THE ARCHITECTURE OF ABBASID PALACES AND MOSQUES (750 - 945 CE)

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ABSTRACT

This research explores Abbasid palace and mosque architecture from 750 till 945 CE. The primary focus of this study is to examine the external features, ornamentation styles, and materials used in the construction of the palaces and mosques, and the impacts of other dynasties and cultures upon their architectural styles and techniques, using qualitative and content-analysis methodological approaches, rather than purely analytical research. Moreover, this study highlights that the Abbasids had outstanding palace and mosque structures relative to comparable civilizations. This research collected relevant data from both primary and secondary sources, which were used to demonstrate cosmopolitan elements, particularly Roman, Sassanid, and Umayyad impacts, upon Abbasid architecture. The findings of this research present the continuity of Islamic architecture from the Prophet Muhammad's period until the Abbasid era, as well as including new elements deriving from diverse cultures.

خلاصة البحث

يكشف هذا البحث عن قصور وتصاميم المساجد التابعة للعباسيين من سنة ٧٥٠ إلى ٩٤٥م. تركز هذه الدراسة بشكل أساس على السمات الخارجية، وأنماط الزخرفة للقصور والمساجد هذه، كذلك تبحث في المواد المستخدمة في هذه الإنشاءات وعند السلالات الأخرى التي أثّرت في تقنياتها. هذه الدراسة دراسة وصفية وكيفية عبر تحليل للمحتوى، وفضلا عن ذلك، فإن هذه الدراسة تؤكد على أن للعباسيين قصوراً ومساجد ذات تصاميم عظيمة مقارنة بالتصميمات الأخرى في ذلك الوقت. جمع هذا البحث البيانات ذات الصلة بكل من المصادر الأولية والثانوية، والتي استخدمت لإظهار العناصر العالمية، وخاصة الآثار الرومانية والساسانية والأموية، على العمارة العباسية. تعرض نتائج هذا البحث استمرارية العمارة الإسلامية من حقبة النبي محمد صلى الله عليه وسلم حتى العصر العباسي، فضلاً عن عناصر جديدة مستمدة من ثقافات متنوعة.

APPROVAL PAGE

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Firstly, it is my utmost pleasure to dedicate this work to my dear parents and my family, who granted me the gift of their unwavering belief in my ability to accomplish this goal: thank you for your support and patience.

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CHAPTER ONE

INTRODUCTION

1.1. BACKGROUND OF THE STUDY

Abbasid rule in Iraq can be divided neatly into two periods. The first begins with the foundation of the dynasty and lasts until approximately 945 CE, when the Buyids of northern Iran, especially under Adud al-Daula (949-983), rose to power, entered Baghdad, and finally reduced the caliphs to puppet status. In the second period, which lasted until the fall of Baghdad, real power in Iraq and Iran was transferred from a series of nominal caliphs into the hands of first the Buyids (945-1055), and then the Seljuks (1055-1194), Persian and Turkish dynasties respectively.[1]

In 750 the Abbasids seized power from the Umayyad rulers, who lost control over all of their dominions except Spain.[2] The Abbasid caliphs ruled over Mesopotamia, Iran, much of Central Asia and parts of India, Arabia, and various lands in the eastern and southern Mediterranean. The period between 750 and 945 has been described as the Islamic Golden Age.[3] During this epoch, Baghdad and Samarra' functioned as the cultural and commercial capitals of the Islamic world. The long period of Abbasid rule was coincidental with the classical age of Islamic civilization, when the Arabic language and its associated culture spread from the Atlantic to the Indian Ocean and from Central Asia to the Sahara, and people from all over the Muslim world looked to Baghdad and the culture of Iraq for artistic and scientific inspiration. Under al-Mansur, his sons al-Mahdi (775-785) and Harun al-Rashid (786-

[1] Hattstein, M., and Delius, P, *Islam: Art and Architecture*, (H.F. Ullman, 2007), p. 90.
[2] Petersen, A, *Dictionary of Islamic Architecture*, (London: Routledge, 1996), p. 1.
[3] Bloom, J., and Blair, S, *The Grove Encyclopaedia of Islamic Art & Architecture*, (London: Oxford University Press, 2009), p. 78.

809), all field of scientific and technical knowledge, the arts, law, and theology were greatly advanced.[4]

During this period the Muslim world became the unrivalled intellectual centre for science, philosophy, medicine, and education as the Abbasids championed the cause of knowledge and established 'House of Wisdom' in Baghdad, where both Muslim and non-Muslim scholars sought to translate and gather all the world's knowledge into Arabic.[5] When the Abbasid Caliph Abu Ja'afar al-Mansur (r. 754-775 CE) founded the new capital of the Islamic Caliphate at Baghdad in 762 CE, they needed a lot of new buildings to make it functional as a political, economic, and cultural centre, as well to beautify it as the crowning symbol of their enlightened rule.

They built innumerable magnificent buildings throughout their realm, including mosques, palaces, public buildings, bazaars, caravanserais, and mercantile buildings, but the quintessence of their vision was Baghdad, which was essentially constructed as a new, model city, embodying the Abbasid worldview, and a centre of Muslim and global learning, culture, and trade. The many buildings, palaces, and mosques were among the most enduring and striking legacies of the Abbasids. The Abbasid Caliphs built huge luxury palaces (known as 'palace cities') and mosques, and these architectural structures were decorated with stucco, brickwork, wall paintings, and thousands of textiles. Abbasid wealth and greatness supported artistic work in silver, crystal, gold, bronze, and ivory. For palaces and mosques, they used bricks for architectural works rather than using stone, enabling innovative designs and constructions laid out over huge sites. The palaces and mosques of Samarra for

[4] Hattstein, M., and Delius, P, *Islam: Art and Architecture*, (H.F. Ullman, 2007), p. 90.
[5] Syed, M.H., Akhtar, S. S., and Usmani, B.D, *A Concise History of Islam*, (India: Vij Books, 2011), p. 51.

instance sprawled along the shores of the Tigris for 40 kilometres (25 mi).[6] During this period (i.e. 750-945 CE), the Muslim world was a melting pot of different cultures which collected, synthesised, and significantly advanced the knowledge gained from the ancient Greek, Roman, Byzantine, Chinese, Egyptian, Indian, and Persian civilizations.[7] Consequently, during this period, a distinctive form emerged and new techniques were developed that spread throughout the Muslim world and greatly influenced Islamic art and architecture.

The Abbasids constructed tremendous mosques and palaces in Baghdad, Samarra, Raqqa, and Kufa. The best preserved of the early Abbasid palaces is, paradoxically, the one about which contemporary texts have the least to say: Ukhaidir, located almost 125 miles south of Baghdad on the steppe to the northwest of Kufa. It remains one of the most impressive and awesome Abbasid monumental structure. Of the mosques, one magnificent architectural structure is the ninth century Great Mosque of Samarra.[8]

This research aims to shed light on the relatively little-known architecture of the Abbasids during the period of 750-945 CE. The majority of scholars who have studied Iraq so far have focused either on the pre-Islamic past or on the Umayyad and early Abbasid periods, with little attention to architectural history in any of these contexts, thus there is a need for more comprehensive studies and summations of the present state of knowledge on architectural phenomena, particularly to provide new, additional information on Abbasid architecture.

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[6] Petersen, A, *Dictionary of Islamic Architecture*, (London: Routledge, 1996), p. 1.
[7] Syed, M.H., Akhtar, S. S., and Usmani, B.D, *A Concise History of Islam*, (India: Vij Books, 2011), p. 52.
[8] Hattstein, M., and Delius, P, *Islam: Art and Architecture*, (H.F. Ullman, 2007), p. 99.

This thesis focuses on palaces and mosques, since both types of structures have important roles in Muslim society and serve as landmarks of Islamic civilization. In addition to considering the various features and functions of the buildings under investigation, this study also highlights the different elements that influenced Abbasid civilization, such as Sassanid, Byzantine, and Umayyad traits. For instance, the composition of early palaces was mostly affected by Sassanid and Umayyad architectural styles. This study mainly concerns the period before 945 CE, which marked the beginning of the decline of effective Abbasid political power (signalled by the ascent of the Buyids). Another reason why this study covers the years 750-945 CE is that it was the most dynamic and productive period of classical Islamic architecture, with the most magnificent mosque and palace structures being constructed during this epoch.

1.2. STATEMENT OF PROBLEM

The Abbasids' predecessors, the Umayyads, had conquered the enormous region between the Atlantic Ocean and the Oxus River, but their culture was concentrated in Syria and Palestine, the heartland of the Arab-Islamic world. Because of its restricted geographical and written record content, their architectural design displayed a particular but restricted vogue, and it is not possible to describe or even to contemplate an 'Umayyad' design reflected in common themes in different regions, such as Iran and North Africa.

In contrast, the Abbasids were able to extend their culture over a vast territory and it is possible to speak of 'Abbasid' architecture and art in diverse provinces, from Transoxiana to Egypt. Abbasid culture was also emulated in Ifriqiya, the province corresponding to modern Tunisia, and even in al-Andalus, governed by the

descendants of the Umayyad rulers that the Abbasids had displaced. This is not to say that the Abbasids enforced a new monolithic culture, nor that they devised a totally new style; rather they synergised numerous pre-existing styles into an organic, cosmopolitan cultural identity that was distinguishably 'Abbasid'. For instance, early Abbasid architecture was coloured by pre-Islamic Iranian or Sassanid influences; the adoption of the Iranian concept of kingship, coupled with the concern for political security, contributed to the creation of the three royal cities at Baghdad, Samarra, and Raqqa, as well as to the building of the fortified palace at Ukhaydir.

The institution of the mosque itself and its roles changed under the Abbasids. In the time of the Prophet and his immediate successors the mosque was a multi-purpose building that combined several functions.[9] While its primarily function was to host the five daily prayers and religious sermons, it was also the social and political hub of the nascent Muslim community. Under the Abbasids, the emergence of other specialised structures for social and political functions led to the mosque developing a new character as an exclusively spiritual institution devoted to prayer and Islamic teaching. This was accompanied by the emergence of mosque structural elements, styles, and motifs, whereas in earlier times there had been no architectural uniformity, as mosques were made out of older structures or were constructed in local vernacular (often primitive) styles.[10]

Under the Umayyads, the grand 'Friday' (congregational) mosques of the major cities such as Damascus, Jerusalem, and Medina were monumentalized with the panoply of late antique architectural forms and decoration, but the effective confinement of Umayyad power to greater Syria meant that the 'imperial style' such

[9] Grube, E.J., Dickie, J., Grabar, Oleg. Sims, E., Lewcock, R., Jones, D., and Petherbridge, G.T, *Architecture of the Islamic World*, (Thames & Hudson, 1995), p. 245.
[10] Hattstein, M., and Delius, P, *Islam: Art and Architecture*, (H.F. Ullman, 2007), p. 94.

as it was, was limited to the core Umayyad region. All this changed in the Abbasid period. The great power of the early Abbasid caliphate, combined with the growing role of the *ulama*, meant that a standard type of Friday mosque evolved over a wide geographical area, although individual examples might differ in the use of local materials and techniques of construction. The typical Friday mosque in the Abbasid period was a rectangular structure, somewhat longer than it was wide, with a rectangular courtyard in its centre. On the opposite of the courtyard from the *mihrab* (prayer room) stood a tower, usually called a minaret (from the Arabic *manara,* 'place of or thing that gives light'), which later became associated with the place from which the muezzin issued the call to prayer, but there is little contemporary evidence that Abbasid minarets were used for this purpose. Rather as the name suggests they were used as beacons (with lamps inside), and their monumental size and prominent placement advertised the presence of the congregational mosque from afar, and symbolised the vision of the Islamic animating principle of Abbasid urban life.

In the same way that a standard mosque style was spread throughout the Abbasid domains, many other forms and techniques that had been developed in the capital were disseminated to the provinces. For instance, in contrast to the Umayyad stone structures in Syria, following on from Roman patterns (and indeed re-using Roman-hewn stones), Abbasid builders favoured mud and baked brick constructions, covered with a rendering of gypsum plaster, often painted, carved, or moulded with geometric and vegetal designs.[11] In part this choice of materials may have been due to the lack of suitable building stone in the heartland of Abbasid power, but in practical terms it meant that Abbasid-style buildings could be erected wherever ubiquitous raw materials – clay, lime, and gypsum – were found, and styles and techniques could

[11] Ibid., p. 94.

easily be replicated in disparate cities. The Abbasid style of moulded stucco decoration, which combined late antique Mediterranean motifs with materials and techniques used in Sassanid Iran, could also hide indifferent construction under a showy but inexpensive revetment.[12]

As with mosques, Abbasid palaces (the official residences of governors) were large and monumental buildings, displaying few unique styles, as illustrated in the Samarran palaces, of which our knowledge is fragmentary. They were constructed very quickly in mud brick and seem to have disappeared as rapidly when they were abandoned, and their materials were plundered for other building purposes. These multiple functions demonstrate the importance of mosques and palaces for the Muslim communities and thus make them worthwhile to study. Moreover, due to extensive and various architectural buildings erected by the Abbasids, the focus must be restricted to only the most outstanding architectural structures, namely mosques and palaces, to illuminate the most remarkable achievements of the Abbasids in architecture, providing information on the magnificent monuments of artistic Abbasid architecture.

1.3. RESEARCH QUESTIONS

1. What are the aspects of continuity in the Abbasid architecture from the previous era?
2. What are the new artistic features that Abbasids introduced into architecture?
3. What are the amazing features that influence the Abbasid architecture?

[12] Hattstein, M., and Delius, P, *Islam: Art and Architecture*, (H.F. Ullman, 2007), p. 94.

1.4. OBJECTIVES OF THE STUDY STRUCTURAL

1. To study the aspects of continuity in Abbasid architecture from the previous era.
2. To examine the new artistic patterns that Abbasids introduced in their architecture.
3. To identify the outstanding elements that shaped or influenced Abbasid architecture.

1.5. SIGNIFICANCE OF THE STUDY

This research uses academic sources to discover the study of architecture during the Abbasid era, particularly palace and mosque architecture from 750 until 945. This research analyses relevant information, starting from the background of the mosque and palace architecture of the Abbasid dynasty in a specific period of time, to be followed by various elements that shaped the character of the Islamic architecture. This research is also beneficial in improving understanding of mosque and palace architecture under the Abbasids during the years 750-945 CE, which pertains to numerous dynamic research interests. The findings of this research are useful for students or researchers considering the role of architecture in Islamic civilization.

One of the best-preserved early Abbasid palaces is Ukhaidir, which displays great Sassanid influences. At the time of its construction (the second half of the 8th century), the elliptical arch had been used extensively by the Sassanids, and the whole palace had a very Sassanid character; indeed it was regarded as an original Sassanid (pre-Islamic) structure until the discovery that one of the chambers on the ground

floor was actually a mosque.[13] Through this study, researchers therefore will be aware of new patterns or foreign influences in Abbasid architecture. Another reason why this study is important is to see the continuity of early Islamic architecture from the period of the Prophet Muhammad and the Umayyad era to the Abbasid period. Moreover, it contributes to the literature on Abbasid architecture in the English language and facilitates access to understand this tradition in the current universal language.

