

**The Principle of Movement in Moroccan Design;
as a source of inspiration for contemporary
artistic applications**

Practice-based research in Art and Design

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Abstract

This project focuses on utilizing the principle of movement contained in traditional Moroccan design (PMMD) for the production of new and inventive artworks. The PMMD is one of the main concepts that rules the creation and construction of design elements; it consists of a group of advanced technical procedures applied to achieve the highest levels of unity, harmony, variation and rhythm between lines and shapes. Great consideration in the PMMD is given to the viewer's perception, as all parts are formed to be equally interesting and to work harmoniously together suggesting ways for the viewer's eye to interact with and move in and throughout the composition.

The purpose of this research is to examine viable methods for stimulating new ideas by taking the aesthetic and technical significances of the PMMD as a source of creative inspiration. The work involved analyzing the relationship between form, method and perception in traditional compositions by exploring the role of PMMD in 1) the process of creating and shaping design elements separately, 2) methods of relating the lines and shapes of different design components. Data on PMMD was collected from recent literature on Islamic art and Moroccan design, from interviews with master-craftsmen, and from my personal analyses and observations. The studio engagement, which is represented in a group of oil, batik and acrylic paintings, explored the transformation of PMMD's arrangements to my personal artistic style, in which I offer varied ways of developing, refining and connecting the traditional forms with contemporary concepts of art.

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"In the name of Allah, the Beneficent, the Merciful. All praise is due to Allah, the Lord of the Worlds. The Beneficent, the Merciful. Master of the Day of Judgment. Thee do we serve and Thee do we beseech for help. Keep us on the right path. The path of those upon whom Thou hast bestowed favours. Not (the path) of those upon whom Thy wrath is brought down, nor of those who go astray" (Al-Fatiha, the first chapter of the Holy Quran).

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Declaration

I declare that the research contained in this thesis, unless otherwise formally indicated within the text, is the original work of the author. The thesis has not been previously submitted to this or any other university for a degree, and does not incorporate any material already submitted for a degree.

Signed: 

Dated: 6-4-2009

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Nomenclatures

It is important from the outset to note that Islamic art as a term is used in this research to refer to the traditional ornamentation system used by craftsmen to adorn various types of artefacts and decorative objects as well as architectural surfaces. The term does not, however, refer to other cultural forms of art such as poetry, music and literature.

Principles and elements in this research are divided as follows: *“Design elements may be thought of as the building blocks or basic units of construction of the visual. All visuals are composed of one or more of these elements. Design principles are guidelines for using the elements and the resulting components of a visual to communicate the intended message. The principles are not unalterable rules, but are guidelines for the effective ways in which visual materials may be put together. Creative and successful designers select appropriate design principles to apply to their designs”* (Thompson, 1994: 166).

Chapter 1 - Theoretical framework

Background to the study

Since I began to draw and paint, at an early age, I have gathered my inspiration from different aspects of my cultural environment, and allowed my imagination to guide the creative process of casting traditional elements with my personal aims and desires. Although many of my early paintings were executed in the Western style, in which I gave significance to imitation and realistic simulation, I focused on exploring new and original themes in every new work. From 1988 to 1996, I was engaged in creating a large body of work, ranging from landscapes, seascapes and still-life, to portraits. Through two solo and many collective exhibitions, I became known for my individual style which visually documented different aspects of the pre-modern Kuwaiti environment.

As an artist, I worked on developing my technical skills, keeping my horizons open and challenging my creativity. In 1996, experiencing a great desire to change, I explored the use of Arabic script for the first time. The painting was a portrait of a female presented in a dynamic atmosphere of abstracted letters (Figure (1)). As the painting won the Golden Pearl award of the 25th exhibition for the GCC¹ countries, the success encouraged me to further explore the world of Islamic design, the art-form to which I felt very drawn and with which I could identify. Therefore, I sought to discover technical methods of executing Islamic patterns and different calligraphic

¹ Cooperation Council for the Arab States of the Gulf

styles such as *Thuluth*, *Kufi*, *Deewani*, and *Taliq*. At the same time, I took an overview of other contemporary attempts which dealt with Islamic art. My aim was to move beyond the mainstream and keep my style distinctive and different from what came before.

My interests led me to explore the interesting, unusual and less-obvious regions in Islamic design and to attempt to analyze the technical methods of mastering different constructions. The challenge was how to reintroduce classic approaches in new and developed ways and forms without losing their unique traditional identity. I found, in aesthetic values and the principles of design, a rich source of ideas that could be used as a starting point for further inspiration. One of the most fascinating aspects I came across was the way lines and shapes were formed, related to one another, managed, and constructed in the ornamented space.

Between 1996 and 1998, I produced a series of paintings inspired, on different levels, by traditional methods of relating lines and shapes in Islamic design, and my practice included forms derived from geometric, vegetal, and calligraphic patterns. In my paintings I attempted to use movement as a medium of expression. Lines can be constructed to form a variety of compositions and organized to create different structures, and each might reflect a special feeling or situation. Lines can be arranged to convey active, alive and vital emotions which might be calm, flowing and streamlined or wild and ferocious in non-uniform or complicated compositions.

Likewise, lines may be set to produce interesting visual forms that excite the viewer's observation or guide his eyes to specific places.



Figure (1) left, "*Excitement in the last monument*", 110 x 90 cm, oil on canvas, 1996. Figure (2) right, "*Overlapped letters*", 90 x 65 cm, oil on canvas, 1997

Between 1998 and 2000, I executed a number of large-scale murals, two of which were entirely inspired by and constructed using traditional Islamic design elements and principles. In *Confidential Talk of Letters*, a 27 x 2.3 metre oil on canvas painting placed in the Seef Palace, Kuwait, I used the principle of movement as a method for unifying and relating the different components. In addition, I freely reshaped and abstracted the elements of Islamic design from their usual form and recomposed them in a structure that conveys their mobile beauty (Figures (3) and (4)).



Figure (3) top, "*Confidential Talk of Letters*", 27 x 2.3 meter oil on canvas painting placed in the Seef Palace, Kuwait, 1999. Figure (4) bottom, a close-up of the right-hand side of the mural

In the same way, I managed the lines and related the shapes in the *Peaceful Homeland*, a 170 meter acrylic mural situated in the Bayan Palace, Kuwait. In this large artwork, I typically depended on curved lines that run horizontally throughout the work to band and unify the different elements into a cohesive structure (Figure (5)).



Figure (5) "Peaceful Homeland", a 170 meter acrylic mural, Bayan Palace, Kuwait, 1999

In February 2000, I won the Golden Pearl award for the second time for the painting *Don't be so square* (Figure (6)) in which I expressed the beauty that can be achieved through complexity, using the Islamic concept of avoiding empty spaces and the dynamic relations of lines and shapes as sources of inspiration. A few months later, *Confidential Talk of Letters* won the state honour award, the highest official prize dedicated to arts and culture in Kuwait. At the age of 34 I was the youngest artist ever to win this prize which was usually reserved for creative people who had long and rich experience in their field. This gained me great support and increased my ambition to explore Islamic art in even greater depth.



Figure (6) left, *"Don't be so square"*, 120 x 90 cm, oil on canvas, 2000. Figure (7) right, *"Hidden secrets"* 120 x 85 cm, oil on canvas, 2000

In 2001, I went on to study for a master's degree in Art Education at Virginia Commonwealth University. This marked a shift in my personal style as I encountered various techniques and came across different artistic activities that I had not experienced during my apprentice years. I received disparate comments on my art works from viewers who were not familiar with Islamic art, which allowed me to re-evaluate my practice, looking at it from other perspectives and reconsidering my use of traditional forms in the light of contemporary understandings of art. Since then, I have focussed on developing my style to convey both its own cultural references and a contemporary artistic language that can interact with the viewer and capture his thoughts. My works became more abstracted and my ideas are now inspired more by the relationship between design components than by the elements themselves.

During my study for a master's degree I undertook field-research aimed at evaluating the ornaments and decorative designs in the King Hassan II Mosque in Casablanca, comparing them with the traditional forms of Moroccan style. Although the study centred on highlighting the amount of change and development in the new-build monument, it was a great opportunity for me to increase my knowledge about the technical methods and design principles of Moroccan style directly from the field. In meeting with master-craftsmen, who have inherited and protected traditional technical knowledge, I found answers for many questions regarding pattern making, design processes, and technical procedures that were not sufficiently studied and clarified in the current literature related to the field.

One of the distinct features of the Moroccan style is the lavish use of knotted and intersecting lines that join and are formulated in a variety of combinations. These elegant compositions reflect an advanced system of rules and techniques which have developed to create the most complex forms and design constructions. According to Paccard (1979), Behrens-Abouseif (1998), and Burckhart (1976) only a small body of literature have analysed the compositional concepts and technical procedures undertaken in design process. In this research, the main aim is to fully understand what the principle of movement offers, how elements are arranged spatially in the first place, its relation with other principles of design, technical methods of construction, and their conceptual values. Therefore I will attempt, through the expertise of master-craftsmen, to discover and re-examine the

significance of this system and consider appropriate methods for adapting it to my personal artistic practice.

Outline of successive chapters

This research is divided into nine chapters. In the first chapter I present the conceptual framework of my investigation with an overview of the research inquiry. I explain my area of interest, outline the purpose and importance of the study, and describe the methodology employed to realize the research aims. The second chapter reviews the literature related to the field of contemporary Islamic art and gives a detailed analysis of previous attempts at using traditional elements. It analyzes and evaluates different collective trends and, in more detail, individual engagements which have adopted, in particular, the principle of movement. Conclusions on the lack of practical knowledge and absence of the aesthetic values of Islamic art in modern artistic applications are supported by numerous viewpoints held by various researchers.

Chapter three starts by justifying the nature of Islamic design and clarifying its compositional elements then explores the historical development of Moroccan art, concentrating on the major shifts and breakthroughs in its design elements. The four following chapters examine in detail the use of movement as an aesthetic concept in shaping and composing design elements. Chapter four studies in depth the role of PMMD in the formation and construction of varied geometric patterns, and in the

same way, chapter five focuses on the exploration of this role in originating the basic elements and construction of various vegetal ornamental compositions. Chapter six looks at the association between the PMMD and good calligraphic performance, highlighting this relationship in different styles of Moroccan calligraphy. Chapter seven explores the role of PMMD as a compositional concept in the process of organizing and relating lines and shapes of different design components. The data presented in these chapters were collected from recent literature, interviews with master-craftsmen and my personal analyses and observations.

Chapter eight is an illustrated presentation of the artworks that I have executed in the light of the explored concepts and techniques. It elucidates the forms of the PMMD methods I have used, describes how I mould them to my personal style, and how each work is formulated to possess a different type of visual movement. The last chapter is devoted to a review of the project outcomes and suggests answers for the two research questions.

The PMMD and distinctiveness of Moroccan design

Andre Paccard attributed the distinctiveness of Moroccan design to the country's unique geography. He argued that Moroccan art, unlike other Islamic orders, has been remarkably free from foreign influence and its design culture existed and remained pure from European, Ottoman or Asian influences. Paccard explains:

"Over the centuries, when the world was being divided up among the powerful empires of Europe and Asia, when the Mediterranean countries were being cut up

and ruined by successive invasion, the Maghrib al-aqsa closed in upon itself in healthy isolation" (Paccard, 1979: 20).

Moroccan design is not only a distinctive Islamic style but also a highly developed order of creating and combining design elements. Kammal Bellamin confirms that principles of unity, harmony, balance, rhythm, proportion, movement, and symmetry have their derivatives, such as variation, repetition, dominance, contrast and similarity (Bellamin, Personal interview May 2006). Talented craftsmen use this wealth of long established principles to originate the most fascinating combinations of form and compete freely with each other to show off their finest skills. Grabar describes Islamic art as *"an art whose creators were more often fascinated by the technical possibilities of their media than by ideologies or by purely formal considerations"* (Grabar, 1982: 505)².

Teresa Bernard³ defines movement in design based on the interaction between the art work and viewer, she noted: *"movement is the path our eyes follow when we look at a work of art"* (Bernard, 2008). As a principle, Maurice de Sausmarez⁴ clarifies

2 Oleg Grabar (born in France 1929) is one of the leading experts in Islamic art history. His research has had a profound and broad influence on the study of Islamic art and architecture. He obtained a PhD from Princeton University in 1955. He served on the faculty of the University of Michigan in 1954-69, before receiving an appointment as professor at Harvard University. Grabar became Aga Khan Professor of Islamic Art and Architecture in 1980 and stayed at Harvard until 1990, when he joined the Institute for Advanced Study. He has been a professor emeritus since 1998. More about Grabar on <http://en.wikipedia.org/wiki/Oleg_Grabar> 2009-02-07

3 Teresa Bernard is an active American writer and artist. The quotation is taken from her personal web-page <www.blumoonwebdesign.com> 2009-02-07

that it involves the management of composing various elements such as lines, shapes, or images to create a sense of visual motion in order to suggest a way to view the artwork. Sausmarez explains the relationship between form and perception in design: *"It starts with the spot which is the simplest division in any element. [...] The spot not only signifies location but has within itself potential energies of expansion and contraction which activate the surrounding area. When two spots occur there is a statement of measurement and implied direction and the 'inner' energies create a specific tension between them which directly affects the intervening space. A line can be thought of as a chain of spots joined together. It indicates position and direction and comprises certain energy; the energy appears to travel along its length and to be intensified at either end. Speed is implied and the space around it is activated"* (Sausmarez, 2008: 25-27).

Bellamin confirms that movement in Moroccan design is *"a sophisticated design practice which requires an artistic personality beside the awareness of methods and techniques used"* (Bellamin, Personal interview May 2006). By arranging the elements of the composition in specific visual relations, the designer controls the movement of the viewer's eyes in and around the various parts of the design. The viewer's eyes are forced to move as the designer intended and are guided dynamically from large elements to small details, from unusual shapes and lines to more usual ones, throughout the structure of the work. This visual interaction was

4 Maurice de Sausmarez (died in 1969) was the first Head of Fine Art at the University of Leeds and later Principal of the Byam Shaw School of Drawing and Painting in London. He wrote a series of books on the subjects of design basics and the dynamics of visual form.

experienced by creative masters of Moroccan design; through centuries of continuous progress, they established unique compositional techniques to enhance visual relations in design structure.

Bellamin comments on the importance of PMMD *"Unlike other decorative order, the principle of movement in Moroccan design plays an essential part. Not only is its function to govern the relationships between elements, it also serves to emphasize the sense of other principles and raises the degree of unity, harmony, variety and rhythm between all the elements"* (Bellamin, Personal interview May 2006). This important role is obvious in creating and shaping design elements; their formation is ruled by compositional concepts more than the rules of pattern standardization.

An in-depth look at Moroccan design elements reveals that visual movement is enhanced by the curved and twisted lines and shapes of cursive scripts (*Maghribi, Thuluth*) and vegetal ornaments (*Tawriq* and *Tashjir*) which lead the eyes to move in a circular pattern throughout the design. Even in the static forms of geometric ornaments (*Tassteer*) and angular shapes of *Kufic* script, the patterns are defined and constructed to create a sense of movement through repetition and rhythm. This plastic nature of Moroccan design elements allowed designers to creatively change, develop and manipulate lines and shapes to achieve perfection. Grabar comments on the development of forms in the design process: *"it is neither its size nor the ornament's internal forms which are dictated by anything but itself"*, he concluded

that *"Islamic design can best be defined as a relationship between forms, rather than simply a sum of forms"* (Grabar, 1987: 189).

Research problem

As this research aims to present a new way of dealing with the aesthetics of Islamic art, it is important from the outset to overview previous and similar artistic approaches in the field of contemporary Islamic art with a special focus on the use of the PMMD. Although studies of modern art in the Islamic world are rare compared with the literature on historic Islamic arts, in the last few years, a number of notable books and articles have explored this growing movement and featured its relationship to contemporary Muslim life. Studies by Naef (1992), Ali (1997), Shabout (1999, 2007) and others have looked at the different individual approaches which cast Islamic art in a modernized mould, and examined the ways in which art reflects contemporary social trends such as nationalism and the struggle for cultural identity. These studies have, to some degree, clarified subjects related to contemporary Islamic art such as its origin, growth, development, various trends and the impact of political, economic, and social statuses. However, the existence of Islamic art aesthetics and design principles in modern art productions have not been fairly studied and/or justified.

Looking generally at the variety of ways contemporary artists deal with Islamic art reveals how its use is limited to the art of calligraphy. The uses of other elements,

geometric and vegetal ornaments, were of interest to only a few. More important is the notable absence of the principles of design construction, which represent the core of Islamic art aesthetics. *"Most of what are presented today as works inspired by Islamic art do not convey the aesthetic sense or the passion for beauty that often marked traditional designs"* (Abdulgader, Personal interview 2004). *"They are not so much reinventing Islamic art as they are repurposing it so that it becomes more clearly a vehicle for personal expression, freed from the constraints of patronage and functionality"* (Komaroff, 2007)⁵.

The absence of many forms of Islamic art in contemporary art and design fields can be attributed to a dearth of practical knowledge about ornamental culture and its fundamental basics. Several factors have participated in the disappearance of many traditional crafts. Decades of economic and political instability may have been major obstacles to the continuity and development of many. Whether in the form of historic sites and buildings, collections of documents and books, archives, or the skills and techniques of artisans, crafts have either been lost or are at serious risk of being lost. Dormer has noted: *"If knowledgeable people fail to pass on their tacit knowledge then that knowledge will disappear. When practical knowledge disappears, it is hard and time consuming to rediscover it"* (Dormer, 1997: 148).

⁵ Linda Komaroff is Curator of Islamic Art and Head of the Department of Ancient and Islamic Art at the Los Angeles County Museum of Art. The quotation from "Islamic Art Now" an introduction to Islamic art collection. Los Angeles County Museum of Art, 2007. 25 September 2008 <http://www.lacma.org/Islamic_art/ian.htm>

Titus Burckhart confirms that *"Islamic art has been extensively studied in relation to its history; but the study of its artistic methods, which comprise both a science and craftsmanship, has been broached by only a few enquiring minds"* (Burckhart, 1979: 6)⁶. Except for the vast literature on classic calligraphy, few studies have comprehensively focused on specific technique or methods of design. Studies such as El-Siad and Parman (1976), Abas and Salman (1995), and Castera (1999) have attempted to explain the technical methods related to the role of geometry in Islamic design in which its principles were tackled. To my knowledge, the principle of movement in particular was never taken as a subject of study and its basics were rarely mentioned or discussed.

In this research I will put together my previous artistic experience, the information available in recent literature, and knowledge of Moroccan master-craftsmen to form a better understanding of the PMMD.

Research questions

The project will attempt to provide answers to the following questions:

⁶ Titus Burckhart. The quotation is taken from the foreword of El-Said and Parman's book, *Geometric Concept in Islamic Art*. London: World of Islamic Festival Publishing, 1976.

- What are the aesthetic and visual significances of the PMMD? What is its role in the formation and combination of design elements? In what ways does it emphasize other design principles and dominate the design process?
- Is it possible to utilize the compositional concepts and methods of PMMD in contemporary artistic applications? Which aesthetic forms are more adaptable to my individual artistic practice? Can the created artworks suggest a new vision for dealing with the aesthetics of Islamic art and design techniques?

Aims of the research

The purposes of the study are:

- To explore in depth the different aspects of the PMMD; its central and critical role in the design process, techniques and procedures used, and its aesthetic value.
- To investigate methods of transforming the concept of movement to my personal field of interest and specialization by selecting it as a primary source of inspiration.
- To produce a group of artworks supported with detailed illustrations and a sufficient volume of written material, which together portray the methods and results of the investigation.

Methods and procedures

The nature of this study required the application of a multi-method approach. In order to put the studio practice into a philosophical framework, a preliminary procedure has been implemented using informal interviews with practitioners. Interviews with Professor Jassem Abdulgader (sculptor-lecturer-author), Dr. Mohammed Mahdi (painter-lecturer-author), and Dr. Mahmoud Said (sculptor-lecturer) benefited my knowledge of the actual field and illustrated modern-day workers' viewpoints concerning responses towards, and observations on, the contemporary use of Islamic art. These interviews served to direct the research, proving that targeted knowledge can be realized by combining creative studio practice with recent literature on Islamic design, field-research on PMMD, and current concepts in fine art. In this light, the research involved the following procedures.

