



Assesment of Buildings in Different Eras of Rifat Chadirji

Melek KUTLU DIVLELI^{1,*}, Norwina Mohd NAWAWI², Aida Kesuma AZMIN³

¹ 0000-0003-2665-8647, Samsun University, Faculty of Architecture and Design, Samsun

² 0000-0003-3237-8123, Kulliyah of Architecture and Environmental Design, Malaysia

³ 009-0005-3398-4952, Kulliyah of Architecture and Environmental Design, Malaysia

Article Info

Received: 19/09/2023

Accepted: 29/09/2023

Keywords

Rifat Chadirji,
Iraqi Architecture,
Regional Architecture

Abstract

Rifat Chadirji, as one of Iraq's regionalist architects, played a significant role in the formation of 1950s Iraq's modern architecture. He was a well-known architect in England and the Arabic world through his many projects and publications. However, despite the recognition for his architectural ideology and design works in the Arabic languages, there is almost no global exposure to Chadirji's regional architecture products. Despite the various economic and political troubles Iraq has experienced since the First World War, including the many restrictions from the changing political environments, learning from the works of Rifat Chadirji increases awareness of the local architecture. Much literature informs that Chadirji, despite undergoing a modern Western architectural education, his architecture reflects the local traces and characters. Therefore, this paper intends to examine buildings designed by Chadirji to reveal the ideology of Architect-Rifat Chadirji in the foundation of modern Iraqi architecture from the 1952s to the 1980s. The study was conducted in the capital city of Iraq, Baghdad, by employing two parts of qualitative analyses, i.e., firstly, for developing a theoretical framework, using content and descriptive analyses from various writings and projects of the subject under study, and secondly, for case studies. Nine buildings were chosen as case studies, within which three were selected for each period. The significance of these findings led to deriving the components of Iraq's Regional Architecture of the 20th Century. The findings will also be a great source of inspiration for the architectural community, the Arab community, and the local Iraqis to continue to explore Chadirji's legacy to make Iraq's modern architecture, their Arab Regional Architecture, their own.

1. INTRODUCTION

As a centre of Islamic civilisations and cultures throughout history, Iraq is a significant country to research on tradition and modernity's role in architecture. Many of the studies on Iraq were written and published by Western researchers with Eurocentric perspectives. Although research by non-Western researchers is available, there are still not enough studies by Muslim or Eastern society researchers on the same topic to make the findings more meaningful. Political and security problems in the Middle East have caused these regions' modern and local architecture less opportunity to be adequately researched and known. This study intends to bring awareness of the significant contribution of Rifat Chadirji, an Iraqi architect, to the body of knowledge towards the notion of regional architectural ideology in general and to the Iraqi community/society in particular.

Who is Rifat Chadirji? Rifat Chadirji is generally known in England and among the pioneer architects in the Arab world. Although Rifat Chadirji had written many books, there was no detailed information about him other than those found in archival studies and the general description of some of his buildings. This study presents a detailed analysis of Chadirji's works produced over three different periods in Baghdad. The periods were classified as early, middle and late periods. The study is to reveal Chadirji's architectural ideology from his work over the periods. Although Chadirji has worked in other countries, Baghdad is a vital study area as it is the city where his works from the three different periods come together to provide the background of Chadirji's theory [1]. This research confines only to buildings in Baghdad that were accessible for visits. The study was a great source of inspiration for the entire architectural community and

* Corresponding author: melek.kutlu@samsun.edu.tr

the Arab community, as it showed how Chadirji could reflect local traditional essences in his version of modern architecture. Chadirji's work is also a resource for Arab architects to make modern Arab architecture.

2. METHOD

The study employs two parts of qualitative analyses. Firstly, in developing a theoretical framework, using content and descriptive analyses from various writings and projects of the subject matter based on themes and coding as follows:

- Period
- Design Concept

Secondly, for the case studies' observation survey, nine buildings in Baghdad based on the three eras (Early, Middle, and Late periods of Rifat's practice) were chosen as the case study sites. Observation analysis of design interpretation was based on Building Type, Layout Plan, Facade Design, Material Use and Design Concept.