1.6. RESEARCH METHODOLOGY

The approach of this study is qualitative, and requires collecting relative facts from the certain documents and references, and evaluating these sources in order to reach a comprehensive understanding of the palace and mosque architecture of the Abbasid dynasty from 750 to 945 CE. Detailed examination of historical books, encyclopaedias, primary sources, library researches, articles, and online journals was undertaken to collate the historical data analysed in this study. For theses and dissertations, those kept in University of Malaya, National Library, and ISTAC were referred to. For primary sources the researcher consulted histories by al-Tabari, al-Baladhuri, and Najeebabadi, which have invaluable primary evidence about the Abbasid era.

1.7. LITERATURE REVIEW

In conducting this study, the researcher made use of numerous key academic works and literature. While there is a dearth of work considering Abbasid palace and mosque architecture, especially the particular period of 750 to 945, there are some studies that shed light on the relevant historical background, the reasons behind the building those

[13] Rice, D.T, *Islamic Art*, (London: Thames and Hudson, 1975), p. 31-32.

structures (palaces and mosques), and the impacts of other cultural traditions on Abbasid architectural styles. In the case of the style of Abbasid palaces and mosques one of the best discourses to be reviewed is the work of Dr. Tariq Jawad al-Janab entitled as *Studies In Mediaeval Iraqi Architecture*.[14] Dr. al-Janab gives details from the mid-12th to the 14th century CE concerning Iraqi architecture. According to the author, these centuries saw development, maturity, and extensive Islamic architecture built in this period of time. Long and peaceful reigns, such as those of the Caliphs al-Nasir, al-Mustansir, and Shaikh Uwais, saw the construction of many remarkable buildings. The author wrote this book in the hope of shedding light on the comparatively little-known early architecture of Iraq. Moreover, this work focuses only on types of mosques and palace structures, rather than exploring their holistic architectural history.

The other great work upon this subject is written by Robert Hillenbrand, with a breadth of knowledge of Islamic art and architecture reflected in his extensive *Islamic Architecture*.[15] In this work, Hillenbrand critically evaluates Islamic architecture and issues his professional opinions on the subject, which he approaches by a taxonomy of building type, rather than chronological period. Thus, there are sections on the mosque, the madrasa, the palace, the minaret, and caravanserai. Each one of them is dealt with for the expanse of classical Islamic history, i.e. from the beginnings of Islam to 1700 CE, looking at the palace and mosque structures in the Abbasid era from many perspectives.

[14] Al Janabi, T.J, *Studies in Medieval Iraqi Architecture*, (Baghdad: Ministry of Culture and Information, State Organization of Antiquities and Heritage, 1982).
[15] Hillenbrand, R, *Islamic Architecture*, (Edinburgh University Press, 2000).

Another detailed sourcebook is *The Art and Architecture of Islam (650-1250)*[16] by Richard Ettinghausen and Oleg Grabar, who made important contributions to the study of Islamic Art. This work pinpoints the development of various local centres of art and culture in Iraq, Egypt, Anatolia, Yemen, Spain, and some provinces of Iran. The work approaches art and architecture in a distinctive style, with a notable focus on the early Abbasid architectural style, dated from 750 till 950 CE. The authors spent almost 50 pages dwelling on 'Abbasid Tradition', including architecture and architectural decoration, the decorative arts, and the arts of calligraphy, book binding and illumination, and painting. Additionally, foreign elements on palace and mosque structure are well-detailed in this work.

The best source in terms of its specifically treatment of palace and mosque architecture under the Abbasid dynasty from 750 to 945 CE is *The Grove Encyclopaedia of Islamic Art & Architecture*,[17] edited by Jonathan Bloom and Shelia Blair. Spanning three volumes, this is the most extensive reference work in this context, covering various areas of Islamic art and architecture. This book contains almost 500 illustrations of mosaics, ceramics, metalwork, calligraphy, and most importantly architectural structures of the Islamic world. It gives signs to its readers that Islamic art is not limited to a specific region, or to a certain period of time. In dealing with Abbasid mosque and palace architecture, this source remains the most comprehensive among others, as mentioned earlier.

[16] Ettinghausen, R., and Grabar, O, *The Art and Architecture of Islam* (650-1250), (Penguin Books, 1987).
[17] Bloom, J., and Blair, S, *The Grove Encyclopaedia of Islamic Art & Architecture*, (Oxford University Press, 2009).

Another crucial work on Abbasid's palace and mosque architecture is *Islam: Art and Architecture*,[18] edited by Markus Hattstein and Peter Delius. This work presents a good background and historical developments of the Islamic dynasties and regions, plus it shows the diversity of their architectural shapes from their origins to the present. In this major source, it is easy to find substantial data about the history of the Abbasids and their successors. From my point of view, the illustrations and images in the book are of very high quality and are worthy of being cited and referred to in any discussion of Islamic art. The source is very didactic for the history of the Abbasid era, and it directly addresses the issue of the cultural and architectural unity of the Abbasid style. The authors cover the architecture of Iraq, Iran, and Egypt during the Abbasid era.

K. A. C. Creswell's book, *A Short Account of Early Muslim Architecture*,[19] is a concise and insightful précis that provided the standard view for future generations of students of Islamic architecture. Creswell divided his book into two parts, covering the Umayyad and Abbasid dynasties. The book is conceived of as a developmental history, with a panoramic view from the primeval beginnings until the peak point of Umayyad and Abbasid art and architecture, covering the period of almost two centuries. The relevant explanations of palaces and mosques of the Abbasid dynasty are sufficiently elaborated in this source.

Another more modest source regarding the culture of the Abbasid dynasty is *Damascus and Baghdad Empires*[20] by M. I. Naved, in which the author analyses the Umayyad and Abbasid caliphates (respectively). Under the Abbasid dynasty he deals with the rise of the Abbasids, the political situation, the 'Fracture of Central

[18] Hattstein, M., and Delius, P, *Islam: Art and Architecture*, (H.F. Ullman, 2007.)
[19] Creswell, K.A.C, *A Short Account of Early Muslim Architecture*, (Cairo: The American University in Cairo Press, 1989).
[20] Naved, M.I, *Damascus and Baghdad Empires*, (India: Anmol Publications, 2010).

Authority,' the 'Golden Age,' the rise of the Mamluks, and relations with the Byzantine Empire, in addition to a section dedicated to the art of the Abbasid period, along with information on Umayyad art.

J. D. Hoag's *Islamic Architecture*[21] also sheds light on the research area, giving a history of Islamic architecture from the 7th to 17th centuries CE in the Middle East, Spain, Africa, and India, including pictures and plans of the most significant and well-known mosques, palaces, madrasas, and other Islamic buildings in the world. In this book the palaces and mosques are well described together with their names.

Another source on this subject is Richard Coke's *Baghdad: The City of Peace,*[22] which contains comprehensive data on the history of Baghdad from the pre-Islamic era to the 20th century. This source is intended primarily for general readers who are seeking to learn about Baghdad's pre-Islamic history. It is not difficult to understand from the author's manner that the present work makes no pretension to fill the gap in Baghdad history. He sheds light on Iraq architecture from the pre-Islamic era to the beginning of the 20th century.

R. A. Jairazbhoy's *An Outline of Islamic Architecture*[23] arranges data according to region and introduces readers to the architectural magnificence of the Islamic world. This work contains about 70 architectural drawings, as well as maps of eastern and western Islam. Among the book's most attractive features is its inclusion of colourful quotations from medieval sources, and inventive paragraphs. Besides these features, there is lack of specific information given in the source regarding the subject under study, i.e. Abbasid palaces and mosques.

[21] Hoag, J. D, *Islamic Architecture*, (New York: Rizzoli International Publications, 1975).
[22] Coke, R, *Baghdad: The City of Peace*, (London: Thornton Butterworth, 1927).
[23] Jairazbhoy, R.A, *An Outline of Islamic Architecture*, (Oxford University Press, 2003).

Another relevant source for this study is Richard Yeoman's *The Story of Islamic Architecture.*[24] This includes an Islamic world map, and an analysis of the religious basis of form and function in Islamic architecture. It covers the architecture of numerous Islamic dynasties, and deals with Abbasid palaces from numerous perspectives, including design, location, and new architectural patterns.

Grube et al.'s *Architecture of the Islamic World*[25] provides information about the background of Islamic architecture and defines how theological, sociological, economic, and political aspects played an important role in Islamic architecture. Unlike some other sources, the detailed explanation about Abbasid palaces and mosques is not well covered in this book.

Another important source for this study is written by Hugh Kennedy's *When Baghdad Ruled the Muslim World*.[26] It is a well-written general history of the Abbasid era, dealing in particular with cultural aspects associated with Harun al-Rashid and the Golden Age, including a detailed discussion on 'Poetry and Power' at the Abbasid court, the Harem, and palaces and mosques. This book has rich information pertinent to this study, including over 30 pages specifically on Abbasid mosques and palaces. It should be noted that the book deals with the entire Abbasid world, and is by no means confined to the history of Baghdad, although the latter naturally consumes a lot of its focus due to its fundamental importance as the greatest Abbasid city. A more general overview of similar subjects is given in *Islam: Early Architecture from Baghdad to Cordoba*[27] by Henri Stierlin. It defines Islam and explores its role in architecture, focusing on Umayyad and Abbasid mosques and palaces, with a broad geographical

[24] Yeomans, R, *The Story of Islamic Architecture*, (NYU Press, 2000).
[25] Grube, E.J., Dickie, J., Grabar, Oleg. Sims, E., Lewcock, R., Jones, D., and Petherbridge, G.T, *Architecture of the Islamic World*, (Thames & Hudson, 1995).
[26] Kennedy, H, *When Baghdad Ruled the Muslim World*, (Da Capo Press, 2004).
[27] Stierlin, H, *Islam: Early Architecture from Baghdad to Cordoba*, (Koln: Taschen, 1996).

scope spanning the entire Muslim world. It has almost 30 pages of detailed information about Abbasid mosques and palaces.

Spahic Omer's *Islamic Architecture: Its Philosophy, Spiritual Significance & Some Early Developments*[28] comprehensively studies Islamic architecture over four chapters. The first chapter in this book basically focuses on understanding Islamic Architecture itself, while the second presents a conceptual framework for understanding it. The third part of the book looks at Islamic architecture from the Prophet Muhammad's time, while the final part is more relevant to this study, explaining the development of Islamic architecture after the Prophetic Era.

1.8. CHAPTERIZATION

This study comprises five chapters, as described below.

Chapter 1 explains the title of my study, *the Architecture of Abbasid Palaces and Mosques (750-945CE)*. It presents the background of the study, statement of problem, research questions and objectives, significance, and methodology, followed by a review of relevant literature, and this section explaining the chapterization of the thesis.

Chapter 2 mainly discusses early Islamic architecture and its salient features before the Abbasid dynasty, with particular consideration of the Umayyad dynasty, which introduced innovations in decoration and new types of building structures, such as mosques with mihrabs and minarets.

Chapter 3 focuses on the administrative and residential palaces in Abbasid Iraq, from 750 to 945 CE. It traces Umayyad influences on Abbasid architectural styles. In the palaces of early Abbasid Iraq constructed between 760 and 860, the most

[28] Omer, S, *Islamic Architecture: Its Philosophy, Spiritual Significance & Some Early Developments*, (A.S. Noordeen Publications, 2009).

obvious feature explored in this study is the Umayyad influence on architecture, of which the Dar al-Imara at Kufa is a clear example.

Chapter 4 mainly focuses on early Abbasid mosques and looks at the diversity of architectural styles and continuity of early Islamic architecture. For instance, the relatively small dome located over the area in front of the *mihrab,* which first emerged during the Umayyad period, became a widespread element in Abbasid mosques.

Chapter 5 summarises the main features of palace and mosque architecture during the study period, 750-945 CE, and concludes the thesis.

CHAPTER TWO

PRE-ABBASID ISLAMIC ARCHITECTURE

2.1. INTRODUCTION

This chapter starts with the definition of Islamic architecture in terms of architectural form, design, and function inspired by Islam, influenced by the Islamic spirit, and representing Islamic doctrines and values. It then focuses on early Islamic architecture before the Abbasids, from the time of the Prophet Muhammad to the establishment of the Abbasid dynasty. Despite the primitive execution of buildings erected during the lifetime of the Prophet, they already established the underlying template for subsequent urban design and mosque architecture, representing the most determinative stage in the evolution of the Islamic architecture. Thirdly, it gives some insights on main features of mosques and palaces in the early Islamic era before the ascendency of the Abbasids.

2.2. DEFINING ISLAMIC ARCHITECTURE

As this study is about Islamic architecture, the first question to be asked is whether there is something called 'Islamic Architecture,' and what it is. Is it the architecture manufactured by Muslims to serve Islam as a religion, referring to buildings or structures for religious functions, such as mosques, graveyards, tombs, and madrasas? Or does refers to all architecture established in Muslim territories? If either of these definitions is true, what does 'Islamic' mean in such contexts? If the term 'Islamic' does not define religious objectives in the modern sense, then shall it be understood as a word that determines a specific architecture, the architecture that mirroring the

civilization and brought some native qualities within Islam as a cultural fact? To answer these questions, Spahic explains that:

> Islamic architecture is an architecture whose functions and, to a lesser extent, form, are inspired primarily by Islam. Islamic architecture is a framework for the implementation of the Islam. It facilitates, fosters and stimulates the Muslims' *'ibadah* (worship) activities, which, in turn, account for every moment of their earthly lives.[1]

From this definition, at the centre of Islamic architecture, *function* is more fundamental than other architectural features. Secondly, its size comes along with the overall physical appearance reflecting Islam as a universal way of life, and at the same time the Islamic worldview that there is no segregation between the spiritual and secular worlds. As asserted by Spahic, Islamic architecture is both a field for the implementation of the Islam and a vehicle for its promotion and advancement. This is done at all planes of architecture: its perception, visualization, planning, execution, and utilization.[2] In light of this, Islamic architecture covers not only the classical 'religious' structures adumbrated above, but any structure comprising the core material of Islamic built surroundings, including citadels, bazaars, palaces, dwellings, caravanserais, and infirmaries etc. As pointed out by some scholars, there are several factors that shape architectural styles or traits.

The knowledge and science of skill in the art of the structure varying at different periods and places; aside from these particular contexts, political and economic conditions are two main aspects that shape architecture as a whole. Architecture arises from human needs relative to external circumstances, and it is ceaselessly changing, with continuous reinterpretation and alteration of both needs and circumstances. Architecture can be defined as the result of effort not only to solve technical problems, but also to express less tangible aesthetic claims and functions.

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[1] Omar, S, *Studies in the Islamic Built Environment*, (IIUM Press, 2002), p. 30.
[2] Ibid., 32.