1- Evaluating previous artistic attempts to utilize Islamic art

This is achieved through critical analysis and evaluation of the different engagements and trends artists adopted to deal with traditional elements in general and the principle of movement in particular. This is combined with a deeper look at some individual approaches that have dealt with movement creatively. Conclusions and justification of the use of the principle were structured, based on recent literature on contemporary Islamic art, publications, and personal analysis and observations.

2- Field-research on the PMMD

The research involved critical analysis of technical and aesthetic values of the PMMD, forming a deep and comprehensive understanding of the role of movement in the Moroccan style. This part examined the aesthetic concept of movement and its existence in design principles, elements, and concepts of pattern construction. Through field-research, in the form of interviews with master-craftsman of woodwork Kammal Bellamin, master of calligraphy and ornamentation Ibrahim Haneen, and others, I have explored the relationship of PMMD with other design components. The documentation of this part of the study was combined with illustrated images and photographic examples of different applications. Special attention was given to creative designs and specific masterworks. Much of the data collected in this part was supported by photographs from André Paccard's book *Traditional Islamic craft in Moroccan architecture* (1979), and Jean-Marc Castera's book *Arabesques. Decorative Art in Morocco* (1999).

3- Engagement in studio practice

The practical part of the thesis tested the possibilities of transforming compositional concepts and technical methods of the PMMD for my own artistic practice in which I used my personal style and individual skills to execute a set of art works in the light of the research themes. The practice has resulted in a variety of outcomes which, in general, offer examples of the wide range of possibilities that can be achieved by employing the traditional system.

Importance of the study

The research aims to shed light on all technical aspects of the PMMD to highlight its important role as a compositional concept. Developing such a lucid perception of the methods and techniques of organizing lines and shapes in design structure will clarify an obscure area of creating Islamic art element and open the door to understanding its aesthetic value, which may serve as a firm starting-point for any prospective studies in this field.

The practical part aims to provide ways of using, transforming, and investigating both the traditional compositional concepts and the technical methods of line management, and attempts to offer forms of utilization which can be applied to a variety of disciplines in contemporary Islamic art and design. The studio practice demonstrates how artists and designers can benefit from using an understanding of previous cultural traditions as inspiration or as a source of new and creative ideas.

Chapter 2 – The principle of movement in contemporary Islamic art

1 Introduction

This chapter reviews the literature related to the field of contemporary Islamic art and evaluates previous attempts at using traditional elements. It analyzes different collective trends and, particularly and in more detail, individual engagements which have adopted the principle of movement.

The study takes a deeper look at the technical relations between traditional methods and some individual approaches that have dealt creatively with movement.

Conclusions and justification of the use of the principle were structured based on recent literature on contemporary Islamic art, publications, and personal observations.

2 Genesis and development of contemporary Islamic art

2-1 The impact of social and political events in the Islamic world on the status of arts and crafts

If the Abbasids era in Baghdad and Umayyad in Andalusia can be depicted as the golden ages of Islamic civilisation in which the economy and arts flourished, the 19th and 20th centuries have witnessed its worst times. Dramatically, all components that

hold together the Islamic community have collapsed due to a sequence of events. This has led to a contemporary status in which Islamic societies live in different circumstances to their ancestors. The united and coherent society 'Ummah' that Islamic faith created no longer exists. The Islamic world is now divided into 57 countries, each with its own issues and interests. Most of these countries are suffering from economic problems, unstable political situations, and civil or regional conflicts. The important role of Islam as a religious social-system, 'Sharia', has been replaced with a variety of types of secular law. In order to understand how the Islamic world reached such a situation, and how this has affected arts and culture, it is important to focus on specific historical events that have had a direct influence on community life.

Muhammad Naqavi⁷ believes that the change in the Islamic world began in the 19th century; he noted "*Napoleon's invasion of Egypt was a turning point in the history of the Islamic world and the beginning of Westernization and nationalism*" (Naqavi, 1985). As Western powers grew, Islamic countries started to fall, one after the other, to different European armed forces. The hegemony of the West was in part caused by the weakness of Islamic dynasties and failure to respond to the challenges of the industrial revolution, particularly with regard to war technology. Foreign powers have heavily influenced life within Islamic countries to suit their own economic and

⁷ Muhammad Naqavi, an Iranian author, wrote a group of books on the impact of colonialism on Muslim communities. The quotation is from his book *Islam and Nationalism*, 1985, available on <<http://www.alislam.org/islamandnationalism/4.htm>>

strategic interests, with limited regard for the opinions and interests of Muslim people.

According to Naqavi, the majority of the Islamic world at the start of the 20th century was divided up into fragmented, colonial and peripheral areas by the British and French military (Naqavi, 1985). The Western occupation forced a change in some Islamic countries toward secularization and modernization, promoting Western modes of education, law, the arts, and so on. Bernard Lewis⁸ writes: *“While modernity included many major social changes, neither the Europeans nor their sponsored intermediaries attempted to empower the Islamic people and encourage pluralistic democratic governance. Indeed, colonialism sustained both economic and political underdevelopment. Local authorities, dynastic or military, in turn gained wealth-sustaining autocracy”* (Lewis, 2002). This has solidified the concept of modernity, in the Muslim mind, as the tool used by invaders to eliminate cultural identity and replace it with the opponent’s way of life.

Wijdan Ali in her book *Modern Islamic Art: Development and Continuity* discussed the influence of nationalism across the Islamic world at the beginning of the 20th century. Ali stated that the British and French governments decided to support Arabs against Turks in particular, and to sustain the enmity between them. According to Ali,

⁸ Bernard Lewis (born May 31, 1916 in London, England) is a British-American historian, Orientalist, and political commentator. He is the Cleveland E. Dodge Professor Emeritus of Near Eastern Studies at Princeton University. He specializes in the history of Islam and the interaction between Islam and the West, and is especially famous in academic circles for his works on the history of the Ottoman Empire. From <wikipedia.org/wiki/Bernard_Lewis>

the first countries that fell victim to nationalism were Egypt, Turkey and Arabia. In June 1916 Sharif Hussein the pioneer of the Arab rebellion, led the Arab war against the Ottomans, with the aid of British military and political support. However, while the Arabs carried on in their war of independence, the British and French were secretly dividing the Arab region amongst themselves in the Sykes-Picot Treaty, which laid the ground for the division of Arab lands. Wijdan Ali noted "*Nationalism in the Islamic world was reflected in the emphasis on Turkish, Iranian, Egyptian, Syrian, Iraqi and other nationalities. After the end of WWII, most Arab countries struggled for their independence against colonial rule*" (Ali, 1997: 5). As this was realized over the two decades which followed, a new conflict point developed with the rise of Israel as a state for the Jewish nation. This situation has resulted in several wars between the Arab countries and Israel to liberate Palestine (Ali, 1997: 7- 8).

According to Ali, in 1923, the progressive advance of nationalism led to one of the great turns in Islamic history. Mustafa Ataturk led a nationalist revolution and launched the secular state of Turkey; ending eighteen centuries of the Ottoman dynasty. Ataturk saw in Westernization and secularization the surest way to compete with industrial Europe. He separated Islamic law from the state authorities, and furthermore, forced major social and cultural changes, such as the abolition of Arabic script and its replacement with the Latin alphabet. Efforts were made to minimise the influence of traditional elements on private life; even customary garments and women's veils were outlawed because they were considered examples of retardation (Ali, 1997: 2- 8).

The same thing happened in Iran in 1925 when Reza Khan Pahlavi came to power after successfully staging a coup against the government of the Qajar dynasty. He immediately launched a campaign to Westernize and modernize the country. In 1935, its name changed from Persia to Iran, wearing of the veil was banned, and various actions were taken against religious authority. According to Hamid Algar, in 1941, Mohammad Reza Shah succeeded his father and continued the trend of social and cultural changes. He replaced the Islamic calendar, which had been in use for fourteen centuries, with an imperial one, which began at the foundation of the Persian Empire. Algar writes, "*In so far as the word 'Modernization' has had any meaning in the Iranian context, what was modernized by the Pahlavi dynasty was the apparatus of repression*" (Algar, 1983: 20)⁹.

In 1952, King Farouk of Egypt was overthrown by Jamal Abd Alnaser who stressed and led the Arabic neutralism, and strongly adopted anti-imperialist ideologies. In June 1967 the Arab army under Nasser's command was defeated by Israel. According to Ali (1997), and Shabout (1999, 2007), This event deeply affected the region in significant ways and caused a major re-evaluation of the direction that the arts and literature had taken. Abdulgader comments, "*Artists experienced the stress and anxiety created by the political realities and turned to script to express their engagement with this series of cataclysmic events*" (Abdulgader, Personal interview 2004).

⁹ Professor Hamid Algar, PhD, born in England in 1940, is a well known scholar and convert to Shia Islam. He received his formal training in Islamic studies at Cambridge University, from where he received his PhD in 1965. More on <www.imamreza.net>

Many scholars, such as Naef (1992), Ali (1997), and Shabout (1999, 2007) saw what happened in Turkey and Iran in the first half of the 20th century as destructive, 'anti-Islamic' acts taken against the Islamic identity and its cultural elements. This may have been one of the causes of the 1979 religious revolution in Iran which came as a massive communal reaction to the cultural and political situation resulting from the Shah's regime. The establishment of a conservative Islamic republic in Iran, with its Shi'a representation, showed that faith could still be a strong motivator of public action. However, the revolution can be regarded as a crucial turning point in Iran's social and cultural status, which was reflected in all aspects of its contemporary culture, specifically in the great support given to traditional arts and crafts.

The last three decades have witnessed the continuation of instability in the Islamic world. A number of critical events have worked as destructive elements against efforts, time, and resources. These include the Arab wars with Israel; the Iraq and Iran war; the Iraqi invasion of Kuwait; endless conflict in Kashmir; civil war in Algeria; troubles in several former Soviet republics with Islamic majorities or minorities; the American occupation of Iraq and Afghanistan; and more recently, the Israeli war on Lebanon, to name just a few. The contemporary era has also witnessed the decline of nationalism and the rise of fundamentalist Islamism and terrorist movements.

Choueiri¹⁰ notes, "*The main interest of these movements is to re-establish the moral and political virtues of traditional Islamic society*" (Choueiri, 1990: 7). Different interpretations set out to explain the growth of Islamic fundamentalist movements, but generally say it is due to a complex interaction of economic, political and cultural

10 Youssef Choueiri is Reader in the Institute of Arab and Islamic Studies at Exeter University.

factors combined with Western domination and the rise of dictatorial governments in Islamic states.

Taking all together, such a complex history can be read in several ways. What is of particular interest for our purpose in this research is the way Muslims respond to modernization and development as the hegemony of Western ideas which were enforced to realize cultural changes. Dawisha¹¹ points out that nationalism and moderation are viewed in the perception as *“Western perfidy designed to divide the Muslims and turn them against one another”* (Dawisha, 2002: 51). Muslim communities acted in response and rejected aspects of Western culture, turning back to stress the importance of, save, and revive their own cultural heritage. Islamic art symbolizes Muslim culture and is greatly appreciated by Muslims as the answer for many artists who search for a visual language that complies with their community's aims and desires. As Lucien de Guise¹² clarified, *“The great eras of Islamic artistic expression coincided with times of technological progress. Muslims are forever being exhorted to remember that theirs was once the culture of progress, the transmitter of ancient knowledge to the modern world. Ideas were an inspiration to more than just philosophers and mathematicians. By looking at Islamic art, it becomes apparent that the whole of society was part of something important”* (Guise, 2006).

11 Adeed Dawisha, professor of political science at Miami University, Ohio.

12 Lucien de Guise is the Acting Head Curator of the Islamic Arts Museum Malaysia. After completing his MA in Islamic Studies, Lucien de Guise worked as the deputy editor of Arts of Asia magazine. Since then he has specialised in Oriental art and writes a monthly column for eight publications in Asia. In addition to contributing to magazines in the UK and USA, he has written the only guide to collectibles in Malaysia. <www.islamicmagazine.com>

2-2 Attempts towards revitalization of Islamic heritage

Islamic art, as the artistic heritage of the Islamic civilization, is greatly respected and appreciated by Muslims all over the world. Although it has been characterized as a decorative form of art, it reflects, in a unique way, the content of various aspects of the Islamic culture. Despite the large geographic area that makes up the Islamic world, with its various ethnicities, cultures, environments, and languages, Islamic art stands as an important element in the cultural background of each Islamic region.

Islamic culture has been badly affected in the last five decades by political and economic problems. Whether in the form of historic sites and buildings, collections of documents and books, archives, or the skills and techniques of artisans, it has either been lost or is at serious risk of being lost. The impact on art in particular has been great and, for many reasons, it has gradually disappeared from new architectural and industrial products. The trend towards modernization and the extension of modern modes of design may have had the greatest impact on the retreat of Islamic design. As Eldemery explains, "*With the new generation placing less emphasis on traditional values and accepting a modernized lifestyle, the existence of cultural products is struggling to survive*" (Eldemery, 2002: 3)¹³.

13 Dr. Ibrahim Mostafa Eldemery, Housing & Building Research Centre, Ministry of Housing and Urban Utilities, Egypt.

Over the past three decades, the saving of cultural identity and revival of traditional arts and crafts have become highly significant issues and a focus for official and social concern in many Islamic countries. Many regional and international organizations have been established to encourage their revival, preservation and development. These institutions launched a variety of activities for this purpose, including art exhibitions, publications, symposiums, competitions, documentary films, and research studies. Their efforts have achieved some success in highlighting some of the forgotten traditional forms as well as supporting others that were in serious decline. Demands for a culturally identifiable art and concerns over revitalizing Islamic forms have spawned a number of artistic approaches, which can be seen in contemporary fields of art and architecture. Currently, the term 'Islamic art' is widely used to describe a variety of new artistic products.

2-2-1 Traditional artisan crafts

Traditional artisan crafts are those that maintain long-established elements of production techniques and of elementary materials. Good examples of these are objects of daily use such as textiles, carpets, ceramics, glass, woodwork and jewellery. What makes these crafts fundamentally 'Islamic'¹⁴ is the style of ornamentation, design and pattern used to decorate different types of artefacts and objects.

¹⁴ For more about the definition of Islamic art see page 86.

Several factors have influenced the disappearance of many traditional crafts including their design culture. Decades of economic and political instability have been major obstacles to the continuity and development of most crafts. The new industrial methods of mass-production and machines have also put an end to much craft production, by offering similar, cheaper products. Some crafts have survived since their output succeeds in the tourist market or is locally requested; a good example is Moroccan ceramics (*Zillij*) which are still produced today, while similar types of tile making have vanished forever.

In the face of the rapid social and cultural change which dominates aspects of modern life, one typical response is the growing call to save traditional crafts from new challenges which could result in their extinction. Eldemery claimed that the desire to save and support traditional crafts has become a highly visible issue in the last two decades, because they are now seen as the visual sign of cultural identity. He noted, "*The revival of the Islamic artistic heritage has become a universal concern which can be shared by critics, architects, planners etc.*" (Eldemery, 2002: 2). This is reflected in the establishment of many local, regional, and international organisations that give emphasis to the revival of traditional crafts. These institutions have undertaken several programmes and introduced policies to encourage their resumption and development. Ideas for revival were frequently linked with economic topics.

However, are these endeavours enough to revive traditional crafts and their ornamental culture? A look into the outcomes of the Research Centre for Islamic History, Art and Culture (IRCICA)¹⁵, as one of the most active organizations in the field, reveals that there are many obstacles facing artisan craft development. N. Suzuki, the Industrial Development Officer at UNIDO, revealed at the International Congress on Islamic Arts and Crafts - Iran 2002, *"Many developing countries have applied various development strategies to promote the artisan craft sector, bearing in mind that the successful implementation would result in export promotion, creation of new job opportunities and related new income generation in rural areas"* (Suzuki, 2002: 3). Suzuki identified the following:

- 1- Lack of sound policy and clear ministerial responsibilities
- 2- Lack of clear strategies for promotion and preservation
- 3- Lack of support facilities focussing on artisan craft development
- 4- Low product quality
- 5- Lack of cooperation among crafts people
- 6- Lack of awareness, by all companions, of future potential
- 7- Absence of capable craft development specialists

15 (IRCICA) Research Centre for Islamic History, Art and Culture, Istanbul, Turkey which was established in 1980. The centre undertakes research, publishing, documentation and other scholarly activities to better make known the Islamic culture. IRCICA's aims have focussed on specific areas in which crafts are facing obstacles and difficulties that prevent their development. Several international symposiums, lectures, competitions, exhibitions and other annual activities have been organized to bring scholars, specialists and artists together, with the aim of creating opportunities to pool knowledge and experience and to investigate and assess the existing arts and crafts situation.

Looking closely at these problems, a lack of specialists may be the major issue at the root of many of the others. Latest studies show a great need for experts, from all fields, who have the ability to deal with specific craft topics and to evaluate their present position and future prospects in order to develop their economic and technical potential. Some policies, planned by non-experts, have resulted in negative outcomes such as low quality or unmarketable products. In addition, other policies have worked on supporting the development of crafts without sufficient care for maintaining the cultural aspects of the products. Suzuki explains, *“Some policies often focus heavily on promotional aspects and neglect preservation of the traditional cultural reference. As a result, there is a growing recognition that a cultural frame of reference might be lost through the process of modernization and mechanization of the production process”* (Suzuki, 2002: 8).

The efforts of both local and international organizations have realized some success in bringing a number of forgotten crafts to light, and more importantly, have resulted in a greater appreciation among the younger generations of the community's rich heritage. Nevertheless, supporting artisans and their activities or encouraging them to make products that people no longer use are not sufficient to achieve continuity and to pass Islamic style to future generations. Policies and programs should not focus only on supporting crafts and developing production techniques without regard to the style itself. A general look at most of what is produced today by artisans reveals that they repeat and copy the same ornamental patterns that were created centuries ago. They lack the skill and ability to develop new forms of ornamentation

derived from traditional ones. In other words, efforts should focus more on saving the *core* of Islamic art; that is, the *style* of ornamentation rather than the craft objects themselves. This may encourage them to develop their products and the ability to challenge changes in the market with new and original artefacts.

2-2-2 Islamic art in modern architecture

According to Eldemery, in the rush for modern development in the Islamic world, the important role of creative artisans has declined and a large number of architectural crafts have died out or are struggling to survive. Modern construction methods, machinery, and technology together with the desire for rapid development have brought in Western modes of planning and design to replace traditional forms (Eldemery, 2002: 3-4).

Many Muslim architects have reacted to the prevalence of Western modes by re-asserting their heritage and searching for suitable contemporary architectural expression that is inspired by Islamic art. Architects such as the Egyptians Hassan Fathy and Abdel Wahed Al Wakil, the Iraqis Rifat Chadirji, Basil Al-Bayyati and Muhammad Makkiya, and the Iranians Nader Ardalan and Kamran Diba are leaders in the field of promoting concepts of traditional architecture in the Muslim world. They instil in their works a great appreciation of the roots of regional expression, as well as a true understanding of modernism and its principles. Eldemery writes, "*The call to establish the deep-rooted Islamic values in contemporary planning and*

architecture is growing, day after day, as a part of the comprehensive Islamic call, a movement is emerging in response to the imminent danger of losing these special qualities through the destruction and mutilation of buildings of value. The revival of the Islamic architectural heritage has become a universal concern which can be shared by critics, architects, planners, etc." (Eldemery, 2002: 2). This rising concern is reflected in the growing number of universal awards that have been established to support, encourage and promote Islamic architecture. Examples are the Aga Khan, King Fahad, and Islamic Cities Organization awards.

Recently, the need to express local cultural identity through architecture has grown strongly in Muslim communities. This trend has resulted in a number of 'hybrid' forms of architecture as a result of the unsuccessful combination of modern types of construction with Islamic traditional forms. The architect Garry Martin in the article "Building in the Middle East Today -- in Search of a Direction" lists three directions contemporary Islamic architecture has taken (Jones, 2004).

1. One approach is to completely ignore the past and produce Western-oriented architecture that ignores the Islamic spirit and undermines traditional culture.
2. The opposite approach involves a retreat, at least superficially, to the Islamic architectural past. This can result in hybrid buildings where traditional facades of arches and domes are grafted onto modern high-rises.
3. A third approach is to understand the essence of Islamic architecture and to allow modern building technology to be a tool in the expression of this essence.