The analysis has been organised in a table in which the different aspects of Chadirji's three periods are emphasised so that the structures of the three periods can be compared and the differences of each period can be clearly revealed. In this table, search codes and themes are given in the form of titles, keywords and summary explanations. Based on these codes and themes, three different periods of Chadirji's architecture were analysed descriptive analysis technique.

3. LITERATURE REVIEW

In the middle of the 20th century, a group of young architects, mostly educated abroad in England, returned to Baghdad with a patriotic and modernist spirit. The sons of prominent families, these architects, wanted to be active in the construction of the new Iraq. They played a prominent role in promoting modern architecture through the struggle and practice of gaining independence from the British and their involvement in the country's budding arts and cultural debates. These architects contributed to laying the foundations of modern architecture in Iraq. They were strongly committed to the principles of international modern architecture. They were eager to reconnect formally and materially with the country's architectural heritage, from Ancient Mesopotamia to the Abbasid Caliphate. In their designs and writings, these architects sought to reconcile modernist designs with historical and cultural roots. Combining the two, they expressed their search for a separate architectural identity in the era of national liberation and progressive politics. It was also the result of their dialogue with the international modern architecture movement, which was under intense pressure to bring history and locality back to design in response to some of the formal problems of early modernism. Rifat Chadirji (1926–2020) is undoubtedly the most influential of these pioneering architects who rose to the top of the profession in Baghdad in the 1960s and 1970s. The movement managed to energise the architectural scene in Iraq and influence the development of modern architecture elsewhere in the region, particularly in Iraq's Gulf neighbours [2].

Rifat Chadirji is an Iraqi architect, theorist, and educator. He was born in Baghdad in 1926, the son of Kamil Chadirji, the political leader of the Bash party, and died in the UK in 2020 of COVID-19 [3]. Chadirji graduated from the Hammersmith School of Arts and Crafts, London, in 1952 [4]. Chadirji designed and executed numerous projects - architectural, industrial, furniture, landscape, gardens, interior decoration, urban and regional studies. After returning to Baghdad in 1952, he founded Iraq Consult. As an advisor to the Mayor of Baghdad, he was instrumental in commissioning leading international architects to build large-scale complexes. These included Frank Lloyd Wright (Opera House), Le Corbusier (Sports Hall), Walter Gropius (University City), Alvar Aalto (Art Museum), Werner March (Museum) and Pier Luigi Nervi [5].

3.1. Buildings of Chadirji

In Iraq and the Arabian Gulf regions, Chadirji was well known for designing projects involving private residences, government buildings and industrial facilities. However, some of the projects for which Chadirji was appointed as a consultant for the reconstruction of Baghdad outside of Iraq did not materialise, such as the Sheikh Khalifa building project, Manama in Bahrain (1969), and Sheikha Munira Sabah Al-Nasser project in Kuwait (1969). His projects, such as the Abu Dhabi National Bank Building, Abu Dhabi, UAE (1970) are among his unimplemented projects [5].

Chadirji has designed more than 100 building projects, mostly built in Baghdad. Chadirji projects are categorised into three phases: early period, middle period, and late period [6] [7].

- The early period structures are the works he designed until the early 60s, usually consisting of residences.
- The middle period is the projects he made until the 70s. Here, Chadirji gradually began to be recognised and to do business in other Arab countries.
- Finally, the late period is when Chadirji designed his masterworks until 1986.

Chadirji's early period was the "international school/worldwide stage" period, which lasted until the 1960s. During this period, Rifat Chadirji was heavily influenced by the architecture of Le Corbusier and the painter Mondrian. His work emphasised the use of air conditioning rather than addressing the social needs of the building's occupants. The first phase, between 1956 and 1962, is dominated by houses that reveal the architect's European training and his commitment to ideals that were, in principle, foreign to his country [8]. In the second phase, Chadirji adapted traditional elements in complex formations to the surface of the buildings. Presently, even the modernist features of the buildings have partially disappeared. Under the influence of the Baroque sculptural character, the human scale disappeared. These buildings appear only as accidental sculptural blocks with symbolic expressions. The buildings combine untreated concrete surfaces with traditional building materials such as brick. The overall design aims to control the environmental impact, controlling sunlight and the amount of light entering the interior [4].