Hoag noted that in the 'architecture of Islam' is 'that building produced by the followers of the Prophet Muhammad between the seventh and the eighteenth or nineteenth century of our era (in a few cases even later), wherever the religion he founded, flourished,' and he noted that in the early period 'we sense a remarkable diversity at first.'[3] The architecture of the Islamic world provides insights into its developmental history, societal perspectives, and its aesthetic outlook. Inferring meanings from architectural artefacts should be tempered by consideration of the fact that, in the history of Islamic architecture, great constructional forms or ornamental techniques emerged quite late, and it also owes much to architecture found in other places, although it undoubtedly made original and innovative contributions to form and function. Islamic architecture, in keeping with its vibrant expression, is undoubtedly viewed as a distinct fact, although differences may exist concerning its exact definition and characterization. Underlying very diverse stylistic features, 'the materials of the structures' are 'baked and unbaked brick, wood, stone, and building techniques are solid masses of burnt brick, legion, burnt brick over cores of adobe, unburnt brick, or terre pisee.'[4]

2.3. EARLY ISLAMIC ARCHITECTURE BEFORE THE ABBASIDS

During the early period of Islam, the Arabian Peninsula did not present any distinctive Islamic architecture, although it should be noted that there were Christian churches in Yemen and elsewhere. A very small percentage of the population were urban dwellers, and most of them lived in simple mud dwellings, known as *ahl al-madar*, while the Bedouin tent-dwellers were known as *ahl al-wabar*. The only notable monumental structure that existed was the Ka'aba in Makkah. The Ka'aba was

[3] Hoag, J. D, *Islamic Architecture*, (New York: Harry N. Abrams, Inc., Publishers, 1977), p. 9.
[4] Ibid., p. 9.

originally erected by the Prophet Ibrahim and his son, Ismail (peace be upon them). During the early Islamic period it has been described as follows:

> 'The sanctuary at Mekka, in the time of Muhammad, merely consisted of a small roofless enclosure, oblong in shape, formed by four walls a little higher than a man, according to Ibn Hisham, or about 9 cubits according to Azraqi, built of rough stone laid dry. It was oblong in shape, the following being the measurements of its sides, according to Azraqi: north-east 32 cubits, north west 22, south west 31, south east 20.'[5]

The sanctuary lies at the lower part of a canyon and was surrounded by private dwellings during the Prophetic Era. During the time of Rightly-Guided Caliphs (*Khulafa al-Rashidun*), as the Muslim population increased, there was a need for greater open space around Ka'aba to facilitate pilgrims' circumambulation as part of the rites of Hajj and Umrah. For that reason, the second Caliph, Umar ibn al-Khattab, levelled many dwellings around the Ka'aba to enlarge the space available for the pilgrimage. The Ka'aba is the oldest mosque structure, having been reconstructed many times after damage due to natural disasters, but it is an archetypal and venerable ancient institution, as well as being the locus for the Muslims' prayers, thus it is not a typical model followed in the building of mosques *per se*.

The first conventional mosque in Islam was the Prophet's Mosque (*al-Masjid an-Nabawī*) in Madinah, constructed under the direct supervision of the Prophet Muhammad after the migration (*Hijrah*). The event drastically transformed the place from a small village to a capital of Islam, also known as the 'illuminated city' due to its associations with the Prophet. Madinah became the most important city throughout Arabia and the capital of the first four Rightly-Guided Caliphs (although Ali ibn Abi Talib in his later years moved the capital to Kufah in Iraq). It continued to be used as the focal point of community life, religious worship and teaching, and state business,

[5] Creswell, K.A.C, *A Short Account of Early Muslim Architecture*, (Cairo: The American University in Cairo Press, 1989), p. 3.

as it had been during the lifetime of the Prophet, although it was renovated and enlarged, notably under Uthman ibn Affan and Umar ibn al-Khattab, but it was not ornamented in a conventional sense until the Umayyad era, when the Islamic expansion (*futuhat*) expanded from the Hejaz toward the Byzantine and Persian empires.[6]

Thus, the Khulafa al-Rashidun built a tremendous Arab-Islamic Caliphate, and the more they expanded politically and religiously, the more construction processes took place during that time. For instance, the Basra region of Iraq was sparsely populated during its capture by Umar ibn al-Khattab, but after a while he coordinated the area and started to build mosque for the coming settlers. Due to favourable environmental conditions, Umar ordered more than 30,000 settlers to move to Kufah and settle there permanently. The construction works started to speed up with his orders, and new buildings came to the scene with mud-brick materials. The Egyptian garrison of Fustat[7] was captured and manned by the Muslims under Caliph Umar, who directed that settlements be built on the near banks of the Nile and Euphrates so that rivers would be natural defences. After the assassination of Uthman, Ali, the cousin and son-in-law of the Prophet, decided to relocate the capital from Madinah to Kufah, to deal with the problems there and to reflect the shifting locus of the Muslim polity toward the east and north.

The people of Iraq were noted for their political disquiet and political demands, and the Muslim world was a tinderbox after the brutal assassination of Uthman, whose clan, the Banu Umayyah, led by Mu'awiyah, sought vengeance on his killers, while Ali attempted to ameliorate the tensions and mediate between the

[6] Expansion Under the First Four Caliphs, accessed January 20, 2019, http://history-world.org/islam4.htm
[7] The ancient name of Cairo.

powerful factions.[8] As the conflict worsened, war was unavoidable, and two sides fought in the Battle of Siffin (657 CE), following which Mu'awiyah established control over the Levant, Egypt, and Yemen (former areas of Roman influences), while Ali maintained control over the Hejaz, Iraq, and Persia. Subsequent to Ali's death, the persecution of his sons Hasan and Hussein by the Umayyads led to the establishment of the Umayyad Caliphate and dynasty, centred in Damascus.

The Khulafa al-Rashidun and later the Umayyad Caliphate saw the establishment of some iconic structures, including the mosques in Kufah, Basra, Fustat, Qayrawan, and Damascus. The humble origin of mosques is illustrated in the description of the mosque in Basra and Kufah built during the period of the Khulafa al-Rashidun, but Islamic architecture became more distinctive and sophisticated under the Umayyads.

2.4. THE MOSQUE

Mosques formed the centre of Muslim settlement from the time of the Prophet Muhammad onwards, and whenever Muslims settled in new areas, they first built a mosque, which was then surrounded by people's dwellings and other public buildings. All Muslims are obliged to practice five daily canonical prayers (*salah*), which is one of the pillars of Islam, and men should ideally pray them in the mosque in congregation. In addition, mosques during the early Islamic period performed most of the functions associated with public life and administration, including education, social meetings, policy discussion, logistical processing of donations for the poor, hospitality for travellers, and healthcare provision. As time passed, the development of Islamic architecture affected and changed these functions as well. After a certain

[8] The fourth caliph Ali wanted to relieve Mu'awiyah of his governance of the Levant, which galvanized people of the region for civil war.

period of time, these functions separated from the mosque itself and particular buildings were built in order to fulfil the other functions mentioned above.

2.4.1. The First Mosque

Prior to the migration of Prophet to Madinah, Muslims did not have a particular site for congregational prayer or worship in Makkah, and they gathered in certain individuals' houses to fulfil this duty, or risked savage beatings in praying around the Ka'aba. While the Prophet's Mosque in Madinah is conventionally regarded as the first dedicated prayer hall in Islam, Ibn Hisham notes that it was predated chronologically by one built by ibn Yasir, and one in Quba (near Medina) in 622 CE, established by Banu Salim, and another one in Madinah itself adjacent to the site of the Prophet's Mosque.[9]

After years of brutal oppression in Makkah, the Muslims could openly practice their faith in Madinah, resulting in a flurry of mosques and prayer rooms being built, the most important of which was the congregational Prophet's Mosque. A *musalla* was originally an open area meant for public prayers and such as other activities, festivities, or special occasions, but it later came to mean a prayer room, either in a home or actually within a mosque.

2.5. THE RITUAL OF SALAH AND FUNCTIONAL ELEMENTS OF MOSQUES

In Islam believers generally come together in mosques. The *salah* (prayer) is a demanding ritual that needs physical, spiritual, and mental attention among devotees. When possible, adult men ideally perform the compulsory prayers in congregation, in

[9] Jairazbhoy, R.A, *An Outline of Islamic Architecture*, (UK: Oxford University Press, 2003), p. 4.

the mosque, and all adult man are generally required to pray the congregational prayer on Friday. Mosques require a large space for prayer, and naturally walls and a roof delineate the space and preserve worshippers from the sun and rain. When purpose-built mosques began to be built in more advanced areas, they included facilities for performing ritual ablution, often elaborate fountains, and for larger congregations the prophetic institution of the *minbar* (pulpit) helped ensure people could see the imam delivering the sermon on Friday.[10]

In larger and more sophisticated structures the issue of acoustics and amplifying the voice of the imam became an architectural concern. Additionally, the muezzin began calling the *adhan* from the minaret tower (which was originally a beacon, as explained previously). As mosques became more complex, prayer niches (*mihrabs*) were dedicated to the imam, usually adjoining the *minbar,* to facilitate his activities leading the congregation (in the *qiblah* wall facing Makkah). Additionally, there could be an enclosure called a *maqsurah* near the *mihrab* to protect the imam from attacks, given that Umar ibn al-Khattab and Ali bin Abi Talib had both been fatally attacked while leading the prayer.

Other features might include a grand shrine (*haram*), a mosque yard (*sahn*), and passages (*riwaqs*) along the edges of the *sahn.*

2.6. MAIN FEATURES OF MOSQUES

This section describes some of the prominent features of mosques worthy of attention, each of which is a fundamentally important architectural element in mosque design.

[10] According to Tabari, the Prophet Muhammad had a pulpit made of tamarisk wood. It was a chair consisting of three steps, on the third and last of which the Prophet used to sit, keeping his feet on the second. Creswell, K.A.C., *A Short Account of Early Muslim Architecture,* p. 5.

2.6.1. Minaret

At the time of the Prophet, the call to prayer *(adhan*) was issued from a high platform or from the top of a building. Subsequently, this situation changed, and the prayer call started to come out from the rooftop of the *masjid*. There is no evidence of the presence of towers (i.e. minarets) during the time of the Prophet's successors. The very first mosque tower was constructed by the Umayyads in Damascus. It can be observed that the towers used during Mu'awiya's reign were of a Roman arch-type.

As mentioned previously, a 'minaret' means a 'place of light,' connoting a beacon, but as these began to be used for giving the *adhan* they also came to be known by other names, including 'place of adhan' (*madhana*), 'and *saumaa*, a name particularly designating hermit towers, more popularly used in Western Islam.'[11] Ibn al-Faqih describes the minaret as being a continuation of Byzantine 'watch towers,' re-utilized as beacons to show the location of mosques and settlements.[12]

2.6.2. Mihrab

A *mihrab* is a prayer niche facing towards the *qiblah* enclosure (i.e. in the direction of Makkah) in the mosque. It was originally introduced during the Umayyad period. It serves as private place for the imam. The design of the niche can be observed in most prayer rugs, and once the worshipper positions it on the floor it should be facing towards Makkah.

There is no evidence of the existence of a *mihrab* in the earlier mosques. As pointed out by Hillenbrand, 'The innate interchangeability of this feature is perhaps most revealingly illustrated in the late Umayyad palace of Mshatta.'[13] It emerged

[11] Jairazbhoy. R.A, *An Outline of Islamic Architecture*, (UK: Oxford University Press, 2003), p. 20.
[12] Ibid., p. 19.
[13] Hillenbrand, R, *Islamic Architecture*, (Edinburgh University Press, 1994), p. 45.

during the Umayyad period and then became in a much more widespread trait under the Abbasids. The *mihrab* can be said to have progressively improved the interior of the mosque architecture, and they normally received special attention from the administrators or caliphs tasked as *imams.* In short, it can be observed that *mihrab* served as an image of government status as well as the locus of prayer within the mosque, and subsequently became one of the main features of Islamic mosque architecture.

2.6.3. Minbar

Preaching was essential to Muslim life from the inception of Islam, most obviously for the Friday sermon, but also for general teaching as well as public announcements. The Prophet Muhammad initially leaned against a tree while delivering speeches, then later a *minbar* was built for this purpose, and the practice of using such a pulpit was continued by his successors. The *minbar* elevates the imam above the seated congregation, and the prophetic one consisted of three steps, the uppermost of which (the *maq'ad*) was for sitting. As noted by Hillenbrand, the *minbar* is analogous to the pulpit in Christian churches, and both serve the same function as the *ambo*, 'the lectern and pulpit in early medieval churches and the bishop's throne in Byzantine ones.'[14]

Thrones of any kind are traditionally anathema to Islamic cosmology, as Allah is conventionally described as being above his throne (*arsh*), thus it is implicitly arrogant for Muslim rulers to arrogate this dignity to themselves, aside from the Islamic emphasis on egalitarianism, however there are certain throne-like associations of the *minbar*. For example, when Abu Bakr was acclaimed caliph, he accepted the

[14] Ibid., p. 46.

pledge of allegiance on this preaching place. During the Umayyad period the *minbars* of Umayyad mosques began to increase in altitude as congregations grew. As time went on, the *minbar* became more decorative as in the words of Kuban:

> Fittingly, minbars received much attention in the decoration of the interior. Made of wood in the early period, in later Islamic architecture, stone, especially marble minbars of great size, were common. Most noticeably in Ottoman architecture, minbars often assumed proportions out of keeping with the dimensions of small- and medium-sized mosques.[15]

2.6.4. Maqsura

A *Maqsura* is a less common element in Islamic mosque architecture. It is basically constructed to protect the imam, who could be the head of state (e.g. caliph or governor), as political leaders traditionally led the prayer. According to some scholars, the earlies *maqsura* was built for Mu'awiya, the founder of the Umayyad dynasty, following a murder attempt on his life in 644 CE.[16] The *maqsura* was initially covered by a wooden screen and later became prominent element in the interior of Islamic mosque architecture. There is another theory that *maqsura* emerged to provide a private area for audiences with the ruler in the mosque.

The successors of the Prophet Muhammad, the Khulafa al-Rashidun, were generally characterised by asceticism, and continued his simple and modest way of living, avoiding all extravagance and absolutely prioritising the poor in their undertakings. During their era we can observe that despite the rapid conquests of the Muslim state and the windfall of vast wealth from the Persian and Roman empires,

[15] Kuban, D, *Muslim Religious Architecture: The Mosque and Its Early Development*, (Brill, 1974), p. 1-8.

[16] A feature introduced either by Muawiya in 665 CE, as Tabari and Maqrizi report, or by Marwan, governor of Medina, who, according to Baladhuri, built a maqsura of dressed stone with window when an attempt had been made on his life in the year 44 AH (664 CE). Jairazbhoy, R.A. *An Outline of Islamic Architecture*, p. 22.

with greatly enhanced religious and political capacity for the caliphs, there was absolutely no conspicuous display or wealth or architectural development beyond the minimum necessary for practical functions, with no monumental palaces, mosques, or sanctuaries being erected, although some governors (especially in Damascus) inhabited former Roman palaces, claiming that this was necessary for the dignity of Islam.