In general, some new buildings succeed in introducing new and developed architectural features inspired from traditional Islamic forms while many others fail to achieve any innovative development. A good example of working in the traditional frame is the King Hassan II Mosque, Casablanca Morocco (Figure (8)). Although the mosque was built with a number of modern materials - it was built to withstand earthquakes and has a heated floor, electric doors, and a laser that shines at night toward Mecca¹⁶ - the general structure is a duplicate of the traditional Moroccan mosques, with no development in the architectural or ornamental forms, the main difference being a limitation on size and scale. Another example is the League of Arab States building in Tunisia which has been described by critics as a copy of the Al-Qayrawan Mosque. Owen Jones has noted in his book *The Grammar of Ornament* that “Architecture is the material expression of the wants, the faculties, and the sentiments, of the age in which it is created” (Jones, 2007: 8).



Figure (8). King Hassan II Mosque, Casablanca, Morocco

¹⁶ The laser shines at night to show local Muslims the direction of Mecca, which they should face when praying.

In this light, these sorts of construction can be evaluated as a reaction; a way to define a regional identity through the revitalization of historic forms, more than reflecting the era or the people. On the other hand, a number of creative architects have gone beyond the traditional order and utilized the opportunities that new materials and techniques offer in order to creatively use traditional elements. The Institute of the Arab World, in Paris, designed by the French architect Jean Nouvel is an example of how art, architecture, history and new building technology can meld together and reinforce one another (Figure (9)). Although the building was differently evaluated by critics, it contains examples of blending traditional patterns with modern technology. This can be seen in the glass walls with metal irises in the shape of an octagonal geometric pattern, which open and close like the human eye to control the intensity of light entering the building.

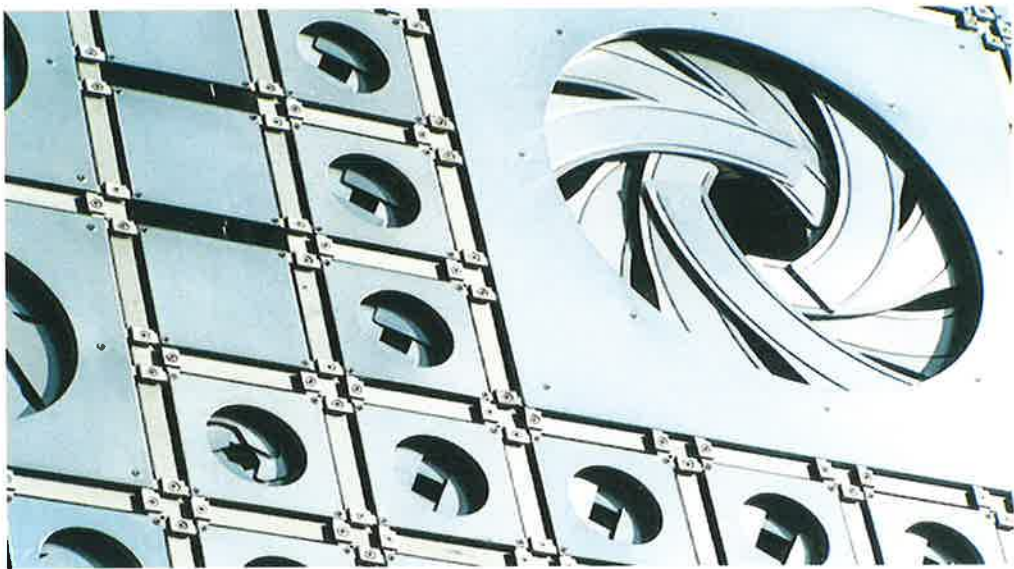


Figure (9) Close-up shot of a wall of The Institute of the Arab world

In the competition for designing the Museum of Islamic Art at the Louvre in Paris, Zaha Hadid, a growing name in contemporary architecture and winner of the Pritzker Architecture Prize 2004, submitted an imaginative entry (Figure (10)). Although it did not win, so will never be built, it is interesting to see how she creatively developed this particular design. The gallery is formed as a sculptural shape in which she relates to the context of structure. In a distinctive way, she utilized the type of movement in geometric ornamentation and cast it in a new proportion, in harmony with form, size, scale, and texture. Her work is a typical model of the great possibilities for creativity and accomplishment that modern technology offers for contemporary architects.

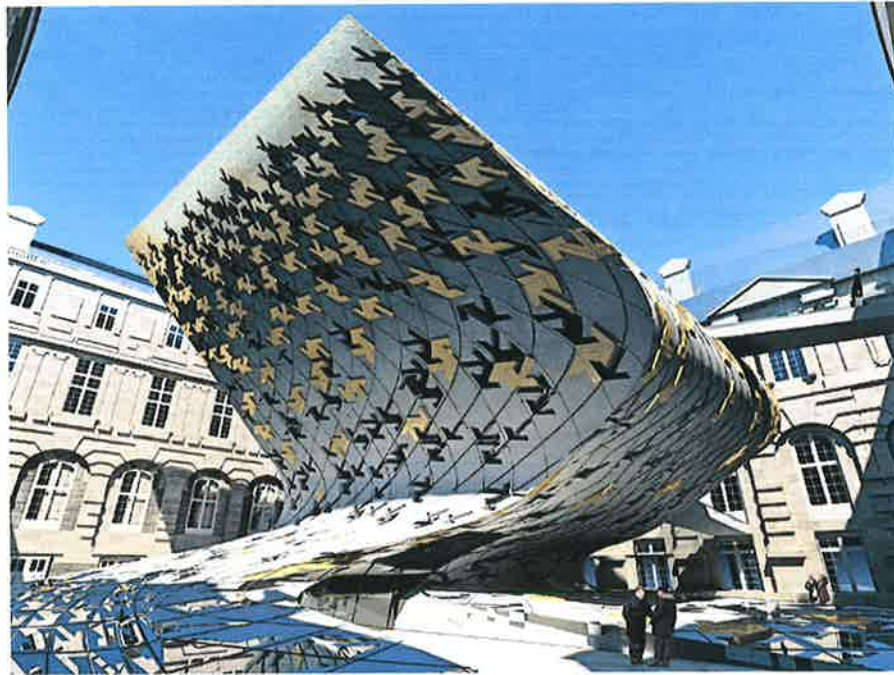


Figure (10). Graphic plan for the Museum of Islamic Art (Louvre, Paris) by Zaha Hadid

3 Early inspiration from Islamic art (1940s to 1960s)

Wijdan Ali confirms that *“Easel painting is a fairly recent phenomenon in Arab art. As the aesthetic and creative fibre of traditional Islamic art weakened in the 19th century, Arab culture yielded increasingly to Western art forms and styles which had pervaded the Arab world due to the West's political, economic, scientific and military superiority and dominance”* (Ali, 2002: 1). In her book *Modern Islamic Art: Development and Continuity*, Ali revealed that the Lebanon and Egypt were the first countries in the Middle East to adopt Western art. While easel painting was introduced to the Lebanon by Christian missionary schools in the 18th century, Napoleon's invasion of Egypt in 1798 exposed the country to Western art on a large scale. The establishment of the Academy for Oriental Studies opened the door for many Western intellectuals, artists, and historians to communicate their culture with Egyptian and later North African communities.

From the mid 19th century, Western Orientalism was at its height in Europe, a large number of artists turning to the Islamic world searching for new sources of inspiration. Among them were Jean-Léon Gérôme, Eugene Delacroix, David Roberts, Eugene Fromentin, Henri Matisse, Paul Klee and others who introduced easel painting to the region. While most of these artists chose to trace realistic cultural features, Paul Klee, on his visit to Tunis in 1914, experienced the use of the lines and shapes of Arabic script. This can clearly be seen in his *Insula Dulcamara*, dated 1938 (Figure (11)).



Figure (11) Paul Klee "Insula Dulcamara" 1938 (210 Kb), oil on newsprint, mounted on burlap, 31 1/2 x 69 in the Klee Foundation, Bern, Switzerland

According to Ali, the School of Fine Arts in Cairo, established in 1908, was the first institution in the Arab world to teach Western art where foreign teachers were employed to educate local artists. Ali confirms that "*Its first students comprised the nucleus of the pioneer generation of modern Arab artists*" (Ali, 2002: 3). Gradually, art schools which had adopted Western art concepts started to appear throughout the Islamic world. Although young artists were trained in Western artistic idioms, they were also more influenced by their societies. As members of emerging national communities, they clung to their own original cultures, responding powerfully to the politics of their own countries, manifesting their own regional identities.

Ali (1997) and Shabout (1999, 2007) agree that the first attempts to use Islamic art elements appeared in Iraq in the mid-1940s. The country in that era was ruled by King Faisal who strongly supported many artists by granting them scholarships to study art abroad. According to Shabout (2007), a group of young artists, Shakir al-Said, Jammil Hammoudi, Jawad Saleem, and Madiha Omar, began to experiment

with the abstraction of Arabic script from its traditional form. Together, they founded the Group of Baghdad for Modern Art in 1950, sometimes named the One Dimension Group, which adopted liberated concepts in developing cultural aesthetics. This era witnessed the birth of modern Arabic *Alhur* poetry (after *Alhuria*, which means liberty in Arabic). The Iraqi poet Nazik Al-Malaika (1922-2007) was the first to use this form of free verse and to liberate the word from the strict metre or rhyme that had been used for more than 18 centuries.

Madiha Omar (1908-2005) was the first artist to use Arabic letters in her abstract paintings: *"In 1949, she had her first solo exhibition, in Washington, D.C., and in 1951 she exhibited her work at the San Francisco Museum of Art. She worked on freeing the letter from its geometric and formal elements. Using only four letters - ع, م, ه, and ك - Omar allowed the letter to emerge in a new form, underscoring its elasticity through abstraction and creating a modern language that renders the inherent qualities of the Arabic script"* (MMA, 2004). In a publication connected with the exhibition *Arabic script as a source of inspiration*, Omar discussed the possibilities of using the elastic characteristics of Arabic letters in modern abstracted art. In Omar's own words, *"I wanted to free the Arabic letter from its old bondage so that it could stand out with its own expression and individuality"* (Burnham, 1994: 9). One of her first art works entitled *At the Concert*, at that time, represented a new way of abstracting Arabic calligraphy from its traditional form. Letters were swirled and curled (Figure (12)). According to Salwa Nashashibi, president and founder of

the International Council for Women in the Arts, *"That was when the actual letter was liberated from the word"* (Lawrence, 1997: 35).



Figure (12) Madiha Omar *At the Concert*, ink on white scratch board 23.75 x 32.5 cm, 1948 Collection Hala Kittani

Shakir Hassan al-Said (1925-2004), a towering figure in modern Iraqi art, was one of the first artists to use letters in the new abstract form. Al-Said merged his artistic attempts with an exploration of the aesthetic and historical significance of Arabic script. As Venetia Porter¹⁷ explained: *"Drawing on a synthesis of Sufism and Western existentialist philosophy, his increasingly abstract works focused on the inclusion of letters and reflected his view that artistic expression is achieved by stages, similar to the stages that bring you closer to God, as articulated by the Sufi*

17 Venetia Porter is a curator at the British Museum who responsible for the collection of Islamic art, in particular of the Arab World and Turkey as well as the collection of the modern and contemporary art of the Middle East. 2009-02-09 <http://www.britishmuseum.org/the_museum/departments/staff/middle_east/venetia_porter.aspx>

mystics. He believed that 'the Arabic script, in its different forms and schools, reflects and is a reflection of the history of the Arab individual and social reality, which remained stored in the intellectual unconsciousness of culture and society' (Porter, 2002: 16). His influence is still obvious in the work of many Iraqi artists. His publications include works on the 13th century painter of miniatures, Al-Wasiti, the historical roots of Arabic scripts, and the history of contemporary Iraqi art. The painting, *Objective Contemplations* (Figure (13)), is a good example of his use of the elemental lines of the Arabic alphabet, numbers and ancient Mesopotamian alphabet.



Figure (13) Shakir Hassan al-Said "*Objective Contemplations*", 1984, oil on board, 120 x 120 cm, Collection of Institute *du Monde Arabe*, Paris

The painter and art critic Jammil Hammoudi (1924-2002) was another pioneer of the use of Arabic letters. In his first solo show in Baghdad in 1950, he exhibited a number of paintings all centred on abstracting the word from its readable meanings

and utilizing the structure of the script. Although letters have a legible sense in some of his works, such as in Figure (14) where the word *Allah* appears in the upper part of the painting, his focus was on highlighting the distinctive shapes and lines of the characters. Influences of cubism are clear in his early works and in the way he later developed his personal style.



Figure (14) Jammil Hammoudi, "*scriptable composition*", 1947, oil on canvas, undated, 70 x 90

After the 1950s, across the Islamic world, artists began to use elements of Arabic script as a subject of inspiration for their works. Although many had trained in Europe or had been exposed to Western art traditions they found, in using letters, a way of creating acceptable artistic language. Each expressed in his own vocabulary the reuse of the inherited culture.

The Lebanese artist Saloua Raouda Choucair, born in 1916, was one of the first artists to deal with Arabic script. Letters were fully incorporated in her abstract painting *Ya-lile*, executed in 1947. In the same way, Syrian born Adham Ismail (1922-1963) explored the "endless lines" of letters and connected them with his political and communal subjects. The Egyptian Hamed Abdullah (1917- 1985) joined elements drawn from his local environment with figures derived from Arabic letters.

The Lebanese artist Wajeeh Nahla (born 1932), in his painting *The Warrior*, completed in 1954, made use of the flexibility of letters and rejoined them in a figurative structure. Many other young artists experimented with the use of Arabic script but it was years later that these attempts matured and advanced.

Representative artists include, Said Aqel (Lebanon), Ahmad Muhammad Shebreen and Abraham Alsolhi (Sudan), Najeeb Balghoja (Tunis), Muhammad Almuwailhy (Morocco), Erol Akyavas (Turkey), and Muhammad Rassem and Muhammad Khadda (Algeria, Figure (15)) (Al-Dahapi, 2007). Khadda's work, shown below, is a good example of the process of decomposing Arabic letters and turning them into abstracted shapes.



Figure (15) left, Muhammad Khadda, "*Alphabet libre*", oil on canvas, 1954. Figure (16) right, Osman Waqialla, "*Allah*", 1982, gouache on cardboard, 50 x 60 cm.

A deeper look at these early attempts reveals that the use of Islamic elements was limited to Arabic letters; other elements such as vegetal and geometric ornaments were not of interest. However, in the early 1960s some artists started to explore the form of movement that the art of calligraphy offers. Sudanese artist Osman Waqialla (1925-2007) was interested in celebrating the beauty of Arabic script, based on his skills as a calligrapher. His works clearly indicate an attention to deconstructing scripts and extracting them to their elemental forms, but he was also concerned with the meanings of letters and words (Figure (16)).

The Egyptian Salah Taher (1911-2007) may have been the first to freely use the type of movement contained in the cursive shape of Arabic script. In 1934 he graduated from the Fine Arts College of Cairo and began his career as an art teacher. For about 25 years he worked in the classical style and became known for his technical mastery. Taher executed a series of murals in official palaces, and also many portraits, most famously of Um Kulthoum and Mohamed Abdel-Wahab, famous Egyptian singers, and the great authors Abbas El-Aqqad and Tawfik El-

Hakim, the former Yugoslavian president Josip Broz Tito, and former Egyptian presidents Anwar Alsadat and Jamal Abdul Nasser. In the mid 1950s, however, he revolted against the strictures of academic art, entering the private world of his imagination and finding his own distinctive way of dealing with Arabic script.

Youssef Rakha explains the artistic change in Taher's style *"In 1956, a year he associates with discovering photography, which 'rendered millions of dollars worth of portraits worthless', Taher, having achieved an excellent reputation as a realist, experienced an intense depression that led him to abandon figurative art in favour of abstraction; it was then that he became a colourist and began to experiment with form, producing what, for most contemporary artists, really made his name"* (Rakha, 2007).

Taher created his own style of abstraction and developed an individual technique in which he played with paint spontaneously, splashing or smearing it onto the canvas, rather than applying it carefully. With limited use of the brush, he created his own tools which enabled him to conduct the necessary strokes and hand-movements. This method of "action painting" became a popular abstract trend in the 1940s. Many artists, such as the Americans Jackson Pollock (1912-1956) and Jane Frank¹⁸ (1918-1986), adopted this style but Taher, influenced by his long classical background, founded a position of abstraction in which he gave value to light,

¹⁸ Information about Jane Schenthal Frank is available on <http://en.wikipedia.org/wiki/Jane_Frank> 2009-02-09

shadow and depth (Rakha, 2007). A look at his painting *Huwa* reveals the way he utilized hand movements in cursive Arabic writing (Figure (17)).

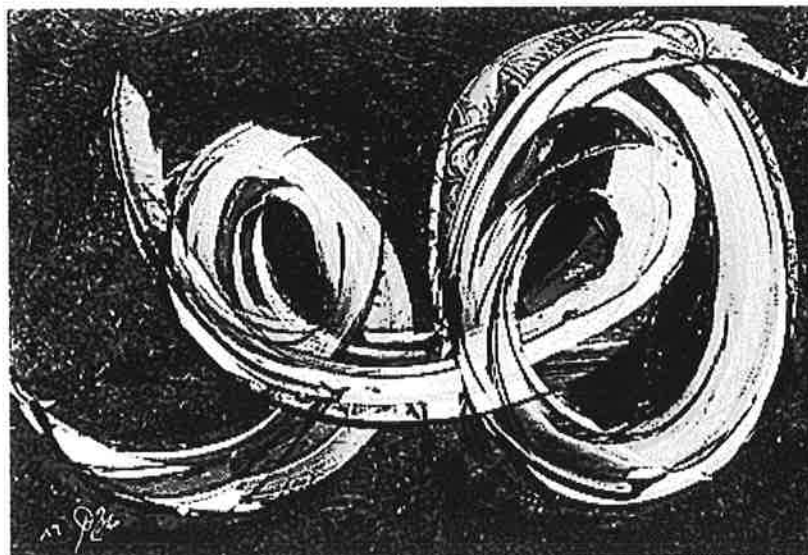


Figure (17), "*Huwa*" by Salah Taher, 46 x 37 cm, oil on cardboard, 1986

The first attempt to use the principle of movement in Moroccan design, and the most successful example, was made outside the Islamic world, and by a non-Muslim artist. The Dutch artist Maurits C. Escher (1898-1972), famous for his incredible artistic talent and for his strange way of utilizing mathematics in his artworks, was the first to explore and invest the principles of Moroccan design in his works. In his travels to Spain, first in 1922 and later in 1936, Escher came across two important places where Moroccan mosaics and geometric ornamentation could be found; The Alhambra, and *La Mezquita*, the great mosque of Cordoba. Escher was fascinated by the distinctive technique of repeated geometric patterns, and the way these patterns were experienced by viewers. In Escher's words *"It remains an extremely absorbing activity, a real mania to which I have become addicted, and from which I*

sometimes find it hard to tear myself away [...] this is the richest source of inspiration I have ever tapped" (Connor and Robertson, 2000).

Escher found in the regular division of the geometric plane a fertile source of ideas which he incorporated into his artistic creations. Moroccan designers used this method to create a sophisticated type of gradually changing rhythm, contrast, and similarity in ornaments. Escher improved upon the works of Moroccan designers and used abstracted motifs such as birds, insects and fish, all of which appear in many of his later works. Based on the same traditional principles, Escher created unusual patterns, impossible constructions, and tessellations. His lithographs and mezzotints catch the eye and play with the viewer's mind in a bizarre sense of beauty. One of his early works, in which he practiced the method, was *Day and Night* (Figure (18)).

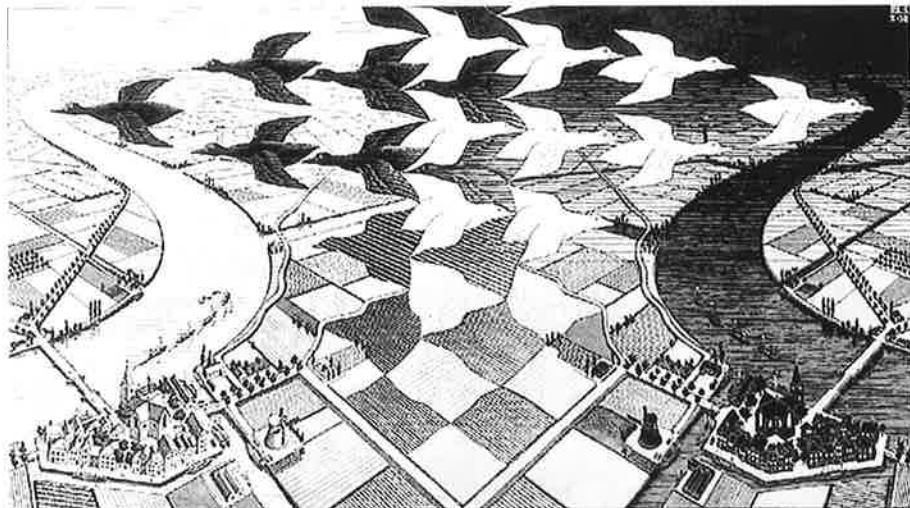


Figure (18) Maurits C. Escher, *Day and Night*, 1938, woodcut in black and grey, printed from 2 blocks

Although Escher's creative inspiration dealt mainly with the contrast in regular division of the geometric plane, some of his works, such as *Whirlpools* (1957, Figure

(19)), appear to be influenced by the spiral movements embodied in vegetal ornamentation.