As Chadirji approached the 70s, the sculptural effect of his buildings diminished, and he designed more utilitarian and functional buildings with a greater emphasis on human proportion and scale. More than one heritage element, other than the arch, was used in a single building [9]. Again, colour started to be used on the facades of the last period buildings, and facades were diversified with building materials such as ceramics, which had never been seen before. Although Chadirji's designs matured in form from the 50s to the 80s, the tendency to arrive at original solutions based on the essence of cultural heritage was part of Chadirji's views and intellectual orientations from the beginning.

3.2. Case Study

Baghdad is the capital of Iraq and the second-largest city in the Arab world. It is located on the Tigris near the ruins of the ancient city of Babylon and the Sassanid Persian capital of Ctesiphon (refer to Figure 1).



Figure 1. Location of Baghdad, Iraq ([Google Search](#))

Figure 2 illustrates the location of the nine Rifat Chadirji buildings in Baghdad selected as the research samples. These buildings represent three periods of Chadirji's ideological interpretations of Iraq's architectural identity.

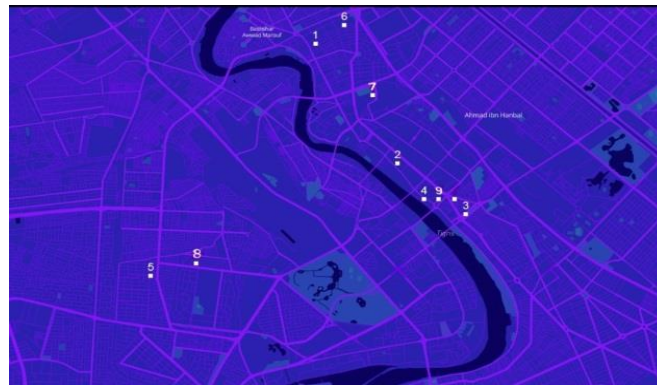





Figure 2. Location of Chadirji's Buildings in Baghdad




Table 1. List of Chadirji's Buildings for Observation corresponding to Figure 2



Period	No	Building Name
Early	1	Rifat Chadriji's Residence 1954
	2	Abboud Building 1955
	3	Freedom Monument 1959
Middle	4	Rafidain Bank-Sinak Branch 1961
	5	Yasoub Rafiq House 1965
	6	Iraq Scientific Academy 1965
Late	7	Tabacco Monopoly 1967
	8	Rafidian Bank-Mansour Branch 1969
	9	Central Post, Telegraph and Telephone Offices 1971


Table 2. Analysis of the Case Studies

Period	Building Case Study	Inventory and Analysis
Early	<p><u>Rifat Chadriji's Residence 1954</u></p> 	<p>1. Building Type: Residence</p> <p>2. Layout Plans inward-looking</p> <p>3. Facade Design Bauhaus affect</p> <p>4. Materials Concrete/Brick</p> <p>5. Design Concept: Band windows and free facade design</p> <p>6. Design Interpretation: Chadirji house with minimal scale modern lines is one of his first designs bearing the classical traces of his early works.</p>