When the Caliphate moved from Madinah to Umayyad Damascus in 661 CE, a sea change occurred in this regard. Eager to advertise the glory of Islam relative to the Romans, the Umayyads commissioned many great works in Damascus and the Levant as a whole, building glorious and luxury palaces and mosques, by engaging Egyptian, Syrian, Greek, and Persian craftsmen, all of whom contributed to the Islamic architectural style taking shape under Umayyad patronage. In 750 CE the Abbasid Revolution continued the architectural essence and attributions, and added original and innovative refinements, while an atrophied and moribund 'Umayyad' style continued to be replicated in Islamic Spain. As maintained by Kuhnel:

> For another 300 years Cordova, in conscious opposition to Baghdad, saw it as a duty to uphold the Damascus tradition; and thereby wrought a miracle of creation, producing works of art which are accounted among the most brilliant manifestations of Islamic civilization, although limited throughout this long period to a well-nigh exhausted repertory of ideas.[17]

It should be noted that the in terms of building materials the Umayyads did not simply take up Roman architecture wholesale, and some early structures were primordial continuations of the tradition of Madinah, with the use of simple palm bole, topped with palm leaves. However, the absurdity of rustic mosques in the midst of sumptuous buildings and increasing requirements placed upon Islamic buildings led

[17] Kuhnel, E, *Islamic Art & Architecture*, (Cornel University Press, 1974), p. 32-33.

to the emergence of more robust architecture, with more substantial construction materials, including stone, baked and unbaked brick, and hardwood.

The most iconic Umayyad mosque is the Great Mosque of Damascus. Originally a church, and the shrine of John the Baptist (Yahya, peace be upon him), it was purchased by the Umayyads from the Christian community and converted into a mosque, with the necessary modifications and additions.[18] The northern minaret was additionally attached to the outside of the vast courtyard of the mosque, with its cubic figure, one of the characteristic features of the period.

In conclusion, the Islamic architecture of mosque that began in the 7th century evolved with time, displaying various elements of other cultures.

> The descriptions and existing remains of these earliest mosques lead to the conclusion that a consistent concept of mosque design already had been developed with its main elements by the beginning of the seventh century. Modified, needless to say, according to existing architectural traditions: thus, in Irak late Sassanian, in Syria post-Roman features prevailed, each with its own distinctive structural methods and construction materials.[19]

2.7. MAIN FEATURES OF PALACES

As mentioned previously, the Prophet Muhammad and the Khulafa Rashidun led an ascetic lifestyle devoted to the service of the poor, and no palaces were constructed at public expense or for public functions prior to the Umayyad period. At this juncture the Umayyads wanted to demonstrate the maturity, wealth, and greatness of Islamic civilization and their own dynasty by constructing magnificent buildings, including palaces in addition to mosques (and indeed many other civic structures, including mills, aqueducts, reservoirs, fountains, and marketplaces etc.). However, in terms of

[18] Ibid., p. 35.
[19] Kuban, D, *Muslim Religious Architecture: The Mosque and Its Early Development,* (Brill, 1974), p. 16.

Umayyad palace architecture there has been inadequate research attention, mainly due to the dearth of physical evidence (i.e. archaeological and architectural remains).[20]

The first difficulty is the sparse remains of Umayyad palaces, as their materials (often themselves sourced from disused Roman buildings) were recycled in later constructions. Literary accounts are prone to exaggeration, and extrapolations made from fanciful or imaginative properties assigned to buildings. For instance, Ibn Khaldun wrote of 'the seven Arabian castles,' named after and corresponding to the motions and influences of the planets.[21] It is clear that Umayyad palaces, erected the milieu of classical Byzantine tradition, must have been monumental and splendid, but there is simply a lack of evidence to truly understand their characteristics and architectural significance. The only thing that is certain is that they were outshone by subsequent Abbasid developments. Nevertheless, the relative simplicity of Umayyad palatial structures and life should not be overstated. In Umayyad palaces, 'materials must have been brought from afar, and the murderous climate and perpetual shortage of water must have claimed many a victim before they were brought to completion.'[22] Some main parameters of Umayyad palaces can be identified.

They had a *majlis*, (reception room), the *dar al-'amma* (official area where the governor and people from public could meet), the *iwan* (in Arabic, known in Persian as the *ayvān*), referring to a whole palace or the most significant and official section of it. Despite the clear attempts to formalize court procedurals and etiquette, it is clear that life in Umayyad palaces was less formal than in their Roman predecessors, and they functioned as little more than grand residences of the ruler, without the

[20] Hillenbrand, R, *Islamic Architecture: Form, Function and Meaning*, (Edinburgh: Edinburgh University Press 1994), p. 377.
[21] Ibid., p. 377.
[22] Kuhnel, E, *Islamic Art & Architecture*, (Cornel University Press, 1971), p.32-33.

significant ritual aspects that later developed around Abbasid rulers (and Turkic sultans after them).

Some additional elements of note include canopies and private compartments to distinguish the caliph from the public; hallways and service corridors for servants; archives for literary and state business and resources; administrative chambers and the treasury; and spectacular gardens filled with various flowers and distinctive animals (which are of particular significance in Islamic civilization as representations of Paradise).

CHAPTER THREE

ABBASID PALACES, 750-945 CE

3.1. INTRODUCTION

This chapter sheds light on the Abbasid Palaces from 750 to 945 CE. Firstly, in the early period of Abbasid palaces 'foreign' influences (especially those directly inherited from the Umayyads) are observable. The discussion presented in this chapter revolves around the early Abbasid palaces, such as the desert palace of Ukhaidir at Baghdad, and those of the later period, including Jausaq al-Khaqani and Balkuwara at Samarra. Special attention is given to unique traits of Abbasid architecture, as well as foreign influences such as Umayyad and Sassanid architectural styles.

In the early Abbasid period (c. 760-860 CE) it is easy to notice the obvious influence of political, economic, and architectural aspects of the Umayyad dynasty, which themselves represented living local customs and an efficient imperial administrative system. The Abbasids initially centralized their administration in Kufa, but believing the people to be capricious and unreliable, the Caliph al-Mansur decided to relocate to the site that became Baghdad, which was surrounded by well-irrigated lands spanning the Tigris-Euphrates basin. Baghdad became the capital in 762 CE. This location was within the Sassanid cultural zone of Iran, Eastern Arabia, and Central Asia, and the Sassanid capital at Ctesiphon was relatively close, which led inexorably to the gradual immersion of Abbasid culture in Persian styles, including in architecture.[1]

[1] With the Abbasids, the Muslim world turned away somewhat from the Byzantine influences which had predominated under the Umayyads. Now, it was the heritage of the Sassanid empire that fuelled the caliph's culture, government, and court life. The Persian influence contributed to a burgeoning

The construction of Baghdad was completed in only four years, by 766 CE, involving more than 100,000 workers employed from different parts of the Middle East.[2] The official name of the magnificent new city was *Madinat al-Salam* ('City of Peace'), but the Persian name of Baghdad stuck, although it was also known as the 'Round City', due to its concentric urban planning.[3] The Round City of the Abbasids was destroyed by successive invasions and reconstructions, but literary sources provide extensive details on the city, including the general dimensions of the citadel:

> This Palace of al-Mansur in the Round City formed a square 400 cubits by 400; there was an audience hall with a ceiling 30 feet high. The audience hall was preceded by an ivan 45 feet high and 30 feet wide, according to al-Khatib.[4]

The Round City consisted of four concentric circles with four corresponding gateways, each located in one direction of the city. This had obvious defensive advantages, in addition to proclaiming the trading associations of the city as a hub of trade, as each gateway pointed to a key city and was named accordingly, comprising the gates of Khorasan, Kufa, Basra, and Damascus. The inner and outer parts of the city had different points of access. The enveloping exterior wall was about 45 feet high, while the inner walls were approximately 60 feet high. There were traditional bazaars, quarters, mosques, public buildings, and dwellings laid out throughout the city according to a neatly organized street plan.[5] Strange described it thus:

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veneration of royal power in the Abbasid caliphs, following the example of the Sassanid 'King of Kings' court sycophancy. Stierlin, H, *Islam: Early Architecture from Baghdad to Cordoba*, (Koln: Taschen, 1996), p. 118.

[2] In order to understand the full significance of the feat of building Baghdad, 100,000 labourers were recruited and organized for this enterprise from Mesopotamia, Persia, Africa, and Arabia, and they built it from scratch in only four years (762-766 CE), implying engineering and logistical genius in addition to skilled craftsmanship. Jairazbhoy. R.A, *An Outline of Islamic Architecture*, (Oxford University Press, 2003), p. 24.

[3] Stierlin, H, *Islam: Early Architecture from Baghdad to Cordoba*, (Koln: Taschen, 1996), p. 118.

[4] Jairazbhoy, R.A, *Islamic Architecture*, (Lahore: Ferozsons Press, 2000), p. 49.

[5] It appears probable that the earliest enclosures were the Assyrian military camps. Creswell, K.A.C, *A Short Account of Early Muslim Architecture*, (Penguin Books, 1989), p. 170.

> In the centre of this area stood the Palace of the Caliph (called the Golden Gate), and beside it the Great Mosque; while from the four gates of the inner wall round the central area the four highroads led out, radiating like the spokes of a wheel, each in turn passing through the gateways in the double walls, and finally crossing the ditch.[6]

al-Mansur's glamorous palace near the Gate of Khorasan was endowed numerous titles, including *al-Khuld* ('the Everlasting'). We can observe Persian elements in many areas of the Round City. From the architectural elements, in the military settlements, and in the intellectual life of the city's inhabitants.[7] Baghdad was the apogee of Islamic civilization and its Golden Age during the reign of Harun al-Rashid (r. 786-809 CE), with outstanding political, economic, socio-cultural, scientific, artistic, and intellectual achievements. al-Rashid himself was particularly noted as a patron of the arts and an expert in Greek philosophy as well as Islamic sciences, and he founded the *Khizanat al-Hikma* ('Treasury of Wisdom') as a repository of all available knowledge from the world, granting the equivalent weight in gold for any book translated into Arabic. His son (from a Persian mother) al-Mamun extended this structure due to the enormous growth in the literary collections and transformed it into a school of theological as well as scientific knowledge.[8]

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[6] Strange, G. Le, *Baghdad During the Abbasid Caliphate*, (Oxford: Clarendon Press, 1924), p. 18-19.

[7] During al-Mansur's reign this Persian influence began to have a marked effect on the manners and habits of the Muslim world. Persian costumes, such as the iconic tall Persian hat (*qalansuwa*), became the fashionable dress at Court. Zoroastrians converted *en masse* to Islam, retaining many of their mores and customs (such as removing their shoes and praying on luxurious carpets), bringing their learning and culture with them. For instance, Nowruz (Persian New Year) began to be popularly observed among Muslims in Iraq. Creswell, K.A.C, *A Short Account of Early Muslim Architecture*, (Penguin Books, 1989), p. 190.

[8] Three decades later, the collection had grown so large that his son, Caliph al-Ma'mun, built extensions to the original building, turning it into a large academy named *Bayt al-Hikma* ('House of Wisdom'), which housed different branches of knowledge. Nizamoglu, Cem. 'The House of Wisdom: Baghdad's Intellectual Powerhouse.' Muslimheritage.com. http://www.muslimheritage.com/article/house-of-wisdom (accessed January 25, 2019).

In 836 the eighth Abbasid Caliph, al-Mutasim, felt Baghdad had become too confined, and he started to build Samarra,[9] approximately 110 km north of Baghdad, which was to be a vast complex filled with palaces and Turkish guards, the capital of Abbasid power. Despite being built with all of the human and financial resources of the vast Abbasid realms at the height of their worldly power, Samarra came to be viewed as ill-fated due to the frequent assassinations that occurred there, and it ultimately became unsustainable and was abandoned in 892 CE.

Excavations have revealed the tremendous architecture structures of the city, which was laid out over an area of approximately 35 km length, and 2-5 km width, including six magnificent palaces of over 400 metres squared each. Aerial archaeology reveals that Samarra was in effect a city of Islamic palaces,[10] but aside from their general outlines, little is known of them. Jausaq al-Khaqani is relatively more well-known, and it is considered later in this chapter. Other notable palaces in the city include Qasr al-Ashiq and the palace of Balkuwara (built around 849-860). As with the original construction of Baghdad, the building of Samarra was a vast undertaking involving a massive labour force and great feats of logistics and engineering. While the overriding theme of Baghdad was the 'Round City', Samarra was defiantly square and rectangular, with massive structures and less need for innovative uses of space. Vast thick walls surrounded the internal complexes, with few gates. These magnificent palaces were named as Dar al-Khilafa, built adjacent to the Tigris.[11]

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[9] There were several reasons why al-Ma'mun's son Mutasim should have decided to quit Baghdad in 836 and found the new city of Samarra higher up the Tigris some 70 miles north of the capital. Firstly, Baghdad had already sustained enormous damage in the siege. Secondly, the Turkish mercenaries hired into service by his predecessor had become too many and too clamorous and were decidedly unpopular among the effete local inhabitants. Jairazbhoy, R.A, *An Outline of Islamic Architecture*, (Oxford University Press, 2003), p. 30.

[10] For example, Qasr al-Jiss, Ashnas, Istabulat, al-Huwaisilat, al-Quwair, Qasr al-Jiss were just few of them. Hillenbrand, R, *Islamic Architecture*, (Edinburgh University Press, 2000), p. 398.

[11] Rejecting the formula of an enclosed city, he chose to construct a series of walled districts along the river. These varied constructions ended up forming a conurbation almost thirty-five kilometres long and

As with Baghdad, Samarra's vast and rapid construction was only possible with the use of mud-brick as the primary construction material, but the decoration overlaid on these humble foundations were exquisite, including ebony, marble paving, multi-coloured mosaics, and gold-plated bronzes, few of which have survived. [12]

3.2. PALACE OF UKHAIDIR

The Abbasid caliphate did not have a system of primogeniture, and the succession was accorded to whichever family member (and his scheming faction) was capable of seizing the title of caliph and the reality of the power of the office. The first Abbasid Caliph, al-Saffah, appointed his brother Al-Mansur to succeed him, followed by his nephew, Isa Ibn Musa, the Governor of Kufah who had an enormous palace in Baghdad. There were numerous intrigues and assassination attempts against Isa and his son by the faction of al-Mahdi, the son of al-Mansur. The palace of Ukhaidir, which is the only desert palace remaining from the Abbasid period, was constructed around 775-778 CE by Isa Ibn Musa almost 120 km south of Baghdad, where he hoped he and his son would be safe.[13] As described by Stierlin:

> This monumental palace was constructed, not in brick, but with rough quarry-stones held together by mortar – doubtless because of the abundance of available stone on the site of Ukhaidir, at the southern edge of the Mesopotamian plain. Stone may also have been chosen due to its greater strength – desirable for a fortified enclosure. Indeed, security seems to have been of primary importance for Isa ibn Musa, who feared an attempt on his life by the caliph.[14]

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between two and five kilometres wide which, during its fifty or so years of active use (836-883), probably had more than 500,000 inhabitans. Stierlin, H, *Islam: Early Architecture from Baghdad to Cordoba*, (Koln: Taschen, 1996), p. 126-127.

[12] Spahic, O, *Islamic Architecture: Its Philosophy, Spiritual Significance & Some Early Developments*, (A.S. Noorden Publications, 2009), p. 246.

[13] Some other accounts mention that it was constructed earlier than this date: 'Though its commonly accepted date is of 159/775-6 is far from being finally established'. Hillenbrand, R, *Islamic Architecture*, (Edinburgh: Edinburgh University Press, 2000), p. 395.

[14] Stierlin, H, *Islam: Early Architecture from Baghdad to Cordoba*, (Koln: Taschen, 1996), p. 123.

Justified paranoia s led to extreme security precautions by Isa, including the construction of 44 semi-circular towers around its walls. Another point about this palace was that it was strengthened with fortresses and circuit walls, each of which was connected to different gates, yet the palace was accessible just by one gateway. The layout of this palace embodied the political claims of Isa to the caliphate, including the Court of Honour, Entrance Hallway, and Audience hall.