Figure (19) left, *Whirlpools*, 1957 by Maurits C. Escher, wood engraving, printed from 2 blocks. Figure (20) right, one of many vegetal spiral-ornaments from the Alhambra. Image by (Barrucand, M and Achim Bednorz: 84)

Escher found in Moroccan design a sophisticated order, based on advanced mathematical relations which were developed to 'grab' the viewer's attention. Throughout his life, Escher produced different types of image all of which were based on this system of construction. He studied the creative process of designing these images, and then refined and developed it to make other beautiful patterns. In the lithograph shown below *Encounter* (Figure (21)), printed in 1944, Escher made full use of this method to control the viewer's eyes and to lead them through the work. Two male figures, one a smiling optimist in white, the other a frowning pessimist in black, emerge from the background and pace around a circular hole to

meet and shake hands in the foreground. This is an amazing example of the way Escher made use of the principle of movement to produce a deeply philosophical artwork.



Figure (21) Maurits C. Escher, "Encounter", 1944, lithograph

4 The principle of movement in contemporary Islamic art

According to Ali (1997), the adoption of elements of Islamic art grew in the 1970s, and they were embraced by a large group of artists across the Muslim world, reaching a peak in the 1980s. This era witnessed the emergence of the classic art of calligraphy which was influenced by a massive number of publications documenting its history, styles, techniques and applications. Arabic script was also popular in modern abstract art. A new generation of artists made their appearance on the fine

art stage, using elements of the stylistic vocabulary of Arabic calligraphy. Although critics categorized this trend as *Alhurofiyya* to distinguish it from traditional calligraphy, it is not possible to draw an exact line between works or 'label' a group of artists, as each has experimented independently and many have changed and developed their individual styles through time. The next section will review the use of the principle of movement in different fields of contemporary Islamic art and will look specifically at the individual approaches of some artists.

4-1 The principle of movement in classical calligraphy

In classical calligraphy, which Ali (1997) designated "pure Islamic art", artists comply with traditional principles, models and materials. The space of creation is determined by tradition; artists use the same styles and rules of writing that were established centuries ago. They show the enduring vitality of the Islamic calligraphic tradition today. The perfection of proportion and the legible meanings of the text are the major subject matter of the artwork, which is often inspired by the holy *Quran* and Arabic and Persian poetry. Porter noted "*In many cases artists and poets work closely together*" (Porter, 2002: 36).

Classical calligraphy can be divided into two branches as some artists cling strongly to the long-established principles of Arabic script, while others have made clear changes. Good examples of the first group are works by calligraphers Hassan Celebi and Hamid Aytac (Turkey), Ghathir Al-Borsaeidi and Seyed Ibrahim (Egypt),

Hassan Zarin (Iran), and Nasser Al-Maymon (KSA). On the other hand, calligraphers such as Kalil Alzahawi (Iraq), Jalil Rassouli (Iran) and Hashim Al-Baghdadi (Iraq) have revitalized the art, giving it a modern format and/or casting it with new techniques and mediums.

One of the first master calligraphers to make use of the movement of Arabic script was Kalil Alzahawi (1946-2007), who graduated from the Fine Arts Institute of Baghdad in 1965, where he held his first exhibition. His works show his calligraphic mastery in using script lines; in fact, Alzahawi was the calligrapher who pioneered the abstraction of letters and recomposed them based on their shapes.

Concentrating on the beauty of lines, and working only in black and white, he reformed *Thuluth* and *Ta'liq* letters and used them both as major elements of his creation and as a background which interacted with, and exposed, the subject matter (Figure (22)). His achievements demonstrate an open minded approach to Arabic letters and were a source of inspiration to many artists.

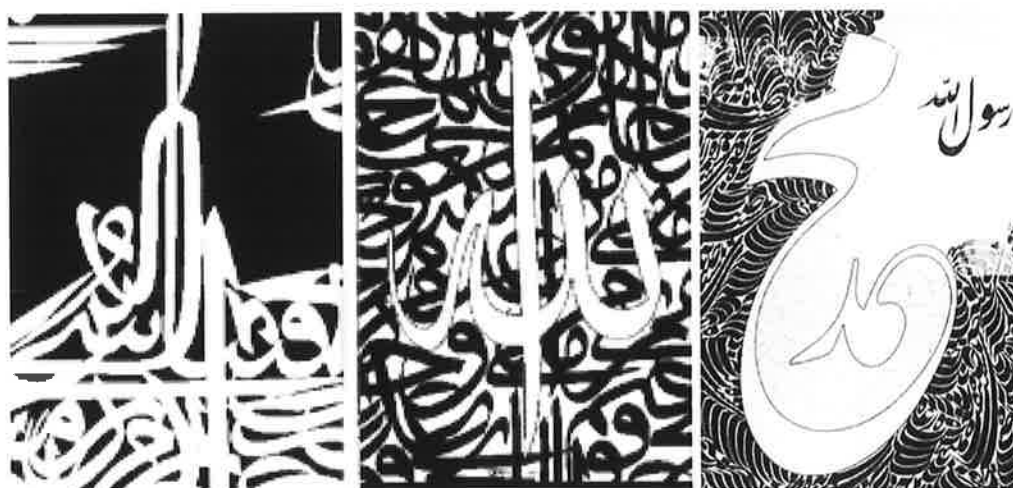


Figure (22) group of Kalil Alzahawi's works, black ink on white cardboard, from his book *Aesthetics of Arabic Calligraphy*

Jalil Rassouli, born in Iran in 1946, is one of the leading names in Iranian contemporary calligraphy. Since the early 1970s he has presented a number of elegant examples in the *Nasta'liq* style. Rassouli worked as a teacher at Tehran University where a large number of young artists were influenced by his style and adopted his way of constructing letters in what became known as the Rassouli School. He was dedicated to the traditional boundaries and principles of calligraphy, and it was not until the late 1980s that he began to liberate his practice from the strict rules and to focus on celebrating the beauty of shapes and lines. However, even when letters were abstracted from the word structure, Rassouli's attempts were shy of achieving obvious changes and his letters retained their traditional form; Figure (23) is a good example. Nevertheless, his compositions expose a great deal of unity and harmony which arise from the way the lines are integrated and extended to flow and move smoothly (Figure (24)).



Figure (23) left, Jalil Rassouli, "*abstracted letters*", undated water colour on cardboard. Figure (24) right, Jalil Rassouli, "*Persian phrase*", water colour on cardboard

Another calligrapher who perceived movement in Arabic script is the Egyptian artist Ahmed Mustafa. He began his career as a classical calligrapher, but later, in the 1980s, took a new direction by combining calligraphic patterns with modern formations and compositions. His personal style is based on the concentrated use of calligraphic lines taken from the Thuluth script in a variety of relations; paralleled, crossed and twisted, and giving an essential role to colour, light and shade.

Although much of his work is derived from Quranic phrases, the lavish use of lines, which cover all aspects of his constructions, makes the text un-readable in a unique visual creation. A good example is *Landscape in Due Measure and Proportion* (1998, Figure (25)).



Figure (25) Ahmed Mustafa, *"Landscape" in Due Measure and Proportion*, mixed media on paper, 135 x 85 cm, 1998

Hassan Al-Massoudy also began his career as a classical calligrapher, but worked to form his own distinct style by focussing on the movement of lines. In 1972 he presented a public performance show entitled *Arabesque* along with the actor Guy Jacquet and musician Fawzy Al Aiedy. *Arabesque* was a combination of music and poetry together with calligraphy, performed and projected onto a large screen. The show played across Europe and succeeded in presenting the art of calligraphy as a modern medium. In 2005, Al-Massoudy, together with the choreographer Carolyn Carlson and the musician Kudsi Erguner, created the show *Metaphore*, a harmony of music, dance and calligraphy (Figure (26)).

Al-Massoudy exploited the emotions one might feel looking at the way in which letters contrast. He allowed the viewer to live and enjoy the moment in which the calligrapher's hand moves swiftly, and also to enjoy the flow of the lines and to witness every change in their thickness and shape. Al-Massoudy explains his practice *"My hand moves rapidly across the page, tracing simultaneously the outline of the words and the shape of the composition. Not only my hand but also my whole body is engaged in this act that unlocks a treasure house of patiently acquired skills. To write quickly a calligrapher must have absolute control over movement and breathing alike"* (Al-Massoudy, 1990: 2).



Figure (26) *"Calligraphy of light and shade"*, public performance by Hassan Massoudy, 1999.

The type of movement Al-Massoudy practiced emerged from the calligraphic strokes that he used to show up the curved lines exaggerating specific words or parts of phrases in large font, he described it as a *"field of energy subjected to the rhythm that I impose on the movement of the letters"* (Figure (27)) (Al-Massoudy, 1990: 2).



Figure (27) Hassan Al-Massoudy, *"Where there's a will there's a way"*, black ink on paper, 1995.

The new generation of calligraphers had more courage to liberate script from its traditional chains and to explore new ways of celebrating the beauty of its shapes and lines. It can be seen that each artist-calligrapher has taken his own direction in using the type of movement Arabic script has to offer. While the works of the Chinese Haji Noor Deen Guanjiang introduced cursive Arabic writings in the traditional Chinese form (Figure (30)), Zahra Cobanali (Turkey) adorned her ceramic objects with abstracted lines derived from calligraphic forms (Figure (28)). Some worked on dividing the word into plain calligraphic strokes, and gave more importance - even more than their legible meanings - to the dynamic appearance of the lines. These included artists such as Ali Hassan (Qatar), Muhammad Ehsai (Iran), Hussein Madi (Lebanon), Mhammed Al-Mulla and Abbas Yousif (Bahrain), Malek Chebel (Algeria), and Khaled Al Saai (Syria) (Figure (29)). Others found their inspiration in the dynamic and changeable shapes of the cursive lines of Arabic script.



Figure (28) collection of ceramic objects by Zahra Cobanali shown in the exhibition Contemporary Calligraphy II, April 23 - May 13, 2007, Bahrain



Figure (29) left, Khaled Al Saai, mixed media on paper, 2003. Figure (30) right, Haji Noor Deen Guanjiang, Chinese ink on paper

In contrast to Arabic script, the use of geometric and vegetal ornaments was scarce and assigned only a marginal role. Issam El-Said (Iraq) was one of only a few artists to explore the use of geometric design. He introduced inventive geometric units and patterns based on the traditional models. He also returned to the study of fundamental procedures for constructing the three elemental shapes - square, triangle and circle - and used the principle of geometric repetition to create new compositions.

The art-critic Samir Chorbachi depicts the works of El-Said as an *"expression of the Islamic cultural identity"*. He noted *"El-Said's fascination for geometry – the vocabulary and language of Islamic art - manifested itself in the design concepts for constructing geometric patterns determining a formula used by craftsmen and master builders in Islamic art and architecture, which avoids the use of complicated*

mathematical calculations. This involvement developed alongside his understanding of the essence, beauty, perfection and harmony found in the Islamic arts and architecture irrespective of the region or era and he delved into theory and practice to reconstruct their elements, all of which endorsed his theory that 'all Islamic arts were governed by the science of preparations in the realm of metre, rhythm and in the form of interval in music' as developed by Moslem scholars and draftsmen" (Chorbachi, 1989: 7).

The following patterns, which are combined with *Kufic* script, are good examples of El-Said's achievements in exposing the principles of rhythm and repetition in geometric design. This requires the viewer to engage in the visual experience, tracing the relations and exploring the formula of construction (Figures (31) and (32)).

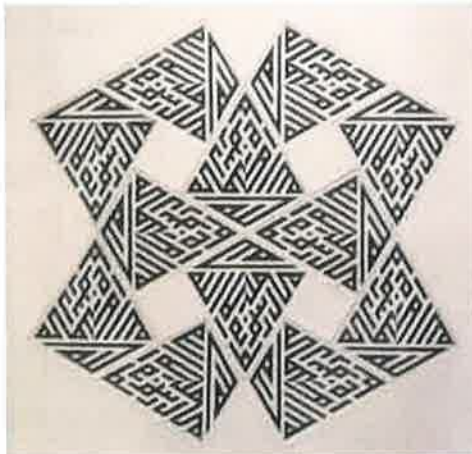


Figure (31) left, Issam El-Said "*La Illaha Illa Allah, Mohammed Rassoul Allah*", etching 48 x 48 cm, 1982. Figure (32) right, *Bismillah* etching 48 x 48cm, 1982

4-2 The principle of movement in abstract approaches

In contemporary Islamic art, many artists have turned to the use of traditional elements in the production of artworks influenced by modern styles; these works are powerfully affected by contemporary art movements and each artist modifies traditional designs or patterns for his own needs and purposes. This trend is popular among abstractionists, and recently with new-media artists such as photographers, typographers, and video and graphic designers. In abstraction approaches, traditional elements play a minor, more often symbolic, role. Letters and words are sometimes legible but are more often turned into beautiful abstract patterns and do not have an important role in the form. Artists who follow this trend use creative products to reflect on and respond to tradition and modernity at the same time. They use traditional elements with new techniques, mediums and styles, and tackle new topics and subject matter which address society, politics, gender, democracy, human rights and other themes.

Many well-known artists, such as Maysoon Qasimi (UAE), Samir Salameh (Palestine), and Shirin Neshat (Iran), link Arabic script with political, nationalistic and humanitarian issues, while others such as Laila Al-Shawa (Palestine), Hamid Nada (Egypt), Khusrau Hasan-Zade (Iran), and Thoraya Baksami (Kuwait) employed calligraphic and ornamental patterns as symbolic tools to express personal matters (Figures (33) and (34)). However, their use of Islamic art elements was superficial

and did not deal with the aesthetical core of Islamic design in general and the principle of movement in particular.



Figure (33) left, "*Speechless*", photography by Shirin Neshat, 1996. Figure (34) right, "*Laila*", by Laila Al-Shawa acrylic on canvas, 91 x 61 cm, 1992

Nevertheless, some artists focussed on specific elements of Islamic design, yet the selected element remained the essential subject-matter of the artwork and was treated experimentally in terms of materials and application. Artists usually only work in this way after long experience and/or having become highly skilled in a chosen area. Some who dealt with Arabic calligraphy, such as Dia Al Azzawi (born in Iraq in 1939) freely interpreted the traditional forms and turned them into new shapes, allowing their abstract thoughts to link with the shapes of letters. Since his graduation from the Institute of Fine Arts of Baghdad in 1969, Al Azzawi has been part of many art groups. Beginning with New Vision, he later joined the One Dimension group which was led by Shakir Hassan al-Said. "*This relationship with the*

pioneers of Alhurofiyya shaped his perception of the aesthetic values of Arabic script" (Shabout, 1999: 193). He practiced the use of letters in many ways, including painting, sculpture, and print making. In his early works, he focussed on the use of letters as major elements of his construction (Figure (35)).



Figure (35) Dia Al Azzawi, "Prayer", oil on canvas, 90 x 120 cm, 1996

Gradually, Al Azzawi released letters from their usual form and worked on reshaping them into new structures. In the last few years, letters in Azzawi's style have begun to change from the detailed full-colour, which marked his 1970s and 1980s works, to a rather transparent and more abstract approach. One factor his works have in common is the inclusion of Arabic letters and worded elements (Figure (36)).



Figure (36) *"Iraqi Day"*, mixed media, 101 x 152 cm, 2006, Dia Al Azzawi

The Lebanese artist Wajeeh Nahla (born in 1932) uniquely transformed the principle of movement in a gradual process throughout his long artistic career. Until the early 1970s, Nahla used Islamic design elements in their traditional forms, including geometric, vegetal, and Kufic calligraphy. Then he directed his experience towards the new abstracted mould, fundamentally based on the principle of movement. *Extract Composition*, (1982, Figure (37)) is an example of his early work in this area, in which aspects of Arabic script exist and are combined with other curved forms, all structured to suggest a unity based on the dynamic relationship between lines and shapes.

Unlike other artists, his use of movement was not limited by what Arabic script had to offer. He went on to discover the world of motion contained by vegetal ornamentation. *Composition* (1987, Figure (38)) is one of many examples in which he presented vegetal ornaments in their familiar shapes. His later paintings became

more abstracted and free from realistic links, such as light, shade and depth, and his lines became softer and blurred (Figure (39)). However, one can feel in Nahla's works influences of Islamic art compositional concepts such as the flow of lines, dynamism of shapes and avoidance of the use of figurative or realistic forms.



Figure (37) Wajih Nahla, "*Extract*" Composition, oil on canvas, 1982.



Figure (38) left, Wajih Nahleh, "*Composition*", 100 x 120 cm, acrylic on canvas, 1987
Figure (39) right, Wajih Nahleh, "*The Dancer*", 110 x 120 cm, oil on canvas, 2002.

4-3 Moroccan design in contemporary art

Although modern art in Morocco dates from the early 1950s, few artists of that era dealt with their artistic heritage. A look at the works of the first generation of Moroccan artists, such as Fareed Balkahia, Omar Mishmasha, Altiaeb Elhillo, Hassan Alkallawi, Muhammad Ben Allal, and Muhammad Alhoumry, reveals the great impact of the French art-schools, impressionism and abstraction in particular. In the 1960s, art exhibitions became a growing cultural phenomenon in Morocco, and new artists found in painting a way to express individual and communal matters. Pierre Gaudibert, Director of the Museum of Modern Art Grenoble, France, in his book *Moroccan Painting*, explained that *"although artists practiced modern art in art-school arenas, they subconsciously reflect their cultural environment and generally turn to words and letter forms as a vehicle for expressing their thoughts"* (Maraini, 2006). However, as with other attempts throughout the Islamic world, the trend towards using traditional elements was limited to utilizing them as symbolic marks, and did not deal with artistic achievements of Moroccan design such as compositional concepts and methods.

According to Maraini, *"in the 1970s and 1980s the Maghribi script became a popular artistic element in various individual approaches"* (Maraini, 2006). One of the creative uses of *Maghribi* script was practiced by Ali Omar Hermes (born in Libya in 1945). Although his works frequently included poetry and literary quotations, the shapes of letters play a crucial part in, and add significance to, the work. One of

Ermes' most exceptional paintings is *Discarding Strike* (Figure (40)) created in 2003, which, with a brush rather than the traditional reed pen, focuses on the movement of a single letter (ح). The black colour dramatically counteracts the lightness of the paper, and the stroke breaks up into different sub-lines and branched curves.



Figure (40) Ali Omar Ermes, "*Discarding*" Strike, acrylic on paper, 153 x 122 cm, 2003.

One distinctive employment of *Maghribi* script can be seen in the work of Rachid Koraichi (born in 1947). The abstracted formations he produced reflect a unique transformation of shapes and lines. In his metal sculpture *A Nation in Exile* (Figure (41)), one could easily see the traces of elegant calligraphic strokes and the way in which these are turned into dynamic abstract patterns. In the same way, Khadija Nekrouf focussed on aesthetic aspects, although letters played only a partial role in her works. The curved and dynamic shapes she created are used to realize balance with other static forms (Figure (42)).



Figure (41) left, "A Nation in Exile", 2003, metal sculpture by Rachid Koraichi. Figure (42) right, untitled, mixed media by Khadija Nekrouf

Although *Maghribi* script has recently become a common artistic vocabulary in the works of many young Moroccan artists, only a few have liberated their practice from traditional boundaries. Efforts toward investing the style aesthetics have been fruitful in the works of artists who have a background in calligraphic skills rather than in the works of those who do not. Artist-calligraphers were more capable of understanding the technical possibilities and each devised his individual methods of employing traditional artistic achievements.