<p>Early</p>	<p><u>Abboud Building 1955</u></p> 	<p><u>1. Building Type:</u> Offices/Business</p> <p><u>2. Layout plans</u> Outward-facing</p> <p><u>3. Facade Design</u> Bauhaus affect</p> <p><u>4. Materials</u> Concrete</p> <p><u>5. Design Concept:</u> The strip windows and free facade design were applied on two opposite forms, cylindrical and rectangular prism.</p> <p><u>6. Design Interpretation:</u> It is the first high-rise building among the iconic monuments of Baghdad. it has a privileged place in modern Iraqi architecture. Its cylindrical design is a first for Baghdad architecture of the period.</p>
<p>Early</p>	<p><u>Freedom Monument 1959</u></p> 	<p><u>1. Building type:</u> Monument</p> <p><u>2. layout plans:</u> -</p> <p><u>3. Facade Design</u> Assyrian bronze figures</p> <p><u>4. Materials</u> Concrete/ Bronze</p> <p><u>5. Design Concept:</u> Assyrian figures are expressed in bronze, a modern material, and a simple reinforced concrete design is presented.</p> <p><u>6. Design Interpretation:</u> This monument becomes an object of representation that represents the independence of modern Iraq by breaking away from the political ground that constructed it.</p>
<p>Middle</p>	<p><u>Rafidain Bank-Sinak Branch 1961</u></p>	<p><u>1. Building Type:</u> Public Building</p> <p><u>2. Layout Plans</u> Outward-facing</p> <p><u>3. Facade Design</u></p> <p><u>4. Materials</u> Concrete/Brick/Wood</p> <p><u>5. Design Concept:</u> The outward opening windows have been reduced in size for solar control and exposed concrete projections have been designed</p>

		<p>around the windows to reduce the effect of the sun.</p> <p><u>6. Design Interpretation:</u></p> <p>The building was designed in a simple and modern style, which was prevailing all over the world at that time. The balcony-like parts used in the windows resemble the balconies of traditional Baghdad houses.</p>
<p>Middle</p>	<p><u>Yasoub Rafiq House 1965</u></p> 	<p><u>1. Building Type:</u></p> <p>Residence</p> <p><u>2. Layout Plans</u></p> <p>Inward-looking</p> <p><u>3. Facade Design</u></p> <p>Arches/small facade windows /deaf brick walls</p> <p><u>4. Materials</u></p> <p>Brick/wood</p> <p><u>5. Design Concept:</u></p> <p>The house was built around a central courtyard considering the climatic conditions, and circular form and brick were preferred as a local element.</p> <p><u>6. Design Interpretation:</u></p> <p>The building's circular form and closed surface resemble a fortress. The architecture explains many examples of Iraq's ancient architectural heritage.</p>
<p>Middle</p>	<p><u>Iraq Scientific Academy 1965</u></p> 	<p><u>1. Building Type:</u></p> <p>Education Building</p> <p><u>2. Layout Plans</u></p> <p>Outward-facing</p> <p><u>3. Facade Design</u></p> <p>Small facade windows /arches/vertical deaf walls/ reflective wall/ corridors for air conditioning.</p> <p><u>4. Materials</u></p> <p>Concrete/Yellow brick/Wood</p> <p><u>5. Design Concept:</u></p> <p>It is a building where the arch effect is</p>

		<p>continued through two floors, blue brick is included in the design and the corridors created for solar control are transformed into the design language.</p> <p><u>6. Design Interpretation:</u></p> <p>This building refers to the late period of Chadirji buildings. While still maintaining the influence of exposed concrete and Bauhaus, it includes local forms and materials.</p>
<p>Late</p>	<p><u>Tobacco Monopoly 1967</u></p> 	<p><u>1. Building Type:</u> Offices/Business</p> <p><u>2. Layout Plans</u> Outward-facing</p> <p><u>3. Facade Design</u> Arches/balconies/ gaps.</p> <p><u>4. Materials</u> Concrete/Brick</p> <p><u>5. Design Concept:</u> The building consists of parts organised around a linear corridor, and the planimetry is complicated by lengthening and shortening the rooms outwards. The semicircular finished surfaces of the ends of these rooms facing the facades characterise the building.</p> <p><u>6. Design Interpretation:</u> The facade and brick closeness gave the design a regional identity. The building is an important link in the closed and brick-clad stylistic production of circular forms that began in 1965 like Yasoub Rafiq house.</p>
<p>Late</p>	<p><u>Rafidian Bank-Mansour Branch 1969</u></p> 	<p><u>1. Building Type:</u> Public Building</p> <p><u>2. Layout Plans</u> Outward-facing</p> <p><u>3. Facade Design</u> Arches /Local traces/ Walls for solar control</p> <p><u>4. Materials</u> Concrete/ Cement-based material.</p> <p><u>5. Design Concept:</u> The building has one side completely closed, and the other is divided vertically into six different parts. Each of these facades has been gradually shifted backwards. Each vertically divided piece has an arched inner wall level.</p> <p><u>6. Design Interpretation:</u> Although gradation is an innovation, vertical fragmentation is a design decision encountered</p>