The Palace of Ukhaidir was mostly constructed with rigid panel materials and brick materials for arches, which circled and sharpened its layout. These materials were also used for the ornamentation of the walls. This palace resembled in many respects the features of the Caliph al-Mansur's palace in Baghdad. Despite its isolated outlook, this palace represents the most fascinating building ever built in early Abbasid history.

The palace was surrounded by a fortified rectangular enclosure measuring 175x169 metres. Moreover, at each end of the palace there is where a circled tower. There were also half circled towers within this enclosure. Hillenbrand explained some Abbasid palace architecture being influenced by foreign styles and traditions such as Umayyad, Mesopotamian, Syrian-Hittite, and Persian elements:

> The resemblances of Ukhaidir to late Umayyad palaces are unmistakable. What gives the building its extra spice of interest is the way that these Syrian Umayyad features are overlaid by others which are less readily identified. Some seem to be rooted in native Mesopotamian traditions, for example the bit bilami derived from Syro-Hittite temple architecture. Others, like the system of rooms (baits) grouped around a courtyard, or the sequence of courtyard, iwan and dome or audience chamber, have a decidedly Persian flavour, which is echoed in other early Islamic palaces in Iraq.[15]

The following subsections outline the main features of the Palace of Ukhaidir.

[15] Hillenbrand, R, *Islamic Architecture*, (Edinburgh: Edinburgh University Press, 2000). p. 395.

3.2.1. Outer Enclosure

> The present height of the walls is about 17 m (55 ft), but the parapet has gone, so it must have been at least 19 m (62 ft) originally. The corner towers are 5.10 m (16 $\frac{3}{4}$ ft), in diameter, the intermediate ones 3.30 m (10 $\frac{3}{4}$ ft) only, with a pitch of 13 m (42$\frac{1}{2}$ ft) and a projection of 2.60 m (8 $\frac{1}{2}$ ft) beyond the face of the wall arches. On the outer side of the gallery, which was tunnel-vaulted, are recesses averaging 1.40 m (4$\frac{1}{2}$ ft) in width and 50 cm (19$\frac{1}{2}$ in) in depth.[16]

The above information describes the size of Ukhaidir Palace, which measured approximately 367x269 feet. Each fifth recess led into a small circuit compartment situated at the upper part of the castle structure. There were some empty spaces throughout the external side of the recession, while the internal side complied with this curved hole system, as Hoag further explained:

> After construction had reached about 10 feet above ground level the outer four-gated enclosure of about 574 by 554 feet was begun – perhaps in 778, when Ibn Musa might have felt he needed added protection. Where the north wall of the outer enclosure enveloped that of the inner one, three stories of asymmetrically arranged rooms rose against it; all other parts of the palace were of one story, like Mshatta.[17]

At the external surrounding, there was a diagonal hallway with a cupola structure at the entrance hall. Furthermore, this structure presumably facilitated access to the mosque and the yard area.

3.2.2. Four Bayts

The palace had four separate living chambers called *bayts*, each of which contained a courtyard accompanied by two northern and southern structural portions, each of which comprised three separate cells.

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[16] Creswell, K.A.C, *A Short Account of Early Muslim Architecture*, (Cairo: The American University Cairo Press, 1989), p. 248-249.
[17] Hoag, J. D, *Islamic Architecture*, (Rizzoli International Publications, 1975), p. 39.

3.2.3. Gateways

The majestic palace contained three gateways of homogenous architectural style. The complex was a fortress and prepared against invasion. The gate also had arches, as described by Creswell:

> The arched entrance, 3 m (10ft) wide, is set between two quarter-round towers which project exactly the same distance as the others. To right and left is a groove about 20 cm wide by 30 cm deep, which shows that there must have been a portcullis here. At the back, at a distance of 1.95 m, is another arch, 1.83 m in span, and between the two is a vestibule measuring 3 by 1.95 m, covered by a tunnel-vault, in which are three slits, 17 cm wide, running from wall to wall.[18]

3.2.4. Court of Honour

The Court of Honour is a governmental meeting area meant for non-compliant affairs where government officers came to present reports etc. In Ukhaidir there is a dome-shaped *liwan* of 11 m depth, 6 m wide. Upon the *liwan* there was an archway elevated to the *liwan* level with an oblong shape. Moreover, there was also a Persian architectural trait, namely the *pishtaq* or façade built and attached to Ukhaidir's Court of Honour. Another pattern introduced into Abbasid architecture that could be observed in the Court of Honour is the ornamentation of the surface, with the enclosure imprinted with tiles to achieve a trick contrasting radiance and shadow. This architectural pattern, called *hazarbaf*, came to be prolific in subsequent Abbasid architecture.

There were domed-shaped chambers on every corner of the large liwan. This glorious palace had many features resembling earlier Islamic palaces. For instance, its inner wall closely mirrored the Umayyad Mshatta Palace, and its huge corridor had nearly the same equidistant dimensions as the Imarat-i Khusraw Palace. Indeed,

[18] Creswell, K.A.C, *A Short Account of Early Muslim Architecture*, (Cairo: The American University Cairo Press, 1989), p. 249-256.

Ukhaidir clearly adapted many characteristic features from Sassanid Persia. For instance, many particular details in its style, in its regulation structure, and its masonry indicate similarities.

According to some researchers the Abbasids adapted and surrounded themselves with Sassanid architectural patterns more clearly than the Umayyads. Eventually this palace remained as a stable and distinctive Persian architectural example situated in the history of Islamic architecture. Moreover, this pompous palace carried many resemblances of Umayyad palaces as well. However, it was much more than a conventional palace, and from the remaining parts of the complex we could say that it was designed as a self-sufficient compound, including with farming infrastructure, in the centre of a sprawling city, clearly designed to allow the inhabitants to survive all conceivable attacks, civil wars, and invasions. Aerial archaeology indicates that it had hidden underground water canals.

> The palace itself is set within a much larger trapezoidal enclosure which had at least ten chambers adjoining the inner face of its western wall. This enclosure was divided into two unequal parts by a wall which joined the south-western corner of the palace proper to the southern wall of the outer enclosure.[19]

Architecturally, from the above accounts, it could be said that the Palace of Ukhaidir displays the amalgamation of diverse cultures, which in turn contributed to the growth of Islamic palaces. Apart from the overwhelming Persian influence, there was also Umayyad architectural traits.

3.3. JAUSAQ AL-KHAQANI

The earliest – and easily the largest – of the Samarran royal palaces was that of the Caliph al-Mu'tasim, known as the Jausaq al-Khaqani, built in 836 CE. It is named

[19] Hillenbrand, R, *Islamic architecture: Form, function and meaning*, (2004), p. 396-97.

after the Central Asian official (or conceivably the architect) entrusted with its erection, Khaqan Urtugh Abu'l-Fath ibn Khaqan.[20] It was so vast that Ernst Herzfeld, the chief archaeologist who excavated its ruins, commented that it would take more than two decades in order to expose its remains. Henri Violet, a French archaeologist and architect, also explored the remains of this giant structure.[21] He discovered after some investigations that this enormous palace consisted of some separate departments, as discussed below.

3.3.1. Bab al-'Amma

The Bab al-'Amma ('Gate of the People') is the best protected part of the palace, with a 12 m high façade and with three equidistant dome-shaped rooms facing the Tigris. The first room had a grand sized *liwan* 17.50 m deep, 8 m broad and almost 12 m high. The inner parts of the *liwans* were ornamented with plaster material. Afterwards, Viollet and Herzfeld[22] discovered some parts of this *liwan* among the architectural ruins:

> The intrados of the frontal arch of the great liwan was decorated with a broad central strip and two much narrower borders, 32.5 cm wide. The latter were composed of ascending vine stalks forming a double row of loops, each containing a vine-leaf with lobes separated by drill-holes, like eyes, surrounded by concentric grooves. The central strip, 95 cm broad, was occupied by a series of eight-lobed rosettes, apparently knotted at their points of contact.[23]

In the meantime, in comparison to earlier Abbasid palaces, this palace of al-Mutasim was vast, being almost 1,500 m long; al-Mansur's palace in Baghdad was only about 107 metres in length. The only remaining part of Jausaq Palace is the Bab

[20] Ibid., p. 399.
[21] Creswell, K.A.C, *A Short Account of Early Muslim Architecture*, (Scholar Press, 1989), p. 333.
[22] Henri Viollet and Ernst Herzfeld were two important archaeologists of the 20th century.
[23] Creswell, K.A.C, *A Short Account of Early Muslim Architecture*, (Cairo: The American University Cairo Press, 1989), p. 333.

al-Amma, which consisted of three portals. The layout of these Samarran palaces is derived mainly from archaeological excavations, plaster plates, and paintings, but at the same time it is hard to imagine their actual magnificence as they would have appeared in their original splendour.

The throne room of this structure consisted of a series of six compartments. At the south of this structure the *harim* outstretched, with an immense appearance. At the northern part the Caliph had his personal apartments. There were hidden hallways in this structure that connected the North and South together, which are characteristic examples of privacy among the Abbasid elite in their monumental structures.[24]

> At the heart of this gateway block lies the throne room, and this too, like the processional approach and the triple-iwan entrance, can claim no special originality. It is cruciform, with a domed square chamber at the centre and a triple aisled basilical hall forming each arm.[25]

The layout of Bab al-Amma was likely influenced by Christian architects of the Middle East. The martyrium of St. Simeon in Aleppo is similar to Jausaq in its features, albeit on an almost miniature scale in comparison.[26] These constructions are considered as a second-degree building with hidden rooms, sprinklers, water-courses and quarters. Furthermore, we could observe that at the east side of this building one grand square was outstretched with the dimensions of 180x350 m.[27]

This structure was completed within a little *sirdab* encircled by some small barns in order to shape an open space. Additionally, upward of this structure there was a huge sized atrium that was used to play polo. On the eastern part of this atrium there

[24] They were typical of this period and were perhaps a response both to the sheer complexity of these buildings and to the familiar obsession with secrecy and security. Hillenbrand, R, *Islamic Architecture*, (Edinburgh: Edinburgh University Press, 2000), p. 402.
[25] Ibid., p. 402.
[26] Ibid., p. 402.
[27] Grand Esplanade, a largely open space partly paved in marble and provided with gardens and water channels. Ibid., p. 402-403.

was a tribune and audiences could watch the games. It could be said that this structure draws attention with its complexity.

3.4. PALACE OF BALKUWARA

The last Abbasid palace to be discussed here is the Palace of Balkuwara that was constructed in Samarra by the Caliph al-Mutawakkil in about 849/860 CE.[28] This unique palace portrayed Umayyad architectural style on a large scale. From its tremendous measurements it could be understood that it represented the characteristic features of Samarran palaces. The German archaeologist Ernst Herzfeld excavated this structure, but there was no clear, discernible layout.[29]

> Herzfeld excavated here between 12 July and 9 October 1911. He soon found that he had to do with an immensely large palace, consisting of a rectangular walled area of 1,250 m (1,367 yd) a side, flanked by towers, the south-west side of which rested on the banks of the Tigris, here 15 m (49 ft) high.[30]

The interior part of the palace was occupied by one grand entrance in the centre of the eastern enclosure. It could be observed that some characteristic features of the Palace had similarities with earlier Umayyad structures (e.g. the Palace of Mshatta). For example, the oblong shape is divided into three equidistant sections. At the second section of this part were the Throne Room, the Courts of Honour, and gigantic passageways. In this spectacular structure there were three courts, and nine hallways. The three throne rooms opened towards the water and the third court. A further enclosure had a gigantic garden surrounded with walls, and this garden was

[28] Some other accounts give different perspectives about the construction date. For instance, Jairazbhoy considered the date to be 855 CE, while Creswell stated that 'Balkuwara cannot be earlier than 235 H (849)'. On the other hand, Balkuwara must almost certainly have been built before 859 CE, for al-Mutawakkil's whole energy must then have been devoted to the founding of his new city al-Ja'fariya. Creswell, K.A.C, *A Short Account of Early Muslim Architecture*, (Cairo: AUP, 1989), p. 367.
[29] Hillenbrand, R, *Islamic Architecture*, (Edinburgh: Edinburgh University Press, 2000), p. 404.
[30] Creswell, K.A.C, *A Short Account of Early Muslim Architecture*, (Cairo: The American University Cairo Press, 1989), p. 365.

completed with ornamental mansions. This glorious garden had a jetty connected ot the river.

Another similarity with Mshatta is that the surface of the court had a triple-arched face.[31] This in turn represents Hellenistic architectural style. The external hallways of the palace located on the transverse side share the regular style of Samarra. The interior halls of the palace lined up in a diagonal style, and among these halls the central one functioned for the public. The triple-arched frontline was ornamented with glass and its background was a golden colour. There were a few other appealing colours, like green, dark green, and shades of gold.[32] The entrances of the chambers were made of gilded timber. In the ornamentation of the windows we could see more variety in colours, including green, dark green, violet, blue, and dark blue. The two side tracts of the great rectangle contain an agglomeration of single houses.

On account of the size of the palace, the space between the river wall and the line of the inner side of the third Court of Honour sufficed for these houses; the space alongside the first two courts remains nearly bare.[33] The individual dwellings represented exactly the characteristic Samarra house features, in 16 rooms. These dwellings could have served as a living place for the household of the ruler.

One of leading historians of Islamic civilization, al-Yaqubi,[34] remarked about the structure of the headquarters that each of them comprised mosques, bazaars, and sentry posts for the soldiers. This glorious palace was constructed by the Caliph al-

[31] A famous Umayyad palace constructed during the reign of al-Walid II, between the years 743-744 CE.
[32] Gold, green, and mother of pearl occupy about equal proportions. Creswell, K.A.C, *A Short Account of Early Muslim Architecture*, (Cairo: The American University Cairo Press, 1989), p. 366.
[33] Ibid., p. 366.
[34] Ya'qubi says again and again that each of these quarters (*qata'i*) contained barracks for the troops, a little bazaar for their needs, baths, and mosques. In the description of the *qata'i* of Ibn Tulun, Maqrizi mentions the great square for polo. All of these features exist at Balkuwara.

Mutawakkil for his beloved son al-Mutazz, and his name is engraved in the crown room of the dynasty. The Palace of Balkuwara was comparable with the Palace of Jausaq al-Khaqani in terms of its façade. The entrée part of the palace was located in the north-east, and access was easier, instead of using the Tigris.