Hakim Ghazali, a notable calligrapher, offered in his abstract compositions a great appreciation of the role of movement as a method of realising unity. In his artworks, shapes and lines play a fundamental role as elements and as tools for banding the work components. Similarly, Ibrahim Hanneen used his long experience as a calligrapher in transferring curved lines to non-alphabetical elements. The works of Mohammed Albendouri, a growing name in contemporary Moroccan art, are examples of

breaking the traditional rules of calligraphy and rebuilding its elements into new abstract compositions, constructing letters in rhythmic order based on their changeable shapes (Figure (43)). Daifallah Noureddine also attempted to utilize the shapes of *Maghribi* script by treating calligraphic strokes as basic elements of construction. Although this approach was practised by many artists, he established his own style of proportion and spacing for Arabic letters (Figure (44)).



Figure (43) left Mohammed Albendouri. Figure (44) right, Daifallah Noureddine

A leading attempt to amalgamate the sophisticated shapes of *Maghribi*¹⁹ script and the highly creative use of its principal of movement was produced by Tunisian artist Nja Mahdaoui (born in 1937). His work is based on a great understanding of *Maghribi* script and its unique nature of gathering together both geometric (*Kufic*) and cursive (*Nasgh*) letters. Unlike other styles of Arabic script, *Maghribi* contains static angular shaped letters joined with dynamic curved ones. This can be seen in

¹⁹ More about Maghribi on page 161

the images below where letters of overlapping *Kufic* script are extended and bent in the same way as cursive letters (Figure (45)).



Figure (45) collection of the works of Nja Mahdaoui, presented on his official website.

His compositions are devoid of textual meaning but stress the visual impact and exciting dynamism of shapes and lines. In addition, Mahdaoui freely changed the traditional basics and included letters from other styles or invented new shapes or knots to his artistic vocabulary.

Mahdaoui created a viable artistic style based on the reconstruction of calligraphic forms in abstract compositions that demonstrate the beauty of changeable shapes and combinations. Mahdaoui applied his style in a decorative manner to adorn such diverse objects as architectural surfaces, book covers, garments, decorative objects, and more uniquely, aircraft (Figure (46)).



Figure (46) examples of Mahdaoui works, 1) upper left, a garment from a 1998/99 fashion show, with designer Amel Sghir, 2) upper right, *Dome du Lac-tower* a five floor building (Tunisia-2005), 3) Gulf Air aircraft decorated for the celebration of the 50th anniversary of the company

5 Lack of practical knowledge about the ornamental culture

Considering the different aspects reviewed above of the contemporary use of traditional Islamic art in general and the principle of movement in particular, it is clear that in most cases the artist was restricted to dealing with Arabic script. Whether used in accordance with established rules or abstracted and transformed into new constructions, calligraphic forms were favoured, easy to adopt, and adapted to modern artistic applications. The use of geometric and vegetal ornaments was scarce and most works incorporated traditional patterns which originated centuries ago.

Only a few artists have moved beyond the existing, limited concepts to explore new approaches and attempt to surpass customary standards for using the traditional designs. Looking generally at innovative attempts to transform the principle of movement, one shared element is observable in all cases; each artist has been through a long period of self-discovery in which they have examined field-related knowledge and practiced the relevant technical skills before arriving at their final achievements. In the case of Maurits C. Escher, and Issam El-Said, both studied the geometric methods of pattern construction and experimented with the execution of similar forms before developing their own performance to a high level. In the same way, Wajeeh Nahla, in his early experiments, created traditionally formed vegetal ornaments which developed later into a sophisticated style utilising shapes and lines. The same thing can be seen in the distinctive productions of creative artist-

calligraphers such as Kalil Alzahawi, Ahmed Mustafa, Hassan Al-Massoudy, and Nja Mahdaoui who interwove their expressiveness and originality with in-depth knowledge and skill. This raises a number of questions; why were attempts which dealt with Arabic script more abundant and more successful than those that dealt with geometric and vegetal ornamentation? Why could only those artists with skilful knowledge in their field effectively transform Islamic design aesthetics whilst other attempts were superficial or delimited by the traditional boundaries?

The answer may lie in the lack of available information about the ornamental culture. While calligraphic knowledge existed in different circumstances throughout the 19th and 20th centuries, and became available in the modern art arena, much of the basic technical information about other design components disappeared. Wijdan Ali noted "*The political, economic and social environments since the 19th century have caused the decline of traditional arts in the Arab world*" (Ali, 2002: 1). In fact, the political, economic and social conditions have effectively destroyed the domain of traditional arts and crafts, the environment in which design lived, was practiced and was developed. These events resulted in the loss of much practical knowledge, whether in the form of documents, archives and books, or the skills and techniques of creative artisans. Dormer stated that "*when practical knowledge disappears, it is hard and time consuming to rediscover it*" (Dormer, 1997: 148).

Teresa Amabile clarified that "*Domain-related skills are a fundamental component of creative production which consists of factual knowledge about technical skills,*

principles, and opinions about various issues" (Amabile, 1996: 85). On the same lines, Issam El-Said declared that domain-related skills and knowledge play a vital role in the process of inventing new compositions. He stated, "*The ability to exploit the freedom of expression [...] necessitated a deep familiarity with the available systems of construction only acquired after long periods of experience*" (El-Said and Parman, 1976: 114). Behrens-Abouseif argues that compositional conceptions and techniques of Islamic art "*are documented only in the works themselves*" (Behrens-Abouseif, 1998: 184). As the continuity and development of many Islamic art forms was interrupted, artists who were interested in gaining specific skills or knowledge were often unable to find the information they needed. "*They therefore had to undertake individual investigation and practical exploration to achieve their targets*" (Al-Mahdi, Personal interview 2004).

Another important factor that adds to the lack of practical knowledge is the marked absence of literature which might provide analyses, and intellectual, and technical details. Although Islamic art has been the subject of many notable publications, the majority of these studies deal with historical topics such its era, place of origin, geographical, political, environmental influences, and materials used. Titus Burckhart confirms that "*the study of Islamic art artistic methods have been broached by only a few enquiring minds*" (Burckhart, 1979: 6). A few scholars consider issues regarding design methods or provide in-depth investigations of technical matters, but "*even these publications were out of artists' reach as many of*

them were limited editions, rare, expensive, or written in foreign languages" (Al-Mahdi, Personal interview 2004).

However, interest in Islamic design began to grow in the 19th century, when it became a distinguished category of art. Hessemer (1836), Jones (1856), Racinet (1886) and others focussed on introducing examples of different patterns in high quality coloured plates. Books that tackled Moroccan style as a distinctive branch of Islamic art (Jones and Goury, 1837; Murphy, 1850; Calvert, 1904, 1906) viewed it in terms of the Andalusian remains and provided highly detailed illustrations, but with little analysis and interpretation of the methods of design construction. These early studies became a base for later attempts in the 20th century that dealt in greater depth with specific design topics.

Geometric ornamentation has been the subject of a number of notable studies, resulting in important analyses and technical detail. Bourgoin, in his book *Arabic Geometrical Pattern and Design* (Bourgoin, 1973), analysed basic methods of construction by reintroducing around 200 geometric patterns in black and white illustrations. Bourgoin took most of his examples from the Moroccan order and his analyses became the base for later practical studies which focussed on investigating the significant role of geometry in design structure. The first study to tackle a design principle comprehensively was *Geometric concepts in Islamic Art*, by El-Said and Parman (1976). In this endeavour, the fundamental methods of geometric proportion, which play an elementary role in design practice, were traced back to

primary rules and the application of a variety of pattern units was explored. In the same way, Abas and Salman (1993) investigated the role of symmetry as one of the major principles of design construction. They decomposed the use of symmetry in different Islamic models, divided them into symmetric groups, and applied this process to the production of a large collection of patterns.

These studies provided valuable analyses of the construction of geometric patterns and the role of geometry in the early stages of the design process; when the decorative space is divided, based on geometric and symmetric proportions, into different panels which might each be divided into sub-units. However, the later part of the design process, in which the designer composes different components in the divided spaces, is not entirely clear. Many of the original methods used for the enhancement of design structure are obscure. How, for example, did designers harmonize contrary elements such as dynamic lines of calligraphy and vegetal ornaments with static geometric forms? What methods did they use to organize, relate and unify different lines and shapes? What concepts and principles directed the final stages of design creation?

Simultaneously, the role of movement as a basic principle in shaping and composing calligraphic and vegetal ornaments is not comprehensively elucidated in modern literature. Except for Almannony (1991) and Boogert (1989), who produced notable materials on Moroccan scripts, and Paccard (1997) who remarked on arabesques, the majority of literature available is superficial and descriptive.

Moroccan and Andalusian patterns *"are very likely the first, and among the most engaging, examples of complex overtly self-similar art made by man"* (Bonner, 2003); the complex and varied ornaments based on multi-level design have reached an advanced stage in constructing design elements. These achievements of design are worth investigation to explore the remarkable visual relationships of line that Moroccan designers have realized throughout history. Although much of the knowledge regarding Moroccan design is unavailable, as Paccard described it, *"it is a living realm"* (Paccard, 1979: 20). Unlike other regional styles of Islamic art, Moroccan traditional arts and crafts existed and are still practised today. As this research aims to sustain such inherited qualities and to integrate them into a contemporary artistic language, it is hoped that the expertise of master-craftsmen may provide adequate answers to many questions concerning the practical knowledge of the PMMD.

Chapter 3 – An overview of Moroccan design

1 Introduction

This chapter will overview the historical development of Moroccan design through the art and architecture of each Royal dynasty from the 9th century to date. It starts by justifying the nature of Islamic design and clarifying its compositional elements then explores the sequential progress of Moroccan art, concentrating on the major shifts and breakthroughs in its design elements, with a special focus on the development of the PMMD as an artistic concept.

2 Islamic art

The term 'Islamic art' might be confusing to some. Grabar blames this obscurity on the correlation between Islam and art; he noted, "*A great deal of occasionally acrimonious confusion surrounds the use and meaning of the word Islamic when applied to art*" (Grabar, 1987: 5). As numerous scholars have suggested, this confusion may be caused by the impact of many factors; one of them, is the variety of significances that this term refers to. Hillenbrand noted "*It is truly no more than an introduction to a vast field*" (Hillenbrand, 1999: 9). It represents a remarkable unity and describes a vast field of artistic styles and art forms which were produced over a vast time span across a large geographical area that extended from Spain to the

borders of China. They include Moroccan in Spain and North Africa, Fatimids and Mamlouks of Egypt, Ottomany in Turkey and Asia Minor, Safavidy in Persia, Mughal In India, and other regional styles that appear in the Islamic world. These styles are all united by the term 'Islamic' despite the differences in race, and tradition.

Grabar concluded that the term "*refers to the monuments and remains of material culture made by or for people who lived under rulers who professed the faith of Islam or in social and cultural entities which, whether themselves Muslim or not, have been strongly influenced by the modes of life and thought characteristic of Islam*", and a deeper look into recent literature dealing with the interpretation of Islamic art reveals that it may be "*interpreted differently*" (Grabar, 1987: 35).

Some interpretations are based on visual analysis and perception of Islamic ornaments and pattern. The German Orientalist Ernst Kuhnel (1882-1964), for example, saw that "*It would be a mistake to attribute symbolic or allegorical meaning to these natural motifs when they appear in fantastic stylizations, nor should one seek for the representation of historical events*" (Kuhnel, 1996: 24). Islamic art, especially from the Western perspective, has been criticised and studied using methods based on superficial analysis. These methods may be successful for other decorative arts, but in this particular case it is illogical to make a judgment on a pattern by studying only its external appearance, without due regard for the cultural and religious meanings that led to its creation or the causes that make it popular across such a large geographical area as the Islamic world. In addition, calligraphy

as an important element in Islamic design was the channel that Muslim artists used to convey their thoughts and notions. Anthony Welch confirms that calligraphy was viewed as the reflection of a visual expression *"A beautiful handwriting speaks for the writer, makes his arguments convincing and enables him to obtain what he wants"* (Welch, 1997: 33).

Another group of writers introduced a different set of interpretations to explain Islamic art, promoting certain Sufi or mystical concepts. Books written by Seyyed Hussein Nasr, Titus Burckhart, Keith Critchlow and others, adopted these mystical methods of analysis and became basic resources for some later studies. Nasr for example noted, *"Traditional Islamic art conveys the spirituality and quintessential message of Islam through a timeless language which, precisely because of its timelessness as well as its direct symbolism"* (Nasr, 1987: 195). Furthermore, he suggests that *"Without the two fountains and sources of the Quran and the Prophetic blessing there (would) be no Islamic art"* (Nasr, 1987: 7).

The symbolic mystical interpretations that have proliferated in books on Islamic art, geometric design, pattern and ornament are based on a modern understanding of mystical literature. *"There is no evidence in Arabic sources to suggest any religious symbolic meaning attributed to Islamic design, whether to the arabesque or geometry"* (Behrens-Abouseif, 1998: 184). Chorbachi debates *"the problem lies in presenting these modern mystical views as historical truths, as if these symbols were the meanings at the time the art forms were created"* (Chorbachi, 1989: 19).

My own approach to a better understanding of Islamic design and the development of its basic elements and principles is to take a comprehensive look at the main factors that affected its construction as an art form. Many scholars attribute the distinctive nature of Muslim arts and crafts to the Islamic religion. To appreciate this role, it is necessary to have a clear understanding of Islam as a faith and of its impact on artistic engagements.

3 Islamic religion's influence on the genesis and development of design elements

The word 'Islam' in Arabic means submission to the will of God (*Allah* in Arabic). It also means to achieve peace, peace with oneself, peace with the creations of God, and commitment to his guidance. Mohammad (570-633), God's messenger and the last of the Prophets, called for pure monotheism. He did not consider Islam a new religion, but a continuation and fulfilment of the same basic message that was revealed by God to other prophets before him (Noah, Abraham, Moses, and Jesus). The Quran, the holy book of God, is both a spiritual and social law. *Sunna*, the way of life of the Prophet, and his traditional sayings, regulate not only culture and common law but also the fundamental and recurring facts of everyday life, such as how to eat, procreate, sleep, and other life activities (Behrens-Abouseif, 1998: 12-14).

Muslims were affected strongly by their common possession of religious confession; it bridged differences of race and tradition, and enforced the adoption of common customs, manner and spiritual approach, in an extraordinarily clear and uniform mould. The importance of the Quran as a guide in all life's questions as well as in matters of faith was the bond that held the whole Islamic world together. The unity of the Islamic world was preserved by the general acceptance of Divine Law, the *Sharia*, which gave Islam a coherent social structure in an immutable law. Islam, as perceived by many Muslims, is a force binding people together, which creates a sense of brotherhood and a sense of belonging to a moral code and a greater interest. As a faith, Islam underpins the moral values of justice, goodness and family, and denounces atrocious acts of evil. This religious concept is reflected on all aspects of Muslim life, especially art.

The aesthetics of painting, sculpture, and other arts are not mentioned in the Quran. Nevertheless it contains a number of precise statements and general attitudes which impact significantly on Islamic art. For instance, "*O you who believe, indeed wine, games of chance, statues, and arrows for divination are a crime, originating in Satan*" (Quran 5:93). While the word *Alansab*, which is used here, is often translated as 'statue', it refers to idols, many of which were of human or living form. In the pre-Islamic era these were "*believed to have power*" (Behrens-Abouseif, 1998: 137). The absence of figurative art in Islamic art may be attributed to an Islamic antipathy toward anything that might be mistaken for idols or idolatry, which is explicitly forbidden by Islam. One of Islam's fundamental beliefs is that God is the only

Creator, the Creator of the whole universe, and the only one who can give life.

Taking this belief together with views on idolatry at that time, we can understand that the artist who fashioned a representation of a living thing was in competition with God. Therefore, the artist, seeking neither to imitate nor compete with God, *"becomes free to recompose the units of nature he knows in any way he sees fit, and the more arbitrary and absurd the better"* (Grabar, 1973: 192).

The growth of Islam to cover an area from central Asia in the east to the coast of Africa and Spain in the west in less than eighty years is one of the most extraordinary events in history. Muslims promoted the development of a religious, political, and cultural commonwealth and the creation of a global nation. Islamic ideology and its meanings diffused and conquered, crossing from one region to another. The major interest for the Muslims of that early period was *Al-Tabligh*, or informing humanity of the message of God. *"There can be no quotation of a universal Islamic art at this early stage"* (Hillenbrand, 1999: 11).

The lands newly conquered by the Muslims had their own pre-existing artistic traditions and those artists who had worked under Byzantine or Sassanian patronage continued to work in their original styles but in a manner acceptable to their new patrons. Grabar has noted that *"at the time of the growth of Islam images had acquired a meaning much beyond their value as works of art; they were symbols of mystical, theological, political, imperial, and intellectual ideas and were almost the equivalents of the acts and personages they represented"* (Grabar, 1987:

6). Consequently, the first examples of Islamic art rely on a combination of what the faith both rejected and accepted from the pre-Islamic decorative motifs, techniques, styles, and forms. This can be clearly seen in early monuments such as the Umayyad Mosque at Damascus and the Dome of the Rock in Jerusalem which *“were not new but consisted almost exclusively of the forms of Byzantine and, to a far smaller degree, Sassanian art”* (Grabar, 1987: 7).

The architecture of the mosque is one of the most significant forms of Islamic art. The mosque, *“the heart of the city”* (Grabar 1976: 114), served not only as the holy place of worship, but also as the centre of Muslim life and as a focal point where most community events and activities took place. For artists and craftsmen, the mosque’s space and architecture were the best place to display their finest skills. These monuments became landmarks that exemplified society’s nature and identity, and represented the shape and tone of its culture.

When looking closely at the many forms of Islamic design, despite the differences in techniques, materials, and other local variations, there are two fundamental principles that unify all their motifs and patterns. First, the geometric proportion of design structure, which represents the base of any Islamic design; Muslim artists used mathematics and geometry to design their ornamentations in order to achieve a high level of balance, harmony, and rhythm. The other is the limited use of three elements; Arabic calligraphy, the use of geometric patterns, and arabesque. These

elements are basic to design all over the Islamic world, which leads us to ask why they became so popular.

Calligraphy is probably the most significant evidence of the close relationship between Islamic faith and art. From the very early years of Islam, Muslims began writing the Quran as beautifully as possible - in a fashion that matched the beauty of its meanings (Porter, 2002: 23). Since Arabic is the language of Muslim worship, and the language of the holy Quran, it binds Muslims of all times and places and links them together in one cohesive brotherhood. The rich meanings of Quranic verses and prayers mean that the art of calligraphy is highly respected and appreciated amongst Muslims. Throughout the Islamic world, Arabic characters became the writing script for the non-Arabic speaking peoples within the Islamic commonwealth (Persian, Turkish, and Urdu, for example). Calligraphic patterns, in conjunction with decorative motifs, embellish all kind of objects and architectural sites, including sacred and secular places. They are also applied to metalwork, pottery, stone, plaster, glass, wood, and textiles (Behrens-Abouseif, 1998: 139-140).

In the eighth century AD, when paper-making became a known craft in the Muslim world, calligraphy as an art form was extended significantly, and different styles of writing were developed. The appearance of paper opened the door wide for the evolution of knowledge, as evident in the emergence of schools (*madrasas*), libraries (*dar Alhekma*) and academic research institutions, and markets for books and writing equipment (*Souk Alwaraqeen*). The vast growth of calligraphy might also be

attributed to the rejection of figurative art by Muslims, after which it became a major tool for the direct expression of thoughts and concepts. The art of calligraphy is not merely a form of stylish writing or decorative element, but a true reflection of a community's concepts and beliefs. Lucien de Guise noted, *"Although considered a 'minor' or 'decorative' art by most early historians of Islamic art, manuscripts are now ranked among Islam's most sublime achievements. The original evaluation is not surprising, since the pioneers of Islamic art analysis were non-Muslims"* (Guise, 2006).

The use of geometric patterns as decorative elements is the most distinctive characteristic of Islamic art and architecture. Whether isolated or used in combination with other ornamentations, these abstract designs not only adorn the surfaces of monumental Islamic architecture but also function as the major decorative element on vast selections of objects of all types. Geometric patterns vary in their complexity and design, from simple shapes to very complicated polygons and stars. Consisting of, or created from, simple forms such as the circle, square, and triangle, geometric patterns were combined, duplicated, interlaced and arranged in intricate unification, with a great concern for unity and order in the structure of the work (Bourgoin, 1973: 10).

Floral and vegetal ornamentation (arabesque) is another basic element of Islamic art. Although Muslim artisans adopted this artistic theme from earlier styles, they developed it to highly abstracted decorative order. Even arabesque that does not

reveal sharp geometric lines and shapes is constructed on a geometric proportion, which organizes the distribution on the decorated surface. Grabar emphasises the pleasure-oriented nature of Islamic design, he describes arabesque, "*not only as a kind of design but also as a way to treat design*" (Grabar, 1987: 505). He writes, "*The redundant became the main function of an artistic tradition, and as the tradition grew and developed, its every new motif, even inscriptions, [was] ornamentalized*" (Grabar, 1987: 179).