		in Chadirji's third-period designs and It is also a typical third-period building in form and material.
Late	<p><u>Central Post, Telegraph and Telephone Offices 1971</u></p> 	<p><u>1. Building Type:</u> Public Building</p> <p><u>2. Layout Plans</u> Outward-facing</p> <p><u>3. Facade Design</u> Arches/Concrete structure</p> <p><u>4. Materials</u> Concrete/Brick</p> <p><u>5. Design Concept:</u> The arch, exposed concrete, and brick continue as the basic elements that characterise the building. The building is divided vertically into segments, each vertical segments terminating in an arch of exposed concrete.</p> <p><u>6. Design Interpretation:</u> It is the tallest in Chadirji's architectural career. Thus, such design shows that Chadirji did not have thoughts of oversize limitation in the context of the locality.</p>

3.3. Limitations of The Study

The nine Chadirji buildings in Baghdad were among samples representing works from the three periods of Chadirji. Rifat Chadirji's Residence (1954), Abboud Building (1955) and Freedom Monument (1959) are three examples of Chadirji's early buildings in Baghdad that can still be visited. Rafidain Bank-Sinak Branch (1961), Yasoub Rafiq House (1965) and Iraq Scientific Academy (1965) are three of Chadirji's mid-period buildings that can be analysed and visited in Baghdad. Tobacco Monopoly (1967), Rafidian Bank-Mansour Branch (1969) and Central Post, Telegraph and Telephone Offices (1971) are three important projects of Chadirji that reflect the characteristics of the late period. Selected buildings are shown in Table 1. The selection criteria for the case studies are that the sample addresses Chadirji's three different periods of design work and that the buildings are accessible (for example, in Baghdad, which has security problems in many regions) for research visits. Although there are also Chadirji buildings in different Arab countries, such as Abu Dhabi and Kuwait, Baghdad was chosen as the study area. Baghdad is where the buildings of the three periods come together. It is essential to be in the same region to analyse and compare the buildings more accurately with their regional elements and environmental factors.

4. RESULTS

Rifat Chadirji, under the influence of the modern architecture school in his early period, always prioritised social needs and gave importance to local references from his early years, even though he made designs with mostly modern lines. Due to the hot climate of Baghdad, he constantly produced new solutions for natural ventilation and air conditioning. The courtyards that he preferred, especially in his house designs in his early period, showed that he gave importance to social needs and environmental (air) conditioning. During the middle period, Chadirji gradually transformed his modern lines into lines with historical traces where local materials and forms were predominantly used to create a regional identity. At this stage, however, it did not imitate the tradition as it is but transformed it. He continues designing influenced by modern art and creating rhythms. On the other hand, he always tries to refresh the interior, such as creating a reflective wall, vertical deaf walls and corridors for air conditioning, which is one of his significant

challenges. In his late period, Chadirji simplified local materials and forms. He reduced the proportions of local tie-dye brick in his buildings and balanced it with reinforced concrete. As a mass effect, it has adapted local elements such as arches and girths to its modern lines rather than reminding of the historical buildings of Iraq. Interpretations of these findings are as follows:

- In terms of the layout plans, Chadirji remained relatively the same in the three periods of his work. While Chadirji prefers inward-looking courtyard plans in buildings such as residences, in considering social needs, he also applies the outward-facing plan form commonly used in public buildings.
- In terms of facade design, Chadirji has included elements of the ground in his designs since his early period. However, it can be observed that the modern Western style, such as the Bauhaus effect, is a more dominant expression in his early works.
- In terms of structure, Chadirji preferred the reinforced concrete frame system, which is a modern and widespread structural system. However, it is also found that sometimes, he prefers masonry in places for local expressions. These stacking traces are primarily observed in the works of the middle period.
- In terms of materials, Chadirji used local materials from the early period. However, local material was partially used in the early period besides reinforced concrete. It was used more intensively in the middle period by adding historical references to local materials and forms. In the late period, the facades became much more straightforward and simpler. The use of local materials decreased as a simpler language was achieved.