The Persian impacts upon the Abbasid architecture in Balkuwara were readily evidenced by the main axis being interrupted by some courts and passageways that are derived from classic Persian four-sectioned gardens.[35] According to Creswell, this format came to the scene with former techniques dated to 847 CE, and the forming process sped up during the reign of al-Mutawakkil. The oblong shape of the Palace measured 460 m by 575 m, while the exterior complex was subdivided into four quarter circles. As Hillenbrand described:

> On the longitudinal axis the spine of the building is formed by three courts in succession, each with a monumental salient gateway, leading eventually to a huge cruciform throne room flanked by deep iwans on the main axis.[36]

The subsections of Balkuwara already mentioned could consolidate this analogy. One more additional forecourt that overlooks the water gives rise to a crucifix layout structure:

> The very fact that several geometric patterns can be traced in this ensemble – even though it may seem that they are mutually exclusive – warrants the conclusion that the architect 'thought big', simplifying the several components of the design into blocks which would be variously arranged.[37]

Herzfeld,[38] a German archaeologist who performed extensive research on Islamic architecture, demonstrated from literal documents that these magnificent palace structures expressed an illustrated format in the world of Islam. At the right and

[35] These gardens are known as *chahr bagh* in Persian style. Stierlin, H, *Islam: Early Architecture from Baghdad to Cordoba*, (Koln: Taschen, 1996), p. 127.
[36] Hillenbrand, R, *Islamic Architecture: Form, Function and Meaning*, (2004), p. 404-405.
[37] Ibid., 405-405.
[38] Ibid., 405.

left parts of this structure garments and drinks were stored, respectively. There was a gigantic square containing the throne room, and a separate building for slaves. Some classical writers often characterised Islamic architecture features with fabric materials.[39]

> The throne room and its immediate precinct are a miracle of precisely synchronised and graded emphases. From the river and from the innermost courtyard the approach is equally imposing: a deep central iwan flanked by two shallow ones. Opening from the square and probably domed central chamber along the cardinal points are four halls.[40]

This brief illustration of this palace is not enough to declare all of its aspects, but it has given an overview of its distinctive features in relation to wider Abbasid architecture. The social order could be considered as the main theme of the Abbasid community that naturally affected the location of the plot and also the selection of the substances used in construction. Balkuwara was in some ways a reiteration of Baghdad in terms of seeking to create a stable and safe space. There were three vacant and gigantic sized courtyards that evoked the magnificence of the imperial capital. It was possible to observe these courtyards from the external entry and each of them was smaller than the ultimate one. At the girder corner of the crown-room there were enormous sized gateways that leading to these courtyards, which were described by Hillenbrand thus:

> The central tract, however, is dominated by the three empty courtyards. From the outermost court, with its relatively simple gateway block, and with no other feature of note, the way leads into the middle court with its central pool and elaborate gates at each end.[41]

As mentioned previously, the selection of materials projected the social order in many ways. The substance of sealed-soil was considered as the simplest material at

[39] For example, al-Maqrizi characterized the Palace of ibn Tulun as a mini *tunic* called a *qamis* in Arabic.
[40] Hillenbrand, R, *Islamic architecture: Form, function and meaning*, (2004), p. 405.
[41] Ibid., p. 405-406.

that time, and for the two-external forecourt it was displaced with mud-brick, which inside the courtyard and for the crown-room turned to be baked brick. The standard of the ornamentation followed-up an expeditious greatness. The Palace of Balkuwara, in its complicated magnificence, is regarded as one of the majestic examples of Abbasid architecture.

CHAPTER FOUR

ABBASID MOSQUES, 750 - 945 CE

4.1. INTRODUCTION

This chapter discusses the early period of the Abbasid era witnessed the most glorious examples of Islamic architecture seen to that time, and the mosque assumed a scope more restricted – and elevated – to the purposes of prayer, as dedicated, purpose-built structures assumed other roles traditionally played by the mosque. Many important architectural features also appeared in the mosque itself during this time, including the minaret, *minbar*, canopy (dome) and courtyard (*sahn*). In this chapter, attention is focused on early Abbasid mosques such as the great mosques of Samarra and Qairawan, and the Mosque of Ibn Tulun. In building these mosques, the Abbasids maintained some architectural features of past dynasties, such as the Umayyads, in shape as well as building materials.

Perhaps the quintessential Abbasid mosque was the very early one constructed in the middle of Baghdad by al-Mansur in 762 CE. al-Khatib described it as being made of sun-dried tiles, with a roof of timbered pillars.[1] The layout of this mosque represented the classic Iraqi architectural patterns. We can also observe the glossy development of Islamic mosque architecture during al-Mutawakkil's reign, such as the Great Mosque of Samarra, occupying a huge, rectangular domain. The *riwaqs* of the mosque had different bottoms, and on the western and eastern corners there were four hallways, while at the north part there were three. The principal prayer hall comprised

[1] Known only from al-Khatib's description, the mosque was a sun-dried brick building, the roof of which was carried by wooden columns. Kuban, D, *Muslim Religious Architecture: The Mosque and Its Early Development,* (Brill, 1974), p. 16.

25 chambers adjacent to the *qibla* enclosure. The surrounding walls (including the *qibla* wall) had a total of 16 entrances, reflecting the mosque's grandeur and size. It had great quadrangular scaffolds made of burnt brick, and the minaret still remains, known as the Manarat al-Malwiya ('Spiral Minaret'), separate from the northern enclosure and surging upright, perpendicular from the ground. This clearly continues the ziggurat, the primordial Mesopotamian archetypal temple structure, and the Sassanid Pillar of Gor (the architects cannot have been blind to the clear evocation of both in the design of Samarra).

Being located in Mesopotamia also determined the materials used in construction, such as baked bricks and relatively few masonry pillars. The series of scaffolds reaches a latitude towards to the *qibla* enclosure, and we can observe significant conclusion that the *mihrab* structure was no longer covered with a cupola. During the early Abbasid period (750-945 CE), Islamic architecture illustrated similar features with the preceding Umayyad period, and a lot of heterogeneous borrowing form foreign influences, including Persian, Turkish, Byzantine, and Greek. As Spahic stated about the general features of Abbasid mosques:

> Mosques with the roof resting directly on piers or wooden columns without the intermediary of arches were widely constructed. Nevertheless, mosques with roofs resting on arcades appeared too. The square plan of early Iraqi mosques departs from the two great mosques of Samarra, nevertheless it was brought to Egypt by Ahmad ibn Tulun. There were also vaulted mosques. Mosques with a dome in front of the mihrab, though not a prominent feature of this period, were scarcely available.[2]

Early Abbasid mosques included *sahns* not encircled by *riwaqs.* In contrast to that, we can observe in some mosque examples in which the *sahn* was enclosed with a *riwaq* structure in every corner. The minarets of quadrangular mosques remained the

[2] Spahic, O, *Islamic Architecture*: *Its Philosophy, Spiritual Significance, and Some Early Developments*, (A.S Noorden Publications, 2009), p. 242-243.

mainstay in the Muslim world for a long time. The weather conditions of Mesopotamia land affected the architecture planning and thus the courtyard of the mosques was constructed to fit as many people as possible at one time, and to protect them from the heat, especially for the congregational prayer on Friday.

Moreover, the addition of passages to the secondary portions made it pleasurable for the public to take a walk in the neighbourhood of the mosque, which began the inclusion of aesthetic elements in mosque compounds that incorporated elements of Persian gardens, resulting in increased use of passageways in later mosques. There were some changes in the cupola of mosques that created visual assistance and removed the dryness from these architectural patterns. A series of buttresses (*spolia*)[3] with the distance between two pillars caused the repetition of many unions to come altogether. Therefore, well organized pillars created a martial sense on the structure. For instance, the Great Mosque of Samarra (238/852) was carrying plenty of these pillars on each corner, with entrances that attached to each of them.

There has been plenty of archaeological investigation to uncover the structures of this period, and they have filled in many gaps associated with the deficiency of literary evidence concerning architecture of the period, including evidence of the Abbasids formed and constructing Islamic monuments over those of the Umayyads and other previous dynasties. However, the Abbasids' magnificent and profound architectural style, that borrowed and adapted from many cultures, can also be fleshed out in detail from the limited literary evidence that exists, and some ornamental illustrations.

[3] Rows of supports.

The centre of the Round City of Baghdad housed the Grand Mosque and the seat of Abbasid government. This is highly significant, given the cosmological and metaphysical effort put into Baghdad's design, including astrological architecture dating back to the Assyrians, as iterated in the pre-Islamic cities of Nineveh, Hatra, Haran, and Firuzabad.[4] More prosaically, the structure of this mosque was a repetition of the archetypal hypostyle buildings of Iraq.

In almost all of the earliest Abbasid mosque examples pillars were used with short roofing systems, but more complex scaffold structures previously seen in Harran and Damascus were adopted from the 9th century. An early characteristic of Abbasid mosques was the use of enclosing passageways around every corner of the structure, which was a spontaneous improvement in mosque architecture. These additions were alongside the increasing use of vaulting systems, which became increasingly complex and technically advanced under the Abbasids, though the earliest Abbasid arch patterns in mosques were adopted directly from Sassanid and Byzantine prototypes.

Some mosque examples had idiosyncratic enclosed chapels set off the main prayer hall, which was a fundamental innovation echoing church architecture antithetical to the ethos of Islam, which was intended to emphasise the holiness of the sanctuary. Of less doctrinal import, the increasing elaboration and decoration of mosques became a firmly embedded part of mosque architecture under the Abbasids, especially in mosques with aristocratic patrons. Ceilings were raised and vaulted, and walls were embellished with complex and expensive mosaics and plasterwork, which was relatively rustic in the Byzantine style during the early Abbasid period (as seen in the Umayyad Dome of the Rock for instance), but which became exquisitely refined and ornate by the mid- and late-Abbasid era, including the dissemination of arabesque

[4] Stierlin, H, *Islam: Early Architecture from Baghdad to Cordoba*, (Koln: Taschen, 1996), p. 118.

geometric designs as a staple decorative element in Islamic architecture in general. While orthodox and puritan trends are wary of embellishing mosques, it should be noted from a religious perspective that the innovations developed under the Abbasids improved the prayer space itself, for which the mosque was instituted, integrating engineering solutions and superior craftsmanship to optimise architectural elements conducive to establishing and elevating the experience of devotees (i.e. broader ceilings and fewer columns, with more robust roofs protecting worshippers from the elements).

4.2. THE GREAT MOSQUE OF SAMARRA

The enormous Great Mosque of Samarra was built in the second caliphal city between 848-852 CE, during al-Mutawakkil's reign.[5] The Great Mosque of Samarra was the largest structure in the Islamic world. The first rectangle of the mosque measured 376 by 444 metres, while the second oblong shape was 240 by 156 metres.[6] This rectangle plan encircled with some barriers and split from the initial rectangle with some domains. These barriers that separated the two rectangles from each other were named *ziyadas*,[7] which contained lavatories, repositories, and ablution facilities.

The prayer tower of the Great Mosque was inspired by the ancient Mesopotamian ziggurat[8] architecture, but there remain some unanswered questions regarding to its original structure as no comparable examples remain from that time. Currently, the ziggurat tower is surrounded by burnt tiles. These magnificent walls

[5] According to Ernst Kuhnel this date was (846-852). Kuhnel, E, *Islamic Art and Architecture*, (Cornell University Press, 1966), p. 51.
[6] Stierlin, H, *Islam: Early Architecture from Baghdad to Cordoba*, (Koln: Taschen, 1996), p. 130.
[7] Aerial photographs show that these walls formed part of a great enclosure which surrounded the mosque on the east, north, and west. Creswell, K.A.C, *A Short Account of Early Muslim Architecture*, (Scholar Press, 1989), p. 361.
[8] A spiral shaped tower with an outer ramp, whose origin is clearly tracable to the Babylonian stepped tower (ziggurat), and which has parallels in Chinese buildings of the T'ang period. Kuhnel, E, *Islamic Art & Architecture*, (Cornel University Press, 1966), p. 51.

encompass a space of 787 by 512 m, and are considered the most massive walls in Islamic architecture. The interior of the mosque is described by Hoag as follows:

> The interior supports, all fallen, were compound piers composed of octagonal brick cores disguised as marble and surrounded by four salvaged column shafts. Similar piers occurred at Khirbat al-Mafjar but in coursed masonry. The flat roof of teak rested directly on the piers; hence, the prayer hall was multidirectional, like those of nearly all the other so-called hypostyle mosques of Iraq.[9]

4.2.1. Outer Walls

The outer walls of the Great Mosque of Samarra comprise a majestic and extensive oblong shape, using burnt tiles as the main construction material. The outer walls were described by Creswell thus:

> The great mosque (233) forms an immense rectangle with bastioned walls of burnt brick, measuring about 240 by 156 m (784 by 512 ft) internally (proportion approximately as 3:2); its area, therefore, is nearly 38,000 sq. m (45,500 sq. yd).[10]

The Mosque of Samarra would have been the largest mosque in the Islamic world even without the ancillary *ziyada* structures. All that remains from the mosque are its surrounding walls (which were probably preserved for potential defensive applications), while the framework and buttresses vanished permanently, probably reused in other structures. The dimensions of the surrounding walls comprise 2.65 m thickness with red square tiles of 25-27 cm.

The fortresses of the mosque had 3.60 diameter, with a partially circular design. There were 15 m long compartment barriers between these fortresses.[11] In addition to the iconic main tower, there were four corner citadels and twelve medium

[9] Hoag, J. D, *Islamic Architecture*, (New York: Rizzoli International Publications, 1975), p. 50-52.
[10] Creswell, K.A.C, *A Short Account of Early Muslim Architecture*, (Scholar Press, 1989), p. 359.
[11] Ibid., 359.

sized citadels in the west and in the east. These tower structures were all of oblong shape, with layered tiles.

4.2.2. Doorways

The Great Mosque of Samarra had 16 entrances of different diameters. At the upper part of these doors, the brickwork led into cornices, which reveal that each door was opened by a timbered girder. Creswell added that:

> Above this, in the southernmost doorway on the west side, is a strip of perfectly smooth brickwork, slightly in advance of the side of the doorway below, which goes right through the wall.[12]

4.2.3. Friezes

Given the unprecedented scale and vast expanses of the mosques built by the Abbasids, and the use of relatively cheap building materials (mainly bricks), the main concern of finishing these structures was to embellish the wide swathes of wall with attractive designs, thus mosaics were used in some cases, but plaster became the most cost effective and expedient form of decoration, with sprawling friezes being common, although few fragments of such work have survived. The walls encircling the Great Mosque of Samarra were 240 by 156 meters, and 440 by 376 metres. The outer walls were probably plain, but the inner walls of the mosque were decorated. In between the mosque interior and the external perimeter walls there were enclosures, the inner of which contained a forecourt measuring 160 by 110 metres, with 14 different portals. Moreover, there were some buttresses on the north part of this, with nine in the south corner, and four in the east side, comprising the *haram* structure. The prayer hall comprised almost twenty-five naves, and it had a tremendous enclosed

[12] Ibid., 359-360.

area that enabled thousands of worshippers to pray at the same place. This enclosed area was vast, comprising almost 10,000 m^2.[13]

> The sides were made up of 168 columns and the portico to the north of 72, making a total of 456 rectangular columns separated by four small corner columns. A wooden roof of teak rested directly on top of these supports, without any arcades.[14]

The buttresses of the mosque were plastered and could be noticed from far away. The remaining part of the mosque, like the *mihrab*, had costly exterior plating with valuable materials, including ivory, encaustic tiles, and pearls.[15]

4.2.4. Fenestration

The Great Mosque of Samarra was notable in having many glorious and shining windows. At the top of the south enclosure, there were around 24 windows with decisive status through the axis of the 25 passageways that were running into the place of worship. Besides that, on each corner there were another two windows leading to the prayer hall, making a total of 28 great windows.