4 Historical development of Moroccan design

The art-historian Muhammad Abdl-Allatif verified that the early beginnings of the Moroccan style appeared in Al-Qairawan (modern-day Tunisia) when Muslim conquerors founded the city as a base for their armies. "*In 670 AD, the great mosque Al-Qairawan, the first Islamic structure in the region, was built. It was greatly influenced by the Umayyad mosque of Damascus, and craftsmen and decorative materials were brought all the way from Syria*" (Abdl-Allatif, 2000). Bayard Dodge in his book *Muslim Education in Medieval Times* explained that Al-Qairawan mosque became the educational centre in which Islam was taught, and calligraphy classes were given to qualify writers for the inscription of the holy book. He noted, "*A distinctive style of calligraphy was born, known as Al-Qairawani*" (Dodge, 1962: 33) (Figure (47)). According to Abdl-Allatif, Al-Qairawani basically developed due to a combination of two styles; the early *Kufic* (Figure (48)) and the cursive *Alhijazee* (Abdl-Allatif, 2000).

The occupation of the Spanish Peninsula began in 711, when Tariq Ibn Ziyad defeated the Christian army led by Roderick at the Rio Barbate. The following three decades witnessed a series of wars between Muslims and Christians, whether with the Spanish or the Frankish empire in the North. Representative artistic styles were of no interest to Muslims in those early years and remained of little concern until the rise of the Umayyad dynasty, when Andalusian craftsmen began to mould together components to create their own artistic identity (Hattstein, 2000: 208).

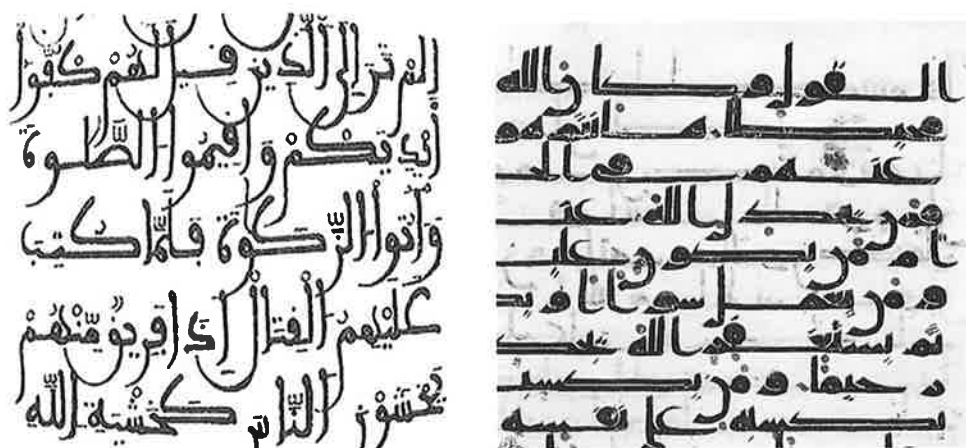


Figure (47) left, a verse of the Holy Quran in *Al-Qairawani* style, about 11th century, private collection.

Figure (48) right, a verse of the Holy Quran in early *Kufic* style, 9th-10th century

4-1 The Umayyad caliphate of Spain (756-1031)

Markus Hattstein designated Abd al-Rahman as "*the great creator of Islamic Spain*" (Hattstein, 2000: 210). Abd al-Rahman controlled the capital Cordoba after defeating its governor Yusuf Al-Fihri, and in 756 he proclaimed himself *Emir Al-Andalus* (prince of Andalusia). Abd al-Rahman succeeded in unifying the country and launched a development strategy centred on supporting agricultural commerce.

Through this policy, efficient irrigation channels were established and accurate land surveys were made to cultivate several types of trees and plants mainly imported from the Orient (Hattstein, 2000: 212-213). This resulted in a flourishing economy, which influenced all aspects of life in Andalusia, particularly in the domains of art, craft and architecture.

The Great Mosque of Cordoba, one of the most magnificent structures of Islamic Spain, was built as a result of Abd al-Rahman's desire to make this mosque worthy of Cordoba as a metropolitan city. Although it used a vocabulary of lofty square minarets, horseshoe-shaped arches and two-tiered arcades, which were traditionally associated with Syrian architecture, it developed its own decorative language (Hillenbrand, 1999: 171). Over the course of four expansions in less than three centuries – a vivid illustration of the additive nature of the mosque in general – it grew to become one of the largest mosques in the Islamic world. *"This gigantic size seems to have encouraged its architects and craftsmen to explore subtleties of lighting, repetition and rhythm to a degree rare in mosque architecture. They repeatedly employed the vanishing point to suggest infinity and a concentration of ornament to exalt the area around the Mihrab"* (Hillenbrand, 1999: 172).

Abd al-Rahman's development policy was sustained by his successors, and under the rule of his grandson Abd Al-Rrahman II (822-852) education was highly supported and occupied an important position in community life. Cordoba became an intellectual centre and destination for knowledge seekers, where different

branches of mathematics and humanities were taught. *"Cordoba had no peer in Europe for the amenities of civilized life. Its houses were bountifully supplied with hot and cold running water, its streets were lit at night, its royal library had 400,000 volumes at a time [...] in this metropolis, and moreover, Muslim, Christian and Jew lived together with a degree of harmony rare in the Middle Ages"* (Hillenbrand, 1999: 175).

Arts, crafts and architecture flourished in this wealthy and civilised environment, as craftsmen competed to produce the highest quality workmanship to satisfy their sophisticated patrons. This reached its peak in the construction of Al-Zahra city, in which Abd al-Rahman III (912- 929) aimed to surpass Samara of the Abbasids (Hoag, 2005: 23). Great improvements took place in the design system as it followed its own course, free from the influence of any other style. A 'softer' Maghribi style developed known as *Al-Andalusi* (Figure (49)), *"in which letters took curved and semi-circular forms"* (Abdl-Allatif, 2000).

The same happened with vegetal ornaments as they became more abstracted than their peers in the East, and new patterns and compositions were invented.

Geometric ornamentation was similarly developed to a highly advanced system in which new and complex forms were created, such as in *Zillij* panels. These changes spawned active and dynamic features that gained the Andalusian style its autonomous character.



Figure (49), Quran written in Andalusian style, about 13th century, collection of the British Museum

Natascha Kubisch reveals that after the collapse of the Umayyad dynasty of Cordoba in 1031, Al-Andalus was divided up into 26 independent principalities, known as *Taifas*, which consisted of three Islamic ethnic groups, the Berbers, Arabs and former Eastern European slaves (*Saqaliba*). Although the cultural and political unity of Islamic cohesion was lost at this time, arts and architecture produced some sophisticated monuments as the *Taifa* leaders competed among themselves to employ the most famous artists and craftsmen (Kubisch, 2000: 310).

One of the innovations in ornament design of the *Taifa* period were the elaborated vegetal forms which can be seen in the Aljaferia Palace of Zaragoza (Figure (50)), named after Abu Jafar (1082-1083) the second ruler of the *Banu Hud*. The unique ornamental faces on the arches of the southern wing portico reveal a great mastery in the arrangement of ornate plant designs. The carved stucco motifs and interlacing

arches of Aljaferia achieved a high level of complexity that became a model of inspiration for later architecture (Kubisch, 2000: 232-237).



Figure (50), southern wing portico of Aljaferia Palace, Zaragoza.

4-2 The Almoravids dynasty (1073-1147)

In 1053 the Almoravids began to spread their *Maliki* doctrine, an ultra-conservative school of Sunni Islam, throughout north-west Africa. Their dominant manner helped to shape the artistic identity of the Moroccan style and their puritanical law was strongly hostile to the arts in general, and specifically against the representation of living things (Hillenbrand, 1999: 170-171). Scholars such as Paccard (1979), Behrens-Abouseif (1998), and Hoag (2005) consider that *the Maliki* doctrine has affected the artistic culture of Morocco, as it sustained the prohibition of living and

figurative art, and enforced an abstemious nature in its architectural and ornamental works. Behrens-Abouseif verified that they "hardly made use of figural motifs in their arts [compared with] arts of other regions, such as Egypt and Syria" (Behrens-Abouseif, 1998: 135).

We learn from Hattstein (2000: 245), that Yusuf Ibn Tashfin (1061-1106), the great leader of the Almoravids, was called in 1086 by the *Taifa* princes of Andalus to defend them against Alfonso VI, King of Castile and Leon. This he did in the battle of Sagradas 1086. In 1090 Ibn Tashfin deposed the *Taifa* princes and annexed Andalusia to his dynasty which covered most of north-west Africa. Although ornamental designs in the Almoravids era were similar to the previous forms, they reflect a sense of simplicity when compared with other Maghribi forms. Paccard (1979: 172) justified the decorative elements of each historical period and illustrated vegetal examples of Almoravid leaves (Figure (51)).

Hoag (2005: 24) confirms that *Muqarnas*, stalactite vaults in plaster, suspended usually from wooden frames, were adopted as a new architectural element that came from the Islamic east, which were used in the enlargement of Qarawiyyin mosque in 1135. In later years, *Muqarnas* forms diffused and became common in the architecture of north-west Africa and Islamic Spain.

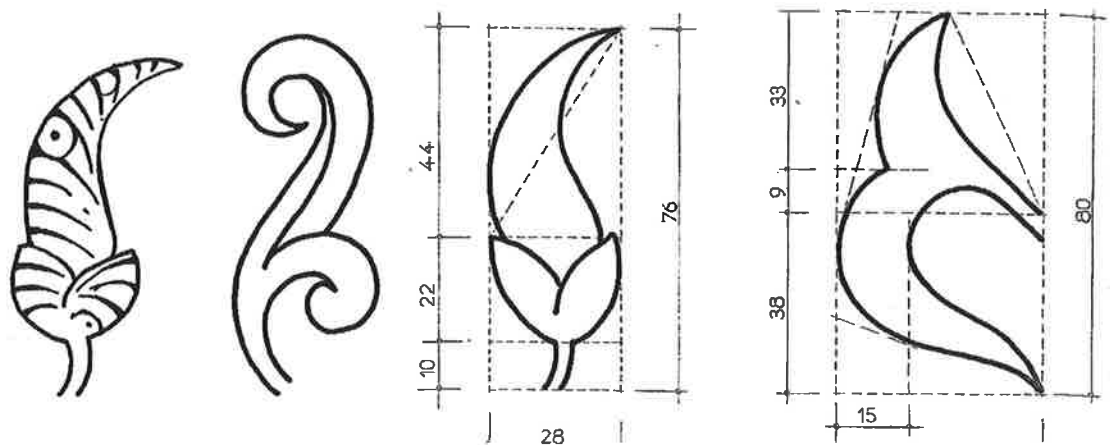


Figure (51), examples of Almoravid leaves, illustrations by Paccard (1979: 172)

4-3 The Almohads dynasty (1130-1269)

Hattstein clarified that the Almohads, who took control from the Almoravids in 1147, exceeded them in their Islamic-orthodox outlook, and in the same way, invaded the Spanish Peninsula after a rescue call from the *Taifa* leaders, and annexed it for the second time to Morocco (Hattstein, 2000: 248). However, the Almohads were great builders and the domain of arts and architecture in their era witnessed the integration of Andalusian and Maghribi styles into one artistic mould (Hoag, 2005: 25). The time between the 13th and 14th centuries can be described as the 'mature' period of the Maghribi style as its artistic vocabulary of design elements, technical methods, and decorative patterns were exchanged between the Andalusian and Moroccan regions. A great example can be seen in the construction of Koutoubia mosque in Marrakech, built in the reign of Yaqub Al-Mansur (1184-1199). Jonathan Bloom clarified how a number of skilled Andalusian craftsmen participated in the decorative works; the *Minbar*, one of a number of masterpieces of Moroccan

woodwork, was made in Cordoba and brought to Marrakech to be installed. As the Almohads transferred their capital to Seville in 1170, Koutoubia minaret was the model for their new mosque (superseded by the cathedral of Giralda) (Bloom, 1998: 3- 4).

Many new artistic forms were also absorbed by Andalusian arts and architecture in the Almohads era, most obviously *Muqarnas* and *Mashrabias*; turned wooden lattice works appeared in Egypt in the early 13th century and spread throughout the Islamic world. In calligraphic decoration, two styles from the East found their way into the Moroccan vocabulary, *Thuluth* and square *Kufic*, which in later years became the most popular scripts in architectural ornamentation (Hattstein, 2000: 245- 258).

4-4 The Marinid dynasty (1215-1420)

The Marinid or (*Banu Marin*) were a group of Zanatah Berber who advanced through northern Algeria into Morocco during the mid 1200s to capture Fez. They overtook Morocco in 1248. The Marinid formed a strong force which overthrew the Almohads from Marrakech in 1269, and controlled Andalus and North Africa under the leadership of Abu Yusuf Yaqub (1259-1286). Hillenbrand (1999: 187) writes "*The Marinids concentrated their patronage on architecture, and most other arts – such as pottery, textiles and metalwork - barely rose above the artisanal level*". Few developments were achieved in the design system as can be seen in the ornaments of Taza and Tlemcen mosques; "*The planer discipline characteristic of Islamic*

architectural design has here reduced everything except the *Muqarnas squelches* to a kind of fretted texture" (Hoag, 2005: 26). The decoration was of a standard level; vegetal patterns were in basic forms with few complex and interlaced compositions, and the calligraphy used was a duplication of previous achievements.

Nevertheless, the introduction of the *Madrasa* (religious school), with its new structural form, provided superb spaces for wood, ceramic, and plaster workers to create new decorative compositions (Hoag, 2005: 26). Unlike the Marinid mosques, *Madrasas* were lavishly embellished with *Zillij* tileworks, *Mashrabias*, carved wood and intricate stucco ornaments. Calligraphic decoration was copiously used in the *Madrasas* and various individual ways of using *Thuluth* script appeared due to the freedom designers were given (Figures (52) and (53)).

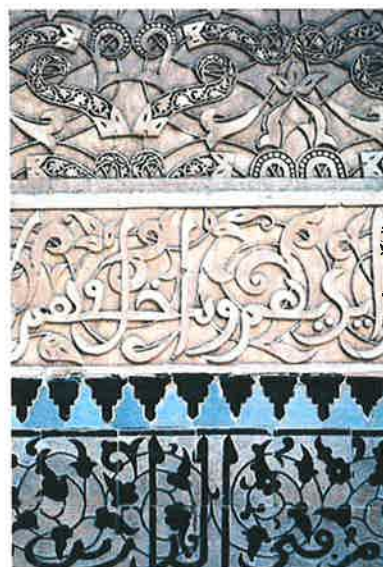
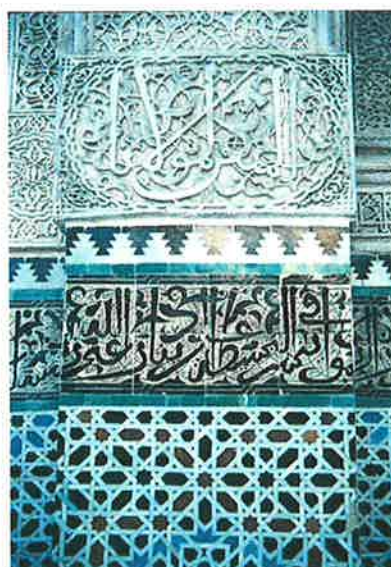


Figure (50) left, examples of Moroccan *Thuluth* from Bu-'Inaniyya Madrasa, Fez. Figure (51), right, examples of Moroccan *Thuluth* from Ali bin Yusuf Madrasa, Marrakech

4-5 The Nasrid Kingdom of Granada (1237-1492)

The Nasrid dynasty (*Banu Nasri*) was the last Islamic kingdom in Andalus. According to Hattstein, in 1212, after the fall of the Almohads at the battle of Las Navas de Tolosa, Muhammad I Ibn Nasr (1232-1273), took control and ruled Arjona. Later, in 1237, he conquered Granada making it the capital of his kingdom. Through a tactically adept policy of alliances with the Christian kingdoms as well as the Marinids in Morocco, Muhammad I extended his kingdom, forcing some towns to submit to him, and conquering others (Hattstein, 2000: 273).

This policy, which was followed by his successors, resulted in a strong and wealthy dynasty which was reflected in flourishing arts, crafts, and architecture. The golden age of the Nasrid dynasty was undoubtedly that of Muhammad V (1362-1391); during this era, in which the Alhambra palace was built, Granada became the artistic centre of North Africa (Marinid Art) and the Iberian Christian Kingdoms (Mudéjar Art) (Lopez, 2000: 279; Borges, 2004).

The Alhambra can be considered, in terms of ornamentation, a masterpiece of Moroccan art. A detailed look at the decorative materials within the buildings (*Zillij* mosaics, plasterwork and carved wooden ceilings) reveals a great creativity not only in developing new sub-elements but even in inventing new complex patterns. In the geometric ornamentation, Jose Maria Montesinos (1987), in his book *Classical Tessellations and Three Manifolds*, gave mathematical evidence that all the 17

groups of what are known today as 'wall paper decoration'²⁰ can be found in tile works at the Alhambra. *Muqarnas* also took on its own distinctive geometric identity – 'Alhambra style' - which was based on square division, as seen in the Hall of the Two Sisters.

On the artistic significances of the multiple-level designs in Nasrid ornaments, Jay Bonner noted (1989: 3): *"Islamic self-similar geometric patterns developed along two separate historic paths: that of the eastern regions of Persia, Khurasan, and Transoxiana, and that of the western regions of Morocco and Andalusia [...] In the far western regions maturity came a full century earlier under the auspices of the Nasrid and Marinid dynasties. Although it is not known for certain, the methods used in creating multiple-level geometric patterns appear to have developed independently in both regions. What is certain is that these developments represent the last great outpouring of inspired creativity in the long and illustrious history of Islamic geometric pattern making"*. As will be discussed later, the management of lines and shapes in these multiple-level designs has reached the highest levels of perfection and accuracy.

Borges (2004) noted: *"During the time of Muhammad V more themes and variations appear: complex palm leaves, shells, peppercorns, pine cones, and for the first time, they begin to appear intertwined with calligraphic inscriptions"* (see Figure (54)). The

20 Contemporary mathematical analyses show that various ways of regularly dividing repeated geometric patterns can be classified into exactly 17 different symmetry groups known as '17 wall paper decoration'.

calligraphic inscriptions in the Alhambra are limited to two styles, square *Kufic* and Moroccan *Thuluth*, both technically invented in the Islamic East in the 11th and 12th centuries, but with newly developed features of the *Maghribi* style. The *Thuluth* script in the Alhambra was turned into a more flexible design element as it was creatively released from strict rules of proportion when it was merged with *Naskh* style (Figure (55)). "Naskhed-Thuluth calligraphy is a more elegant style used for describing the function of the rooms or as a reference to poetic quotations. In later periods, the Nasrid used it as a vehicle for their propagandistic aims, displaying their dynastic motto 'Wa la ghalib ila Ala' ('There is no conqueror but God') in key locations of the design" (Borges, 2004).



Figure (54), examples of Nasrid leaves at the Alhambra, illustrations by Constantin Uhde, 1892. From (Danby, 2002: 87)



Figure (55) plasterwork at the Alhambra decorated with *Thuluth* calligraphy

The square *Kufic* script appeared in a variety of inventive forms; horizontal and vertical lines were extended to create new combinations of knotted and intersected forms (Figure (56)). Whatever the material used or the size of the decorated surface, knotted lines were used lavishly and reflect the designers' passion and desire to reach the utmost of creativity in their creations. Figures (56) and (57) are good examples of the priority of design value over cost and effort; the same pattern could be completed with fewer knots which might save time and labour, but quality and creativity were more important.



Figure (56) plasterwork fragment at the Alhambra, decorated with square *Kufic* inscriptions



Figure (57) wooden door at the Alhambra, embellished with knotted geometric lines

3-6 Moroccan design from the 1500s to date

As the Muslims were forced to emigrate from Spain after the fall of the Nasrid dynasty in 1492, Morocco inherited the artistic culture of Andalus. Provençal verified that Fez, in particular, was a popular destination for many Andalusian refugees. Here, from the early 1500s, many craftsmen settled to reproduce their artefacts, making the city a commercial and cultural centre (Provençal, 1948: 6-7). However, with the ascendancy of Spanish and Portuguese power, Morocco began to lose many of its important harbours on the Atlantic and Mediterranean coasts and therefore its trade and strong economy (Si-Nasser, 2000:17).