4. DISCUSSIONS

This research suggests that Chadirji's architectural adventure, which started under the influence of modern architecture schools such as the Bauhaus school, continues by constantly improving himself and feeding on regional elements. The findings of this research have confirmed that although Chadirji frequently uses elements such as brick, arches and courtyards in his designs following the local identity of the region and always prefers specific criteria such as reflective walls for air conditioning, he sometimes prefers circular lines and sometimes the opposite in his choice of form. Such a preference shows that form is not sacred for Chadirji and that he works in a style that can sometimes be considered rational and detached from local architecture. He did not stay within the boundaries of local design; on the contrary, whenever he had the opportunity, he tried new and different things following the identity and character of the region. However, it is crucial to recognise that in all these experiments, belonging to the place, the social needs, and national identity form the basis of Chadirji's architectural philosophy and approach.

5. CONCLUSION

Understanding Rifat Chadirji buildings, as one of the pioneers of modern Arab architecture, is very important in understanding the regional architectural ideology and the traces of local architecture in the Middle East. Chadirji buildings have sunk into oblivion in Baghdad, and most are neglected and abandoned. Local attention has always been expressed to the architectural periods of Chadirji, which this research has classified into three periods. Although there were local concerns in the early period, in Chadirji's building, mostly Western modern architectural lines were encountered. Issues such as local materials, climate and social needs were expressed in the middle and late periods. Imitation of the old was avoided. The local architecture was always found wrapped in a modern language. It can be said that Rifat Chadirji's late period works are the golden period in which he simplified his language and used material and historical imitations more abstractly. This study is important to set examples for architects and prospective architects on how to use local contexts in designs. More studies should be done on regional architects such as Rifat Chadirji; their works should be examined in detail and taken under protection. Knowing influential regional architects such as Rifat Chadirji of modern times and producing designs using the references in their works will guide the emergence of today's quality productions of modern Arab or Arab regional architecture.

REFERENCES

- [1] Kutlu Divleli, M., Divleli, A.A. (2023). *Pioneering Architect in the Construction of Post-Colonial Iraq*, International Journal of Environment, Architecture, and Societies, Vol. 03, No. 02, August 2023.
- [2] Rabbat, N. (2021). *Rifat al-Chadirji (1926-2020): Designing a transhistorical Iraq*. "Journal of Contemporary Iraq and the Arab World, 15.
- [3] "Prominent Iraqi architect Rifat Chadirji dies in London aged 94". The National. 11 April 2020. Retrieved 11 April 2020.
- [4] Pieri, C. (2013). *Rifat Chadirji's Work-Building Modern Iraqi Identity and Hadara*, Kufa: Kufa Review, fall.
- [5] Chadirji, R. (1991). *Al-Ukhaydir wa-al-Qasr al-Balluri: nushu' al-nazariyah al-jadaliyah fi-al-'imarah* / Rifat al-Chadirji. London: Riyad al-Rayyis.
- [6] Kutlu Divleli, M., Nawawi, N., and Kesuma Azmin, A. (2019). *Comparative Analysis of Regional Architecture: Education, Theory, and Practices of Rifat Chadirji and Sedat Hakki Eldem*. The Future and the Built Environment Proceeding Book. Second International Conference. ISLAH.
- [7] Alsammarae, R., "MEA sits down with Rifat Chadirji, the father of Iraqi architecture" Design Mena, [Middle Eastern Architectural Website], 14 November 2017, Online: Archived 3 July 2018 at the Wayback Machine.
- [8] Kulterman, U. (1982). *Contemporary Arab Architecture: The Architects of Iraq*, mimar 5.
- [9] Chadirji, R. (1986). *Concepts and influences: towards a regionalized international architecture*. London; New York: KPI; New York, NY: Distributed by Methuen Inc.