According to its architect, in the design of the spaces in this complex, an attempt was made to observe the vernacular style and architecture specific to the Iranian people, and the central courtyard pattern was used for this purpose.	Climate Compatibility
		Using the central courtyard plan and pattern and replacing the courtyard with the patio element and arranging the spaces around it.	Geometry and Proportions used in Vernacular Architecture

Architect	Work	Analysis of Regionalism Characteristics	Regionalism Criteria and Components
Leila Farhad Motamed	Leila Farhad Motamed's House	The use of concrete	Vernacular Material
		-	Vernacular Construction
	The interior design of Leila Farhad Motamed's House	The use of tall porches, tall arched windows, a wide courtyard with a large pond in front of the house to achieve Iranian architecture.	Having Regional or National Elements in Architecture
		-	Climate Compatibility
Banoo Consulting Engineers (Keyhandokht Radpour, Mina Samiei, Shahrzad Seraj)	Payam Summer Camp	Using modern materials (concrete) for the construction of this building.	Vernacular Material
		-	Vernacular Construction
	Plan of Payam Summer Camp	-	Having Regional or National Elements in Architecture
		Using a gable roof	Climate Compatibility
Banoo Consulting Engineers (Keyhandokht Radpour, Mina Samiei, Shahrzad Seraj)	Family Welfare Center, Kermanshah	-Unlike modern architecture, which is characterized by simple plans with perpendicular lines, in this building, an attempt was made to complicate the plan through the use of an octagon plan, which is used in vestibules in Iranian architecture. - Arranging all the spaces around the octagonal courtyard is reminiscent of the central courtyard in Iran.	Geometry and Proportions used in Vernacular Architecture
		Using modern materials (concrete) in all 4 buildings.	Vernacular Material
	Lotfabad's library	- Modern vault construction technology with modern materials in Lotfabad's library. - Construction of a gable roof with modern materials in the Family Welfare Center in Kermanshah	Vernacular Construction
			

Architect	Work	Analysis of Regionalism Characteristics	Regionalism Criteria and Components
Banoo Consulting Engineers (Keyhandokht Radpour, Mina Samiei, Shahrzad Seraj)	Gaz's library 	Using vaults and porches as elements in Iranian architecture. (Gaz's library and Lotfabad's library)	Having Regional or National Elements in Architecture
	Serakhs's library 	- It seems that gazebos, vaults, and porches were used to address climate issues. (Family Welfare Center, Lotfabad's library and Gaz's library)	Climate Compatibility
Nasrin Faqih	Chaharbagh-walkway transformation 	-	Vernacular Material
		- Using the Chaharbagh pattern as an Iranian element in this complex.	Vernacular Construction Having Regional or National Elements in Architecture Climate Compatibility Geometry and Proportions used in Vernacular Architecture

4.1. Results of the Analysis

In the present study, ten architectural works were analyzed using the five components of regionalism. To this end, each of the components and criteria were valued according to their frequencies in the

all samples. This indicates that the most frequent component is the most used component for linking modern architecture and Iranian architecture in the works of female architects in the Pahlavi era and has been of interest to them. The results of this section are presented in Table 5.

Table 5. Investigation and Analysis of the use of Regionalism Components by Female Architects in the Pahlavi Era.

Result	Frequency	Component
Vernacular Material	1 building with vernacular materials-brick 91 building with modern materials-concrete and glass	Low usage - Architects often used concrete and glass materials to align with modernity.
Vernacular Construction	2 buildings with a link between modern and vernacular technologies	Low usage; Architects paid less attention to this component in their works
Regional or National Elements in Architecture	6 buildings	High usage; It shows the high importance of this component for female architects in the Pahlavi era
Climate Compatibility	7 buildings	High application; It indicate the high importance of this component for female architects to preserve the authenticity of Iranian architecture
Geometry used in Vernacular Architecture ³	10 buildings	High usage; in addition to using square, rectangular, octagon as Iranian geometries, architects tried to destroy the simplicity of modern architecture by complicating the plans.

After analyzing the samples, it was found that female architects in the Pahlavi era, who aimed to preserve Iranian architecture in their designs, most used the "geometry used in vernacular architecture" component to achieve their goal and link modern architecture and Iranian architecture, followed by the "climate compatibility", "having regional or national elements in architecture" components, respectively.

5. RESULTS

In the Pahlavi era, a kind of modernization took place with the arrival of modern architecture in Iran. In this period, a group of Iranian architects, who followed modernism, used the principles of modern architecture in the design of their architectural works and created completely modern architecture with modern materials. Their works lacked the spirit of Iranian architecture. Another group tried to not ignore Iranian architecture and establish a link between modern architecture and Iranian architecture in their works while using modern materials and technology in their architectural works. In the present study, the main research question was as follows: "What was the

most used component of regionalism to link modern architecture and Iranian architecture in the works of female architects of the Pahlavi era?"

After conducting the research, it was found that the regionalist female architects tried to link modern architecture and Iranian architecture often by complicating the architectural plan to remove the simplicity of modern architecture through the use of Iranian architectural geometry in the plans, i.e. using the "geometry used in vernacular architecture" component, and then using the components of "climate compatibility", and "having national and regional elements in architecture". They often used modern materials such as concrete and glass to induce modern architecture and maintain the modern spirit.

In general, it can be concluded that, first of all, the "vernacular geometry" was the most used components of regionalism in the works of female architects in the Pahlavi period, to establish a link between modern architecture and Iranian architecture, followed by the components of "climate compatibility" and "the use of national elements".

ENDNOTE

1. Geometry refers to the shape of space and the proportions of the mathematical concept, which implies the relationship between the components with each other and between them with the whole work (Najafaghali Poorkalantari 2017, 148). In Iranian architecture, geometries were extremely orderly, and balanced, and shapes such as square, rectangle, circle, hexagon, and octagon were used, for example, in the construction of vestibules, etc. (Sylvay et al. 2013, 58), and proportions are multiples of 1,1,2,3,5,8, etc. so that the sum of two values is the next value (Bakhtiar and Ardalan 2012).
2. The geometry of modern architecture is very pure, uncomplicated, and simple while in Iranian architecture, in addition to the fact that spaces are in a square, rectangular, or octagonal form, etc., geometry is more complex compared to modern architecture, and there are a greater number of spaces.
3. Since the reviewed documents did not have a specific scale, it was not possible to measure the proportions. Therefore, the proportions were removed from the results due to the lack of measurement, and the component was limited to "vernacular geometry".

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