The history of the Saadians dynasty began in 1509 when they ruled southern Morocco. They succeeded in the mid 17th century in ousting the Portuguese from some coastal cities, but their important achievement was defending the country against the Ottomans who occupied all of North Africa (Kubisch, 2000: 316). The Ottomans imposed their artistic style on the Maghribi regions they controlled (Tunisia and Algeria) which resulted in hybrid structures that gathered mismatched elements of both styles. This can be observed clearly in Hammuda Pasha (1665) and Sidi Mahriz (1675) mosques in Tunisia.

The Saadian tombs at Marrakech are one of only a few structures which survive from that era and were only discovered in 1917. Such monuments are a Sufi way of honouring the entombed religious leaders and can found in Moroccan architecture of

the last few centuries, but in the case of the Saadian kings, expensive materials and lavish ornamental patterns were used in the decoration. In modern times a similar structure, built for the Alaouite kings in Rabat, includes designs which demonstrate a high level of mastery in dealing with design principles and in the creation of new decorative patterns. Bellamin confirms that *"some of these patterns are the equal of the Alhambra ornaments in their use of multi-level methods for forming designs"* (Personal, interview 2006).

Although it struggled with the French and Spanish occupations, which imposed different aspects of their cultures and extended into the mid 20th century, Moroccan artistic heritage has, remarkably, survived throughout this long period. *"Many reasons participate in the upholding and continuity of Moroccan style to date. The geographical isolation could be the main cause but without the directing role of royal patrons and their endless support and appreciation of the domain of traditional crafts, its ornamental culture would never survive"* (Bellamin, Personal interview 2006).

The present Alaouite dynasty, which has ruled since 1659, has succeeded in various circumstances in keeping the country united under its leadership. In 1956, when Morocco was finally liberated from colonial hegemony, Muhammad V (1955-1961) launched a development policy which was later supported by his successor King Hassan II (1961-1999). King Hassan led the development process of the modern

state in which Morocco achieved political stability and some economic and social progress (Kubisch, 2000: 317-318).

Throughout the 38 years of his reign, King Hassan was the guardian of Moroccan artistic heritage; he personally encouraged, supported, and guided the maintenance of cultural arts. Traditional crafts related to architecture have flourished due to legislation which sets out to promote crafts and to provide craftsmen with an appropriate environment in which to sustain their culture (Si-Nasser, 2000: 2). One of the obvious results of these laws is the preservation of the architectural identity of every Moroccan city, through a set of rules which limit the features used in new constructions to those which suit local characteristics.

In every way, the King Hassan Mosque in Casablanca (1986-1993), is the largest monument ever built in the Moroccan style. It reflects the King's passion to create a landmark that displays the legacy of the country's architecture. In terms of structural planning, the French architect Michel Pinseau has made maximum use of modern technology to accomplish this gigantic construction whose *minaret* is the world's tallest at 210 meters (Si-Nasser, 2000: 9-12). The mosque introduced a new concept in displaying architectural decoration as patterns were lavishly used to embellish the exterior surfaces while, as is typical in Moroccan structures, the priority for decoration was given to the interior.

The mosque was an opportunity for a large number of master-craftsmen to demonstrate their skills and utilise their knowledge in achieving new conceptions. However, when looking in depth at the designs of different ornaments, in spite of the material used, or the quality and mastery of execution, no actual developments or changes were made to the design system. Basic elements and the most decorative patterns are within the conventional boundaries, if not duplicated from previous forms. Geometric compositions are similar, if not less complex, than their peers in historic models. The same can be said of the vegetal ornaments as no new sub-elements and/or leaves have been added to the traditional vocabulary. The use of *Thuluth* script in its typical form (the way it is written in books) which is executed with strict rules of proportion is one of the imperfections in the mosque's decorations (Figure (58)). *Thuluth*, in its decorative form, has been a distinguishing feature of Moroccan architectural decoration since the 12th century and it has been developed to far greater stylistic order, in which its characters are shaped in an organization with other decorative elements.



Figure (58) calligraphic ornament in typical *Thuluth* form, in stucco, King Hassan Mosque

Taking all together, it is clear that Moroccan design as a system has been stable throughout its long history. A general look to its artistic vocabulary reveals that, except for the limited influences that came from the Muslim east, no major change has taken place in the basic compositional methods or technical procedures. However, although designers of all periods have used almost the same compositional elements, they have made changes in the way these elements are composed; this is practically achieved by varying the way in which lines and shapes are combined. The next four chapters will outline the varied ways of creating and relating lines and shapes in Moroccan design, analyzing the relationship between form and perception in different structures.

Chapter 4 - The role of PMMD in creating geometric decorations

1 Introduction

The chapter examines in detail the role of movement as an aesthetic concept in shaping and composing varied geometric patterns. Although different theories have been proposed for the arrangement of geometric pattern construction, all agree that the circle is used as a basic unit for creating all types of compositions. However, this investigation will adopt the methods suggested by El-Said and Parman (1976), which provide the most comprehensive and logical explanation of the construction of all complex forms of geometric compositions.

2 Arrangement of line and shape in geometric pattern construction

Despite the various forms of complex geometric pattern in the Moroccan style, most of these designs are formed with a minimum of equipment and theory. The compass and ruler are the main instruments used by craftsmen. *"In principle, this method is reminiscent of the rope-stretching techniques of surveying, using peg and rope for a pair of compasses, in the planning of buildings in Ancient Egypt. Craftsmen found through the utilization of geometry, based on the circle, a perfect method to shape areas without resorting to complicated mathematical calculations. From a circle it is possible to generate any regular polygon once the circumference is divided equally*

to required number of sections, and straight lines join these points of division" (El-Said and Parman, 1976: 3-4). This is illustrated in Figure (59).

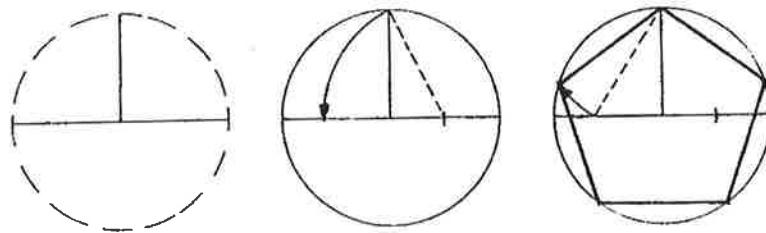


Figure (59) Method of forming a polygon by dividing a circle. Illustration by El-Said and Parman (1976: 4)

These regular polygons can be sub-divided to make basic units in the shape of right-angled triangles, the number of triangular sub-units being equal to twice the number of sides of the comprising polygon. The sides of these triangular sub-units consist of the radius of the circle circumscribing the polygon, the bisecting perpendicular line from the centre to the side of the polygon and one-half of the side of the polygon (see Figure (60)). From this we can observe that the basic triangular sub-units of all the polygons with a common circumscribing circle differ only in the proportion of their two perpendicular sides. It is this constant relationship of the parts to each other which determines the shape and properties of regular geometric forms irrespective of size (El-Said and Parman, 1976: 4-5).

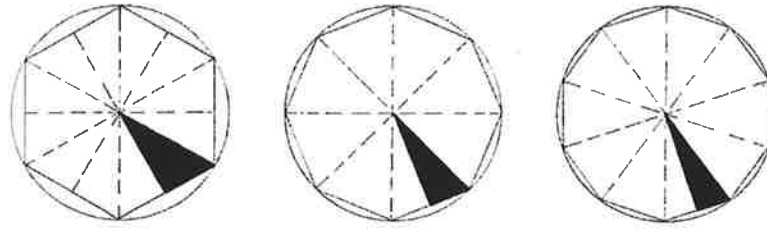


Figure (60) Method of creating basic triangular sub-units. Illustration by El-Said and Parman (1976: 5)

The repeat pattern, which gives the geometric design its character, is determined by grid lines drawn between points established by the intersecting sides of squares inscribed in the circle. By inscribing squares within the circle, a geometric method of proportional sub-division of the area of the repeat unit and, thereby, of all the grid lines of the pattern, is achieved. When a surface is to be decorated, one of its sides is divided equally into a number of parts corresponding to the number of repeated units required. The area is then filled with circles, the diameters of which are equal to the sub-divisions of the side of the surface being decorated (see Figure (61)).

Dividing the square repeat unit into a series of concentric squares will result in concentric octagonal stars, which establish a primary base, using the point-joining method, for creating harmonious sub-divisions (see Figure (62)). Figures (63) and (64) are examples of repeat unit patterns constructed on an octagonal base. The top line of the figures shows how the master grid and the dependent grid lines of patterns are constructed to draw the repeat pattern (El-Said and Parman, 1976: 7-9).

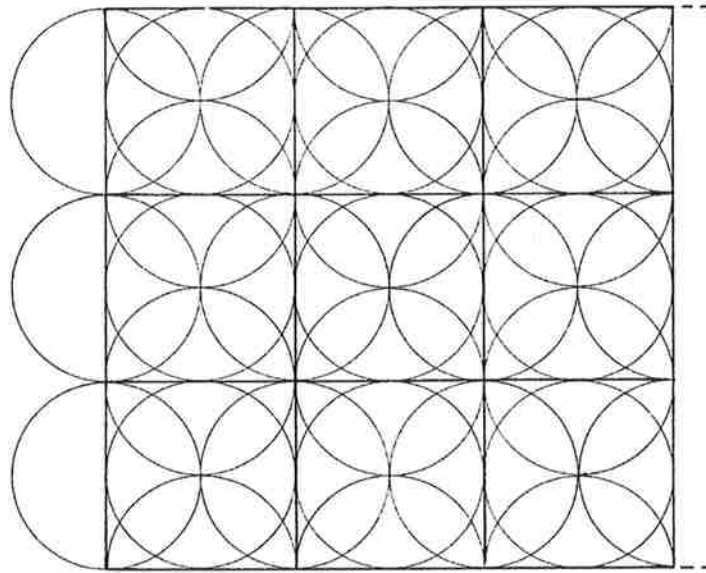


Figure (61) Dividing the decorated space into squares and circles. Illustration by El-Said and Parman (1976: 8)

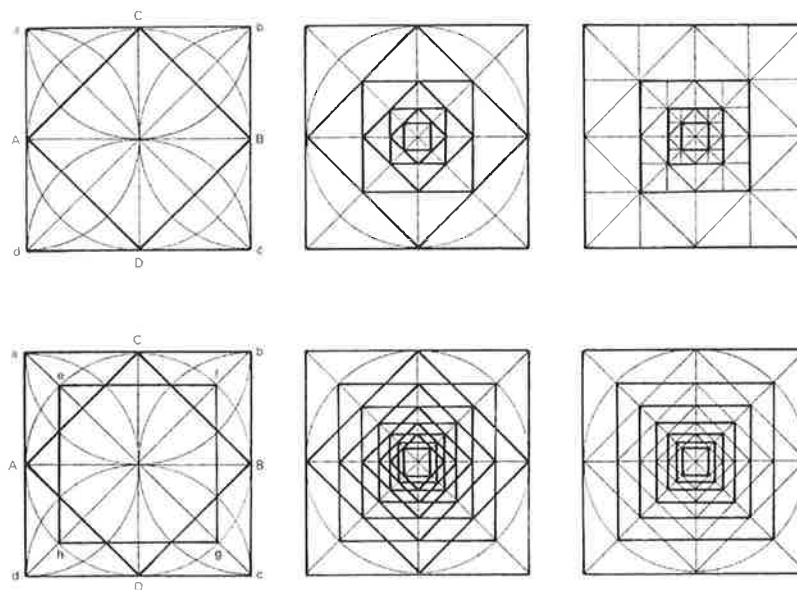


Figure (62) The division of a square into a series of concentric squares. Illustration by El-Said and Parman (1976: 9)

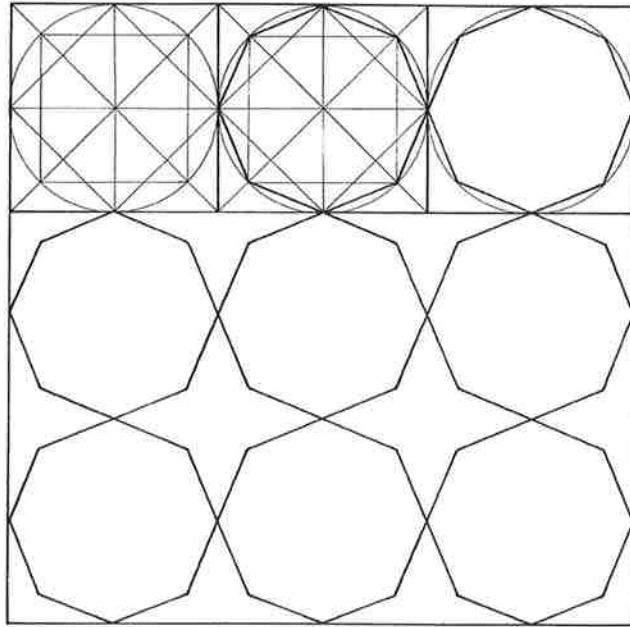


Figure (63) Basic octagonal repeat-unit pattern. Illustration by El-Said and Parman (1976: 11)

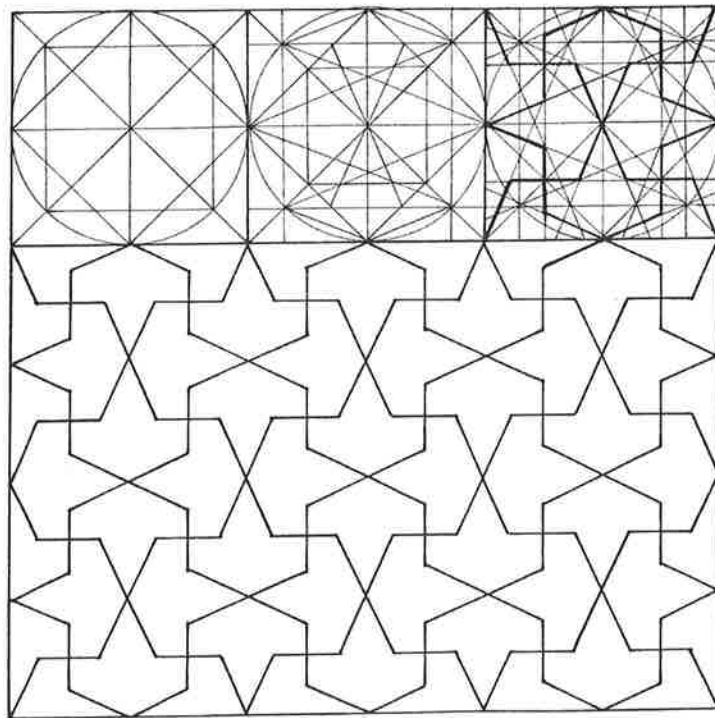


Figure (64) Repeat pattern constructed on an octagonal base. Illustration by El-Said and Parman (1976: 19)

Different types of repeated units can be created based on a master grid of a hexagon shape. The possibilities of creating more detailed star/rosette patterns arise from the division and sub-division of the lines of the master grid. Figure (65) is an example of a simple form of repeated unit based on the hexagon but enhanced with curved lines instead of the standard straight-line. Figure (66) demonstrates the technique for dividing a hexagon into a series of lines, which, with the point relating method, could produce a multi-detailed repeat pattern such as that in Figure (67).

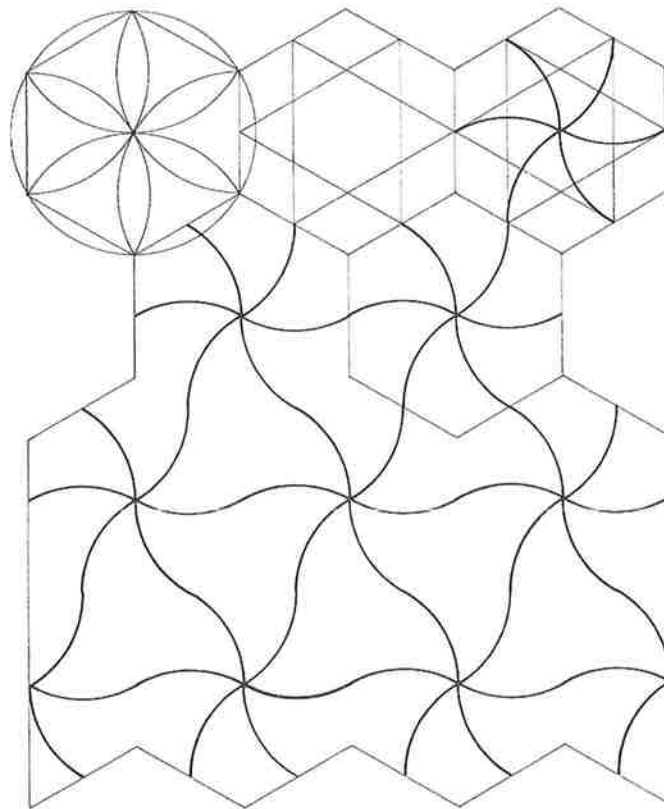


Figure (65) Example of a simple form of repeated unit based hexagon. Illustration by El-Said and Parman (1976: 78)

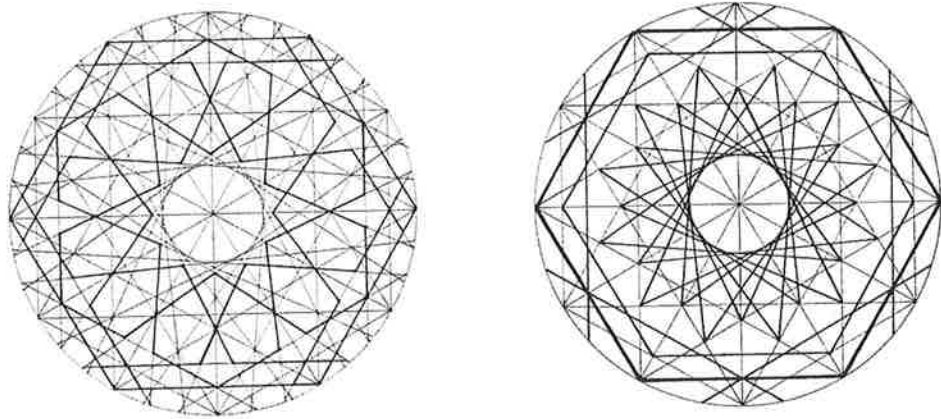


Figure (66) The division of a hexagon into a series of lines. Illustration by El-Said and Parman (1976: 113)

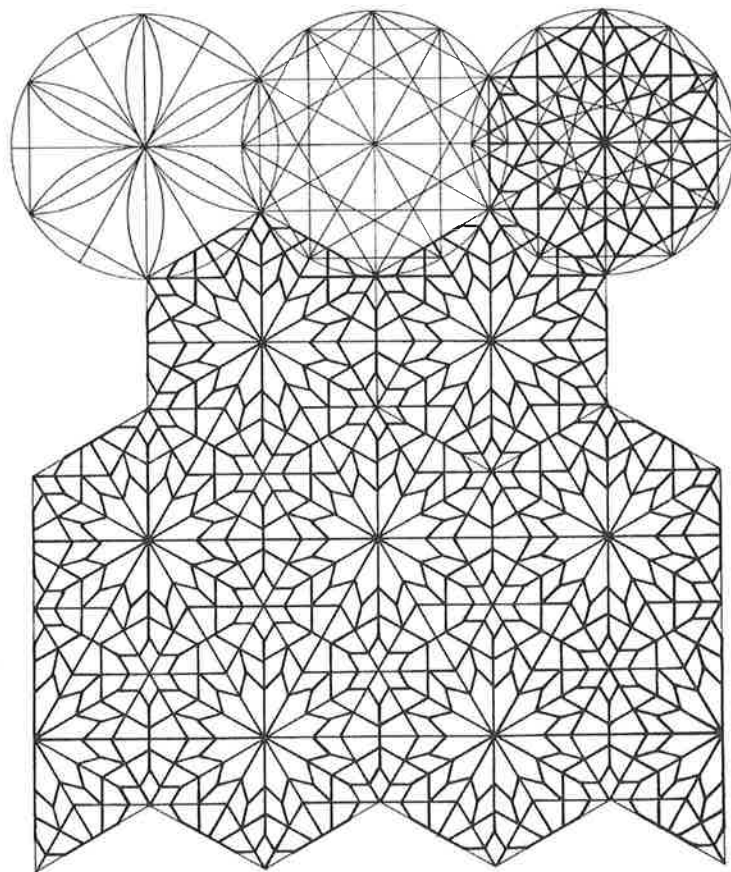


Figure (67) Multi-detailed repeat pattern based on a hexagon master grid. Illustration by El-Said and Parman (1976: 84)

Patterns based on a pentagonal master grid give decagonal star units and might be constructed on a rectangular or rhomboid (instead of a square) repeated pattern. This will result in a group of pentagon and kite shapes surrounding the main unit pattern (see Figure (68)).