4.2.5. Interior

The interior was characterised by its 25 broad aisles, in harmony with the axis of the windows. The central passageway was the widest. According to Herzfeld, there were 24 sequences of nine buttresses located around the place of worship, and another three one in the northern part of the *riwaq.*[16] The end of all of these sequences flowed towards the *qibla* structure.

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[13] Stierlin, H, *Islam: Early Architecture from Baghdad to Cordoba*, (Koln: Taschen, 1996), p. 130.
[14] Ibid., p. 130.
[15] Ibid., p. 130.
[16] Creswell, K.A.C, *A Short Account of Early Muslim Architecture*, (Cairo: The American University Cairo Press, 1989), p. 360.

> Just sufficient vestiges remained of the piers for it to be possible to fix their form. The bases were squares of 2.07 m a side. On them stood an octagonal brick pier with marble columns at the four corners. As these columns were only 2 m long, three superimposed ones were required in each case, joined by metal pegs and lead, as in the Great Mosques of Kufa and Wasit.[17]

4.2.6. Mihrab

The mihrab structure of this mosque was not in a circular shape (typical of other Abbasid mosques, and the general habit to the present day), but a right-angled form. The dimensions of the mihrab were around 2.59 m, with 1.75 m depth. As described by Creswell:

> It had been flanked by two pairs of columns of rose-coloured marble from ‘Aintab, with clock-formed bases and capitals, on which rested two concentric arches set in a rectangular frame, nearly as high as the clear height of the mosque. There were traces of gold mosaic in the spandrels.[18]

4.2.7. The Minaret

The minaret structure of the Great Mosque of Samarra, known as the *Malwiya*, was the most extraordinary part of it, and remains an iconic and distinguishing feature of Iraqi architecture in general. Made of brick, this remarkable tower had a spiral platform rising to the sky, with 55 m elevation. This structure is so exceptional that its form is not useful for an analysis of conventional structures in Abbasid architecture, although it is typically Abbasid in drawing on and improving pre-existing architectural styles and techniques. Based on Babylonian ziggurats, it is entirely alien to archetypal early Islamic architecture. The name *al-Malwiya* (‘spiral’) has proved to

[17] Ibid., p. 360-361.
[18] Ibid., p. 361.

be an enduring and sturdy structure, which originally dominated the middle of the mosque.[19]

The peak part of this minaret was in a cylindrical layer, ornamented with eight parallels arched in a specular shape. There was a cavity in the southern part of this structure shaped as an anteroom, leading to a perpendicular stairway. At the beginning of this stairway there was a flat form, but later it was changed to a helical shape leading to the summit.

4.3. THE GREAT MOSQUE OF QAIRAWAN

As an example of the dissemination of Abbasid architecture from its Iraqi heartland to the wider Muslim world is given by the 8th-century Mosque of Qairawan in North Africa. The initial structure was built by 'Uqba Ibn Nafi' in 50 AH (670 CE),[20] which subsequently underwent many restorations until the final form completed by the Aghlabid ruler Ziyadat Allah in 836 CE. Hoag wrote:

> According to recent studies by the late Alexandre Lezine, Ziyadat Allah's new mosque, finished in 836, consisted of a prayer hall about 236 feet wide, with sixteen aisles of seven bays each flanking a much wider mihrab aisle leading to a dome over the mihrab.[21]

Characteristic architectural points about Qairawan include that part of the cupola is located in the face of the *mihrab*, which one can sense has been put into the structure to affect a glorious-looking cupola. Qairawan embodies two aspects of 9th-century Abbasid architectural achievement: it reiterates the hypostyle form characteristic of Abbasid structures in Kufa, Fustat, and Baghdad; and it proliferates ornamental motifs connected with architectural patterns that may be described as

[19] al-Malwiya, which literally means 'snail-shell', was perhaps the most spectacular example of Abbasid architecture. Stierlin, H, *Islam: Early Architecture from Baghdad to Cordoba*, (Koln: Taschen, 1996), 130.
[20] Uqba Ibn Nafi was the conqueror of large parts of North Africa.
[21] Hoag, J. D, *Islamic Architecture*, (New York: Rizzoli International Publications, 1975), p. 64-72.

Abbasid, but which are much more lavish than seen in Iraq. For instance, Samarran mosques have minimal decorative patterns, partly due to the unfeasibility of decorating its vast walls, while Qairawan and in the Aqsa Mosque[22] have elaborate coloured and sculptured works, mostly from timber-made plafonds.

Some Umayyad remnants remain in Qairawan, including the quadrangle minaret tower. During the 8th century, many North African mosques were laid out in a T-shape, which is also seen in al-Mahdi's Masjid al-Aqsa. In the course of Ziyadat Allah's construction, brick or stone archways were added, either in the form of circle or horseshoe shapes. Later on, the fifth Amir of 'Ifriqiyya' (analogous to modern Tunisia), Abu Ibrahim Ahmad, rebuilt Ziyadat Allah's *mihrab* structure and added luminosity to the bricks. Ettinghausen and Grabar describe this mosque as follows:

> The building, a rectangle of 135 by 80 metres, was of stone, with narrow rectangular buttresses on the outside. Inside is a perfect example of a hypostyle with courtyard and porticoes. Like Abu Dulaf, it combined the traditional hypostyle with a T, which was raised above the rest of the aisles and punctuated by two domes, one at the crossing of the T, the other (later in its present form) at the opening on the court.[23]

Carved marmoreal plates were introduced, either from Samarra or Syria. Abu Ibrahim Ahmad also incorporated the *riwaq* structure during the same period. We can observe the *maqsura* structure added as a final substantial part into this building. This *maqsura* structure did not encircle either the *minbar* or *mihrab*, rather it was adjacent to the head of the prayer hall portal.

It is easy to see some similarities between the *mihrabs* of Abu Ibrahim Ahmad and al-Mansur, and the timbered panels in Masjid al-Aqsa Mosque are clearly similar to patterns in Abu Ibrahim's construction. This indicates some kind of architectural equilibrium spanning the Muslims world under the Abbasids, but it also induces an

[22] Located in Jerusalem.
[23] Ettinghausen, R., and Grabar, O, *The Art and Architecture of Islam* (650-1250), (Penguin Books, 1987), p. 94-100.

eclectic mix of styles, as well as some definitive regional preferences. For instance, the distinctive pointed arches of Abbasid architecture in Iraq, which became the 'Islamic' norm until the present day, took a long time to take root in North Africa.

The considerable architectural structures of the Abbaid era, specifically the mosque structures, had a standard essence, despite their varied motifs. There were some substantial examples that can be observed in the *qibla* enclosure of the Qairawan, with tiles and panels influencing the *mihrab* domain. The Great Mosque of Qairawan comprised a rectangle shape, with its primary axis indicating the *qiblah*.[24]

4.3.1. Exterior

The framework of the mosque was split by some diverse pillars with various dimensions and shapes. In the south-west corner there were gateways placed amidst two separate pillars. The exterior frame was wholly wrapped with plaster and limewash, along with two gigantic pillars near the *qibla* enclosure. The first floor of the minaret tower was the only part not covered in limewash.[25]

The floor of the mosque inclined from west to east, which affected the elevation of the enclosures. Moreover, at the exterior part of the mosque the most striking compartments were the five cupolas and the great sized minaret. Among all sections of the mosque, the gigantic enclosure located in the *qibla* corner was the only part attracting the public's attention from outside.

From these barriers we can sense that few of them were constructed in perfect harmony, and a few minor enclosures were representative of one large enclosure. The

[24] Creswell, K.A.C, *A Short Account of Early Muslim Architecture*, (Cairo: The American University Cairo Press, 1989), p. 316.
[25] Ibid., p. 316.

lack of limewash on the two large pillars enables identification of their similar (probably parallel) construction with the minaret.

4.3.2. Doorways

In the Mosque of Qairawan there were eight antechambers, four of which were located in the south-west side, while the other four were in the north-east. Among the doors located on the north-east, just one had a veranda and cupola together. There were some epigraphs for the definition of these doors, and one situated on the northern-west side, the fourth entry, was named Bab Lalla Rejana.[26]

4.3.3. Minaret

The minaret is a three-layer quadrangular tower. In terms of height, the first layer is 10.67 m, the second is 5 m, and the third is 7.5 m. The first floor is actually conical. Creswell described the minaret thus:

> The entrance, which is a metre wide and 1.85 m high, is formed of two jambs and a lintel, all carved Roman fragments; above the lintel is a horse-shoe relieving arch. The first seven courses are formed of large blocks of stone, but the rest is built of small stone blocks only 13 cm high – so small in fact they look like bricks at a distance.[27]

The ladder part of this tower is not situated exactly in its heart. Moreover, the walls of of huge intensity. Each flight of the ladder structure is enclosed with a flat cupola.

[26] According to an inscription, to Abu Hafs in 693 AH (1294). Ibid., p. 319.
[27] Ibid., p. 321-322.

4.3.4. Sahn and Riwaqs

The *sahn* is an equilateral form upholstered with a subtle marble material. The south-west and north-east portions of this structure are 67 and 67.18 metres squared, respectively.[28] According to Henri Saladin, a French architect, the north-west front line was probably restructured at some specific periods.[29]

4.3.5. Sanctuary

The sanctuary of this mosque contained authentic form pillars splitting the space into almost 17 passageways through another 16 archways flowing vertically towards the back enclosure. The pillars of this sanctuary were approximately 3.55 m high, and 34-44 cm in diameter. Major pillar examples were the most diversified structures in the building, with their abutment points. The pillars located in the main passageways were 4.25 m tall, while other columns supporting the cupola were 4.70-4.90 m.[30]

4.3.6. Central Aisle

The central aisle of the mosque is more spacious than the other halls, flanked by another two passageways. The arches situated on the exterior of the passageways in every corner could be seen in the same form, while the internal passageways were in a sharpened horse-shoe form.

4.3.7. Mihrab

This indentation was 1.98 m broad and 1.60 m in depth, with a horse-shoe outline, with red and orange pillars and striking ornamentation of distinctive architectural

[28] Ibid., p.322.
[29] Ibid., p.322.
[30] Ibid., p.324.

expression. Almost 28 panels decorate the *mihrab*, each of which was 4 cm in diameter:

> At the edges of such panels, however, the brickwork behind is actually in contact with the marble lining. If, therefore, the marble was taken away, we would find a curved surface corresponding to it, with patches hollowed out to a depth of about 15 cm at those places that correspond with an openwork panel.[31]

4.4. THE MOSQUE OF IBN TULUN

The third splendid example of Abbasid mosque architecture analysed here is the Mosque of ibn Tulun in Egypt, which was constructed in 263 AH (876-877 CE). This glorious mosque was named after the eponymous founder, Ahmad Ibn Tulun, the son of a Turkish Bukharan slave of the Caliph al-Ma'mun. Ahmad Ibn Tulun received an ideal education, and his intellectual talents and court connections resulted in his employment in the Abbasid government, ultimately as Governor of Egypt.[32] In the year 870 CE Ahmad Ibn Tulun established a settlement at al-Qatai,[33] with a fortress and community mosque.

According to the Al Qudai,[34] the minaret tower and the mosque of Ibn Tulun imitated the style of Samarra in many perspectives. For instance, the usage of plaster covering and bricks as a construction material, and the external wall of the mosque could be given as examples of the ways in which this mosque was imitating the Samarran style. Another medieval Arab scholar al-Muqaddasi, correlated this mosque with Samarran style. He noted that the minaret tower of the mosque had stairs

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[31] Creswell, K.A.C, *A Short Account of Early Muslim Architecture*, (Cairo: The American University Cairo Press, 1989), p. 325.
[32] His heirs subsequently ruled Egypt and Syria until 905 CE. Hoag, J. D, *Islamic Architecture*, (New York: Harry N. Abrams, Inc Publishers, 1977), p. 56.
[33] A separate quarter bounded on the north by the hill on which stood the citadel, and on the south by his congregational mosque. Ibid., p. 56.
[34] An Egyptian historian and preacher.

reminiscent of the Malwiya tower in Samarra.[35] Indeed, it is unsurprising that Ibn Tulun would seek to replicate and propagate the latest architectural trends in Egypt that he had imbibed in his homeland, in the imperial metropolis in Iraq.

The Mosque of Ibn Tulun has a powerful impact determined by its relatively modest layout structure and its enormous dimensions. Anyone who enters the mosque can experience the quiescence and peace that lingers in the air, entirely disconnected from outer noises. Moreover, the latticework of the windows is astonishing. Hoag described the interior thus:

> It would be difficult anywhere to match the solemn peace of the interior, where a dignified procession of heavy piers and broad arches channels movement down the spacious aisles and muffles all sounds.[36]

The *sahn* was almost 92 metres square, encircled by *riwaqs*. The mosque as a whole was constructed with fired brick, evoking the Samarran-style *ziyadahs*. Its passageways and scaffoldingsclearly show the influences of Abu Dulaf Mosque.[37] Additionally, the layout is reminiscent of Kufa and Wasit, reflecting early Iraqi architectural techniques.[38] The three *ziyadahs* of the mosque extend the external measurement to an almost 1,750 square feet.

> The outer wall of the northwest ziyadah, once the principal façade, has a pishtaq about 3 feet high corresponding to the width of the mosque proper, which rises some 16 feet higher than the outer walls. The view must once have been very striking, with five regularly spaced central portals.[39]

Creswell's records that the minaret of the mosque was restructured by the Mamluk Sultan Lajin in 1296.[40] Some literary sources revealed that Ibn Tulun's

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[35] Creswell, K.A.C, *A Short Account of Early Muslim Architecture*, (Cairo: The American University Cairo Press, 1989), p. 405.
[36] Hoag, J. D, *Islamic Architecture*, (New York: Harry N. Abrams, Inc., Publishers, 1977), p. 56.
[37] Constructed in Samarra city by Caliph al-Mutawakkil in 859.
[38] Hoag, J. D, *Islamic Architecture*, (New York: Harry N. Abrams, Inc., Publishers, 1977), p. 56.
[39] Ibid., p. 56.
[40] Ibid., p. 56.

original minaret tower was a helical style and made of stone. The Samarran architectural tradition also stayed alive with the arch examples, with their enclosures and delicate lattice windows. The Mosque of Ibn Tulun, like Samarran mosques, was a structure that illustrated the increasing grandeur and power of Turkish interests in Abbasid governance.[41] This magnificent mosque was modified in minor ways, but it stands as a coherent example of 9th-century Abbasid architecture. Its layout is a rectangle shape with two square designs. The external measurements are 162 metres square. In the middle of the mosque there was a glorious and striking sprinkler structure, which was ruined in 968.

> The covered parts of the mosque consist of five aisles parallel to the qibla wall and a double arcade on the other three sides of the court. It is entirely of brick, and the supports are rectangular brick piers with engaged columns; the minaret is a fourteenth-century replacement of the original spiral.[42]

Egyptian architectural history was profoundly affected by the Samarran/ Abbasid innovations brought by Ibn Tulun. The architects of this mosque developed basic and at the same time impressive rigid structures, which was essentially revealed in the sanctuary and the design of the court. Grabar and Ettinghausen described the interior part of the mosque thus:

> They also lightened the outer walls by means of grilled windows and niches whose position is logically related to the structure of the interior. In addition, the decoration was fully subordinated to architectural forms: the narrow band of designs following every arch subtly emphasizes the lines of construction without overpowering them.[43]

[41] Refers to his father (Turkish slave).
[42] Ettinghausen, R., and Grabar, O, *The Art and Architecture of Islam* (650-1250), (Penguin Books, 1987), p. 92.
[43] Ibid, p. 92-94.

4.4.1. Ziyadas

The *ziyada* structure served as a protective wall that separated the mosque from other buildings located nearby the mosque. In some cases we witnessed the fact that they included bathrooms for the benefit of the worshippers. The exterior wall of the *ziyada* was approximately 8 m high, and the width was 1.35 m.[44]

4.4.2. Outer Doorways

The external entrances of the mosque are considered completely simple apart from some strips arranged by some sequence cycles in quadrangle spaces. These gateways are exclusively right-angled, leading to the mosque enclosure.

4.4.3. Inner Doorways

In the north-west of the mosque there were five doorways, while in the north-eastern and south-western parts had seven each. Some of them were upholstered with basic appearances at the edges, while their lower sides were decorated elaborately.

4.4.4. Minaret

The 22 m limestone minaret comprises four floors. The bottom part of this tower is quadrangular, while the next floor is orbicular. A stairway runs up the tower. al-Qudai supported the Samarran origins of this minaret's style, while Maqrizi and Ibn Duqmaq had slightly different views, affirming a traditional story. According to this, one day, Ibn Tulun was playing with a piece of paper, which he rotated in his hand. When he saw that the paper took a helical shape, he immediately wanted his minaret to be in the

[44] These *ziyadas* must be regarded as corresponding to the outer *temenos* (or sacred enclosure) of a Semitic sanctuary, such as the Arab conquerors met with when they captured Damascus. Creswell, K.A.C, *A Short Account of Early Muslim Architecture*, (Cairo: The American University Cairo Press, 1987), p. 405.

same shape, which he later achieved.[45] However, the current shape of the tower does not comply to these stories. Modern historical analyses of this tower affirm that it is essentially helical:

> Modern architectural historians unanimously agree that Ibn Tulun's mosque imitates the great mosques of Samarra in three features – the ziyadas, or exterior courts surrounding the mosque on three sides, the use of brick piers rather than columns for supports, and the form and siting of the tower.[46]

The early Abbasid era (750 to 945 CE) saw the most stunning proliferation of Islamic art, the hub of which was in Iraq, but at the same time the structures and the building forms were well-known throughout the Muslim world and beyond, and splendid architectural echoes are abundant in eastern lands like Bukhara and Nishapur as well as North Africa.

[45] This story goes back to the ninth century, and can be found among the fragments of Ya'qubi printed at the end of the Goeje's edition of his *Geography*. Creswell, K.A.C, *A Short Account of Early Muslim Architecture*, (Cairo: The American University Cairo Press, 1987), p. 405.
[46] Bloom, J, *Minaret: Symbol of Islam*, (Oxford University Press, 1989), p. 126.

CHAPTER FIVE

CONCLUSION

The chapter summarises the previous four chapters clarifying Abbasid palaces and mosques from 750 to 945 CE. The architectural elements of Abbasid mosques and palaces gathered from many sources revealed the accumulating power and prosperity of the Arab-Islamic Empire during the period, with the continuation and introductions of many styles in Islamic architecture from past dynasties, such as Umayyad, Sassanid, and Mesopotamian influences. Distinctive features of Islamic architecture during the early Abbasid period included *muqarnas* and pointed arches, which became preponderant among other architectural features and which came to symbolise an Arab-Islamic style, and indeed Islam itself.

This research mainly focused on Abbasid palaces and mosques from 750 to 945 CE, when the Buyids of northern Iran, notably under Adud al-Daula (949-983), rose to power, entered Baghdad, and finally reduced the caliphs to puppet status and marked as the end of effective central Abbasid government from Baghdad. Prominent mosques constructed during this period include the Great Mosques of Samarra and Qairawan, and the Mosque of Ibn Tulun. Prominent palaces highlighted in this research include the desert palace Ukhaidir at Baghdad, Jausaq al-Khaqani and Balkuwara at Samarra. The aim of the thesis was to highlight their main features and to trace previous architectural influences from past dynasties (Umayyad, Persian and Sassanid, and Byzantine etc.), and to shed light on new features introduced under the Abbasids.

The Umayyads were deposed in the bloodbath of the Abbasid Revolution in 750, which marked a sea change in the governance and culture of the caliphate from the Roman-Arab Syrian civilization of the Umayyads, centred in Damascus, toward the increasingly Persian, Iraqi civilization of the Abbasids, centred in Baghdad, with commensurate doctrinal shifts in Islamic currents and practices. This was analogous to the shifting locus of Roman civilization and culture when its effective centre changed from Rome to Constantinople.

The Abbasid dynasty nourished its art and architectural features in the milieu of Sasanian Persia, and the Samarran architectural style developed into a distinctive style even among other parts of Abbasid Iraq. The Abbasid victory resulted in their wholesale appropriation of the quintessentially Umayyad settlements of the region, such as Basra and Kufa. There is little information available about this conquest, but it could be said for these regions and also it could be witnessed many innovations in their mosque features from the Abbasids.

For instance, the hypo-style mosque with straight-roofed on wooden pillars was firstly developed in these regions, with acknowledged and discernible Persian influences (indeed, Persians were prolific architects and artisans in Abbasid construction projects), such as the *iwan* structure, associated with vaulted compartments. Sassanid impacts were enhanced by the subsequent inflow of scholars and artisans from Khorasan and Greater Persia, which intensified the Sassanid influences. The emerging Persianized Abbasid culture subsequently spread throughout Iraq and to other lands, including Egypt, where it is clearly manifest in the Ibn Tulun Mosque.

Excavations at Nishapur and Bahrain have revealed specimens of Samarran-style plaster decoration. This period of Abbasid mosques differs in terms of style in

Abbasid Iraq. There had been one special style, called *apadana*, in which the roof lies in a straight direction on timbered pillars, as seen in Samarra, Kufa, and Baghdad. Moreover, the mosque examples with their roof over passageways could be observed in the Mosque of Ibn Tulun and in the Mosque of Abu Dulaf.

The quadrangular design of early Iraqi mosques that mentioned in the earlier chapters, like in the city of Baghdad and Kufa, were introduced into Egypt with Ibn Tulun. Besides these mosque examples, we can point out dome-shaped mosques from that time in the Palace of Ukhaidir, the Great Mosque of Susa, and Tarik Khana Mosque in Damghan, Iran. The Iraqi-Persian mosque model had its dome situated in the face of the *mihrab*, as at the Great Mosque of Qairawan and the Great Mosque of Damascus. This feature was not been seen in Samarra or in Raqqa. Furthermore, in a few mosque patterns the courtyard was not encircled by arcades during the early Abbasid era, as at the great mosques of Tunis (864), Qairawan (836), and Cordova (787).

The palace architecture of Abbasids differed more sharply from that of the Umayyads, which perhaps reflects that the predominant cultural styles were derived from systems of government, thus they were more articulated in palaces than in mosques, presenting a sharper rupture between the Umayyads and Abbasids. Umayyad era palaces reflected court life and rituals rooted in Bedouin concepts, with a less refined and ornate character and less social stratification among the common population (apart from the ‘royal family’, all subjects were essentially equal). The archetypal Umayyad palace is thus reminiscent of a garrison. Conversely, Abbasid court life was increasingly populated and designed by Persian elites, who revived the pretensions of Sassanid court life, including strict hierarchies and ceremonial conventions, which was reflected in elaborate and ornate architectural styles, which

elevated and removed the government – particularly the Abbasid caliphs themselves – from the ordinary masses, facilitating rule by a burgeoning professional caste of bureaucratic Persian ministers.

The distance between the rulers and the ruled was physical as well as psychological, and Abbasid palaces are much more immense than their Umayyad predecessors, which themselves had been considered ostentatious Roman innovations when the Muslims first ruled in Syria. Abbasid palaces began to institute dedicated throne-rooms, designed for the theatricals and display of court rituals, with regulated access for spectators, who could penetrate a dome-shaped rectangular hall (liwan). The pivotal shape of Abbasid palaces was a main characteristic point, exemplified in the palaces of Samarra and Merv.

The majority of Samarran palaces were mud-tile constructions covered with an intense plaster material. According to the German archaeologist Ernst Emil Herzfeld, who conducted significant work and research on Islamic architecture, these Abbasid palaces were impromptu structures that embodied the '*schragschnitt*' type, as an outcome of new affluence and financial status, with spacious land sizes that could be used for many purposes. In Abbasid palaces ornamentation was relatively cheap but exquisitely detailed, including plasters, door sills, and plafonds. There were some influences from Umayyad motifs during the early era of Abbasid palaces, like the usage of mosaic glass utilized in the Palace of Balkuwara and in the Mosque of Samarra, but Umayyad equivalents began to appear rustic compared to the exquisite craftsmanship of Abbasid decorative elements.

The Abbasid era is to be chiefly credited with the emergence of geometric designs and the arabesque in Islamic art and architecture. Circumventing the Islamic prohibition on depicting animate beings (e.g. humans and birds etc.), Muslim artisans

developed complex and finely wrought geometric patterns with which they adorned Abbasid architectural structures. This is more obvious in latticework used for windows, as in Samarra, but with increasing skill and refinement such geometrical ornamentation sprawled its way across all available surfaces in examples of classic Abbasid architecture, with its mixed round corners creeping throughout palaces and mosques alike, pausing only to allow the eruption of magnificent pointed arches that appeared from the tenth century, especially the four-centred Persian style, as seen in Raqqa.

The Abbasids adapted many architectural features from Persia wholesale, and one of the earliest examples of this is the use of glazed bricks in the Palace of Ukhaidir (778 CE). Although Abbasids brought along many innovations into the Islamic world, not all of them spread to every corner of Islam, but their general style embodied in Iraq certainly became the prevailing 'Islamic' cultural expression, as seen in two fundamental, specific features: squinches and archways.

The archway feature became stunning from the establishment of the Abbasids until 900 CE, drawing on pre-existing techniques in Sassanid Iran. One half rounded example can be observed at Atshan, and it is also present in Ukhaidir, where the substantial archway feature consisted of two focus point. This type of archway marked a distinctive style in Abbasid Iraq for a long time until it was replaced by the new and much improved four-centred arch in more monumental structures. However, the introduction of the new arch style did not consign the former one to history, and it could be seen in some subsequent building examples, like the palace of Qasr al-'Ashiq.

According to K. A. C. Creswell, an English architectural historian, the oldest Islamic squinches are attributable to the Abbasid dynasty, but that they were rooted in

Persian architectural currents. Nevertheless, their rapid dissemination to Qairawan in Tunis and elsewhere is certainly attributable to Abbasid civilization and culture. The Islamic architecture of Iraq, along with the dynasties who patronized it, undoubtedly represents the adoption of pre-Islamic cultural styles, which is also manifest in building materials, with more Roman-Umayyad influence in the stone structures of northern Mesopotamia, and the preponderance of Persian-Abbasid mud-brick structures with elaborate ornamentation, particularly in the south.

The early period of Abbasid architecture has a more obvious and less nuanced appropriation of pre-Islamic Iranian impacts, especially in decorative elements. This reflected the wholesale reiteration of Sassanid culture and governance adopted by the Abbasids, such as their implementation of Iranian bureaucratic conventions and styles, and their interest in their diplomatic reliability and cultural heterogeneity. For example, the Roman governance paradigm that influenced the Umayyads was premised on assimilation, while the Parthian Empire was a multicultural and cosmopolitan confederation of peoples. Consequently, as the Arabs became Persianized, they conscripted Turkish hordes into their armed forces under Abbasid rule, ultimately building whole cities to accommodate them, such as Samarra.

While Persian influences were pervasive, due to the finite nature of human institutions and cultural manifestations (e.g. clothing), the most enduring and obvious examples of the continuation and development of Persian styles under the Abbasids is seen in architecture, such as Ukhaidir Palace. At this time, we can able to examine the new architectural leitmotifs that came to be part of Abbasid culture. It should be noted that the more evocative decorative elements are premised (and indeed were designed to disguise) technical innovations based on cheaper construction, using brick instead of stone, which enabled or led to the development of architectural elements such as

innovative archway methods. Moreover, these new architectural components were utilized for the ornamental intentions, and the presentation of geometrical decorations, particularly *hazarbaf*, made this period of architecture more unique.

In Abbasid architecture, timber and plaster was used in a widespread way in decoration boards. The shift of the capital of the caliphate from Damascus to Baghdad was reflected in governance, diplomacy, art, science, and culture, and was embedded monumentally in architecture. The Roman-style monolithic stone edifices of the Umayyads gave way to the quick-build brick palatial complexes of the Abbasids, encrusted with Persian elaborations. Baghdad (the Persian name for the city) was quintessentially a resurrected Persian Persepolis, primarily constructed of brick, plastered over to create a beautiful façade, with the prudent use of timber for structural purposes, especially in entrance portals, and elaborate woodwork in *minbars*.

The Abbasid cultural enterprise created a new concept and vision for Islamic cities, attracting diverse impacts from Asia to forge a new distinctive and fascinating style. One of the most iconic Abbasid Islamic structures is the magnificent and enormous Ukhaidir Palace, completed in 775 CE, which epitomises the palace-city model of Samarra, and marked difference in form and function from antecedent Umayyad palaces. Nevertheless, Umayyad architectural features were adopted in Abbasid residences, army headquarters, and administrative centre, including in Samarra itself.

In Samarra the Abbasids propagated Islamic art and architecture altogether, and reciprocally drew on and contributed to Christian and Jewish architecture. The artisans of that era illustrated their skills most emphatically in wall ornamentations, which can be seen abundantly in Samarra. Some of the substantial mosques were encircled by some surrounding latticework fences that dissected the sacred and

communal areas. These palace buildings indicate the imaginative and vibrant capacity of the Abbasid dynasty.

The historian al-Ya'qubi gives a fascinating insight into the nexus of government, logistics, and culture involved in Abbasid architectural production, stating that Baghdad was erected from nothing by a project involving almost 100,000 workers in rapid time, and the city of Ja'fariya was erected in a year – clear facilitated by the use of brick. Aside from the more important but prosaic realm of urban planning and construction, some Samarran palaces deserve to be mentioned in the context of the high life. The Palace of Jausaq al-Khaqani demonstrates the accommodation of delight, including facilities for hunting, dancing, and music. This manifests the apogee of prosperity achieved under the early Abbasids, which was embedded in their physical culture of architecture, which facilitated their lifestyles.

Albeit the Abbasids drew freely on previous cultures, especially the Persian, Abbasid architecture manifests the first iteration of a decidedly *Islamic* civilization in terms of architecture, with a common pattern laid out across the Muslim world. The mosque designs developed by the Abbasids became the standard blueprint for mosques until the present day, including the hypostyle, *mihrab*, *minaret*, and *minbar*. Additionally, they pioneered the *ziyada* structure. While all of these achievements are essential contributions to human civilization in their own right, their intangible contribution to Islamic civilization remains an enduring legacy of the Abbasids that is enjoyed by all Muslims every time they avail themselves in their religious devotions of the facilities now taken for granted, that were etched indelibly in the Muslim story by the Abbasids.

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