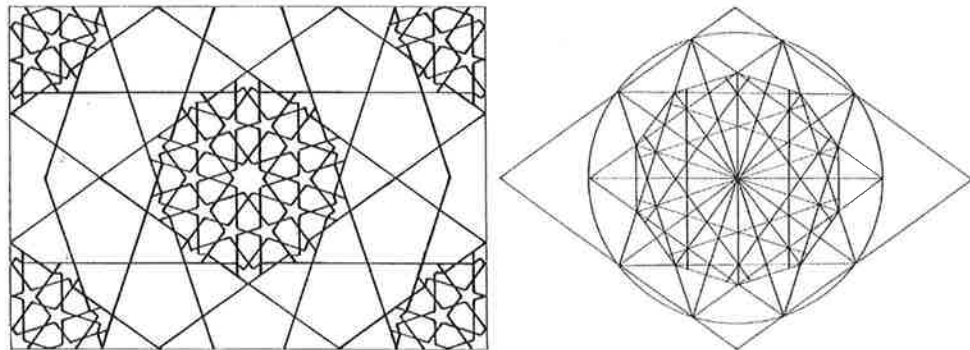


Figure (68) Left, a 10 point star pattern constructed in a rectangle. Right, the master grid for the same star in a rhombus. Illustrations by El-Said and Parman (1976: 91)

One of the most distinct achievements of Islamic geometric ornamentation is the method of joining two or more types of star/rosette in one pattern which is more difficult to construct than a single repeated pattern. As a technique, this requires the artist to be experienced in proportion and is achieved by linking nearby star-centres, by making their nearest radii parallel or collinear (see Figure (69)). In Figure (70) the pattern contains twelve red and fifteen blue rayed star/rosettes, which, due to their proximity, enable the new geometric shapes shown in pink and green to be drawn. These connecting cells might take a variety of shapes which increases the variation in the designed pattern.

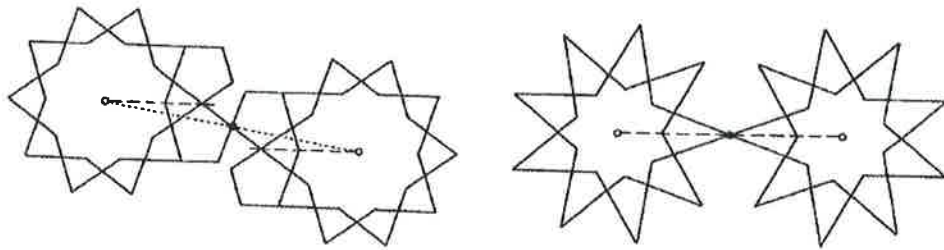


Figure (69) Left, a parallel link between 10-pointed stars. Right, a collinear link between two 9-pointed stars. Images by A.J. Lee (1987)

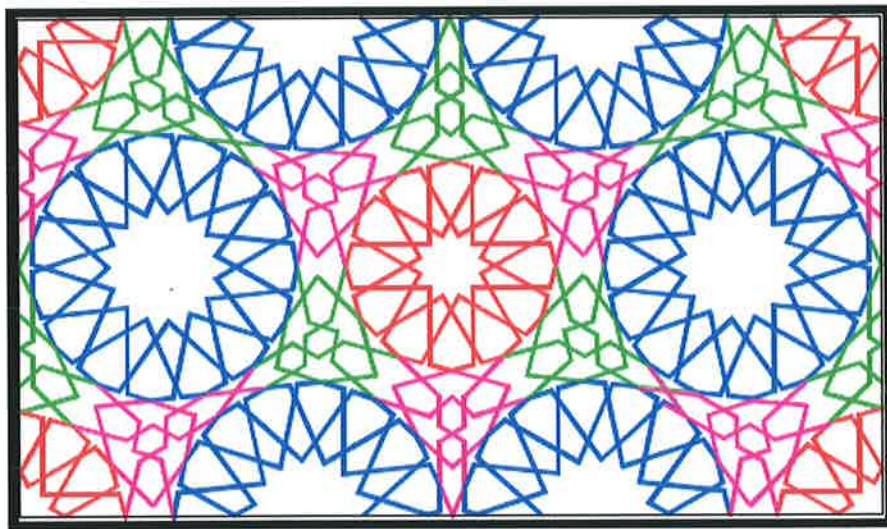


Figure (70) Containing twelve and fifteen rayed star/rosettes. Image by E. Hanbury (from Aljamali and Banissi, 2004)

3 Main characteristics of the principle of movement in geometric patterns

3-1 Continuity of lines

Paccard writes on the relation between form and perception *"Of all the marvels of Moroccan geometrical art, the most wonderful patterns are those which leave the spectator in perpetual thought, for, in deciphering one figure, another one appears*

enigmatically, so that he can never find the beginning or the end of the lines which weave in and out ceaselessly" (Paccard, 1979: 135).

One of the key rules in achieving unity in the construction of geometric patterns is the use of the line-connecting method. The lines of each pattern unit are extended and linked with its neighbouring units. Through these connections, long lines which run throughout the pattern emerge. The shapes of linking-lines are determined by the shape of the star/rosette unit, and can be in any form and run in any direction; straight, curved or undulant, as in Figure (71), or closed, round lines, as shown in Figure (72). They may even move unpredictably, as in Figure (73).

When viewing such patterns, the human eye recognizes a line and connects it with another, which guides the line of sight. Once the eye reaches the end of the line, it moves off in search of another, attracted by similarities and differences. When these designs are applied to materials such as Moroccan mosaic (*Zillij*) or painted wood (*Ziwaq*), contrasting colours and/or values can enhance the effect of related lines.

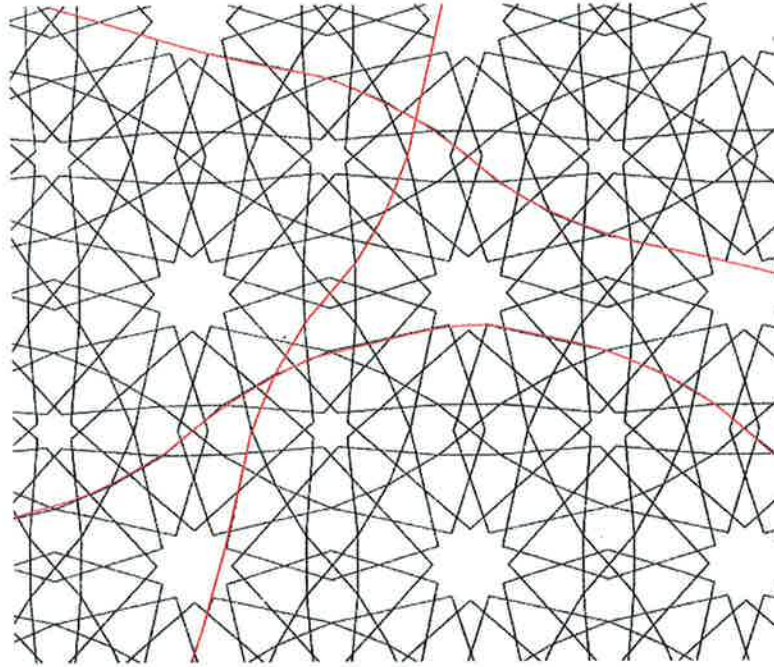


Figure (71) 12-point star pattern with some linking lines highlighted in red. Illustration by Bourgoin (1977)

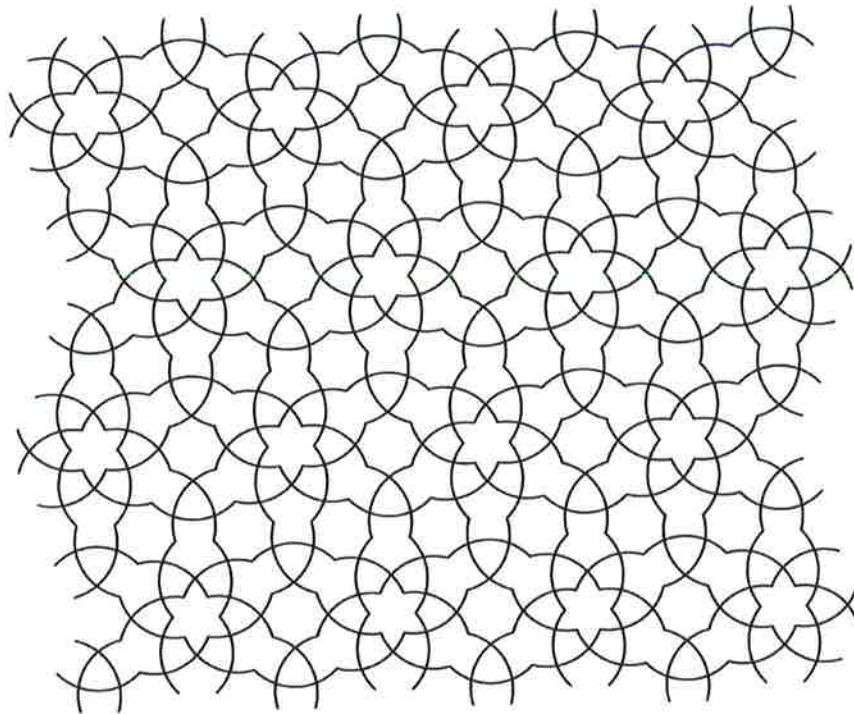


Figure (72) 6-point star pattern. Illustration by Bourgoin (1977)

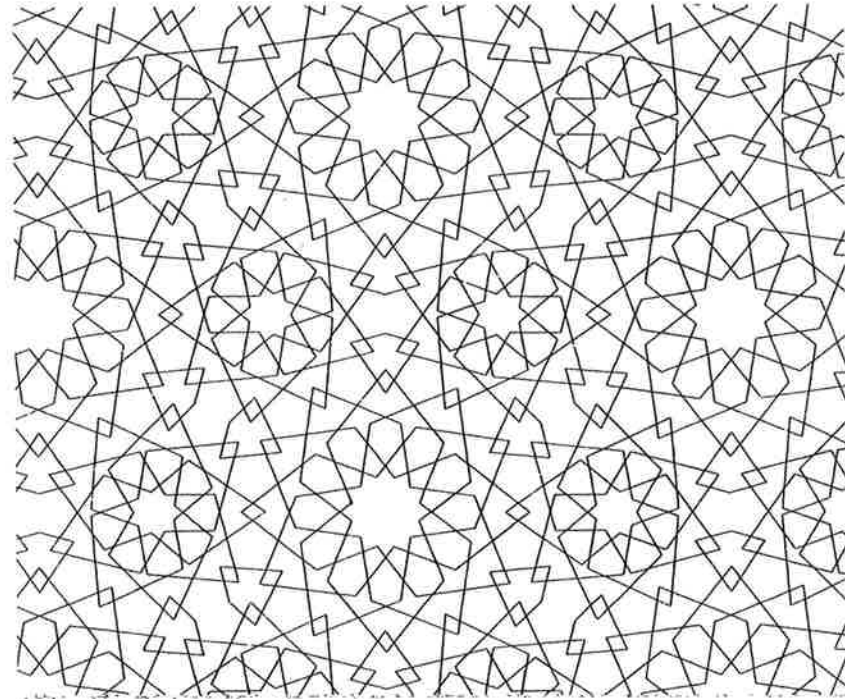


Figure (73) 12-point and 9-point star pattern. Illustration by Bourgoïn (1977)

3-2 Interlacing lines

Interlaced lines are one of the hallmarks of Moroccan style and as a technique they are used in the construction of all design elements, in the form of knots or braid. This sophisticated method of relating lines is applied in the later stages of the design process when the elementary plane is established. The thickness of lines is amplified so that they may alternately weave above and below each other. The thickness can be broadened to accommodate inner patterns or ornaments, as in Figure (74). The method of Interlaced lines can be applied to all lines of the geometric pattern or it can be limited to specific elements such as the main

stars/rosettes, borders and frames. They can feature in an infinite number of ways in the creation of geometric patterns. In three dimensional crafts such as carved wood, plaster, and stone, interlaced lines add a realistic sense of depth to the created forms.

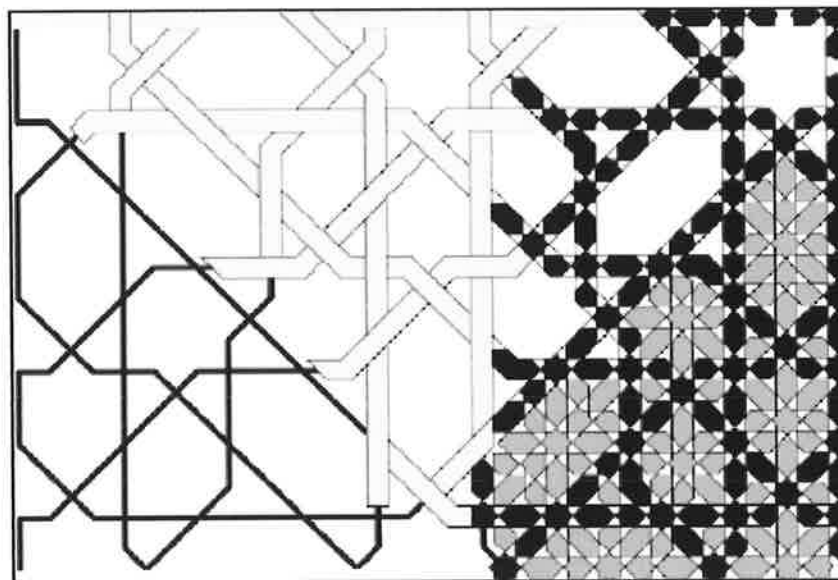


Figure (74) Methods of creating Interlaced-lines. Illustration by J.M. Castera (2003)

Interlaced lines enhance the sense of movement according to their direction, breadth, and variation. While the linking-lines move the viewer's eye throughout in a connected, fluid manner, interlaced lines move it from one place to another in a rapid, dynamic way. As shown in Figure (75), the eye moves along the line which suddenly turns through a sharp angle or is interrupted by a line which crosses it. These kinds of strands attract the viewer's attention to specific places and as their eyes move from one to another, they become excited about solving this complex

'puzzle', and in doing so, perceive the degree of mastery and creativity behind the creation.

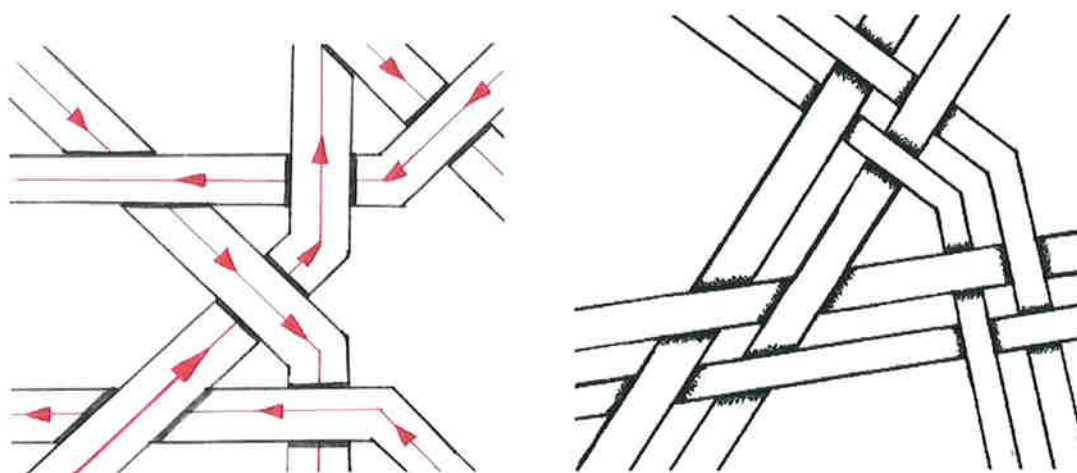


Figure (75) Left, example of the variety of directions interlaced lines may suggest Figure (76) Right, the twofold stripes method. Illustration by the researcher

An advanced pattern using interlaced lines is produced by dividing the line into two strips which run as the inverse of one another, as shown in Figure (76). This kind of application illustrates the designer's appetite to demonstrate their practical skills and creativity by inventing more complex and multiple overlapping line forms. In Figure (77) an elegant *Zillij* pattern from the Alhambra is executed with twofold strips.



Figure (77) A *Zillij* pattern from the Alhambra executed with twofold strips. Photo by the researcher

3-3 Repetition and variation

Repetition and variation are perhaps the most important characteristics of Moroccan geometric patterns. Although based on only a small number of star/rosette shapes, it is clear that designers devise various ways to preclude monotony and to keep all parts of their works equally interesting. The realization of variation may take place at the planning stage, in the sizes and shapes of the pattern, or later during execution, through the choice of material and colours.

Variation is established when pattern or elements are repeatedly changed.

Repeating a similar shape but making changes to its composition gives both variety and movement at the same time. For example, a star/rosette pattern can be changed to several forms based on different divisions of the master grid or by turning its straight lines into curves; this will result in repetition of the same pattern but with different interior lines. The viewer of such a pattern will be interested in

observing and exploring the changes, but quickly becomes bored when viewing a single unchangeable repeated pattern. In the same way, the inner spaces may be filled with non-geometric patterns, calligraphic or vegetal, which might themselves be subject to repeated change. Figure (78), a *Zillij* pattern from the Alhambra, is a good example of variation in geometric decoration.

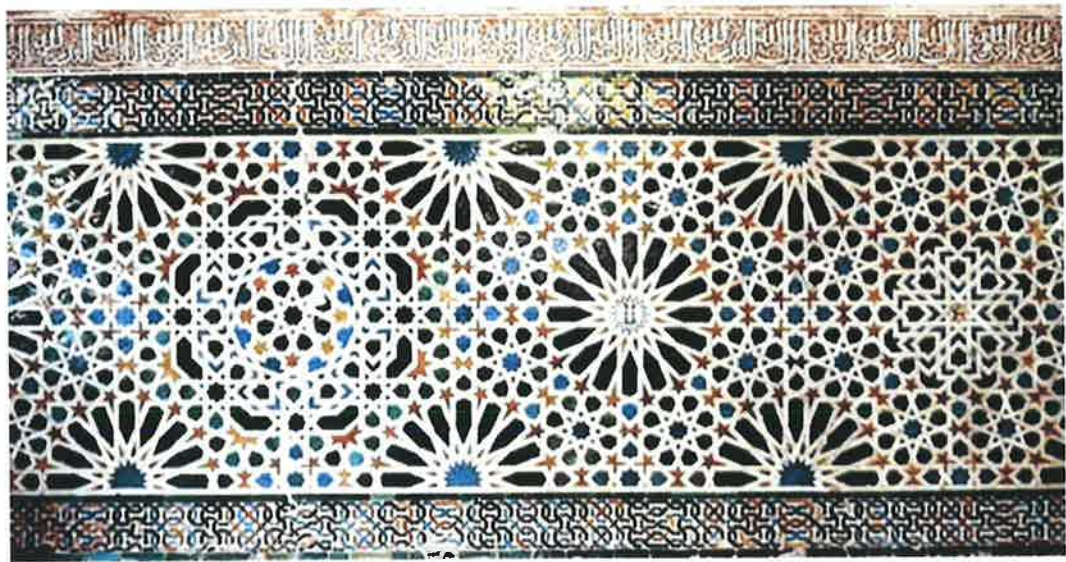


Figure (78) Example of variation in geometric design, *Zillij* pattern from the Alhambra. Image by J.M. Castera; official website, <http://castera.net/entrelacs/entrelacs.htm>.

Varied repeated patterns may create their own type of visual interaction; although all parts of the design have the same importance, some parts might draw the viewer's attention more than others due to their unfamiliar shapes. These segments provide emphasis and form a point of interest or serve to interrupt the rhythm of the viewer's eye-movement. Castera (2005) suggests that cells that emerge from a combination of two different types of star/rosette pattern participate in this rhythm interruption due

to their unfamiliar geometric forms; the viewer's attention might be drawn to compare the differences and similarities between these shapes (see Figure (79)).

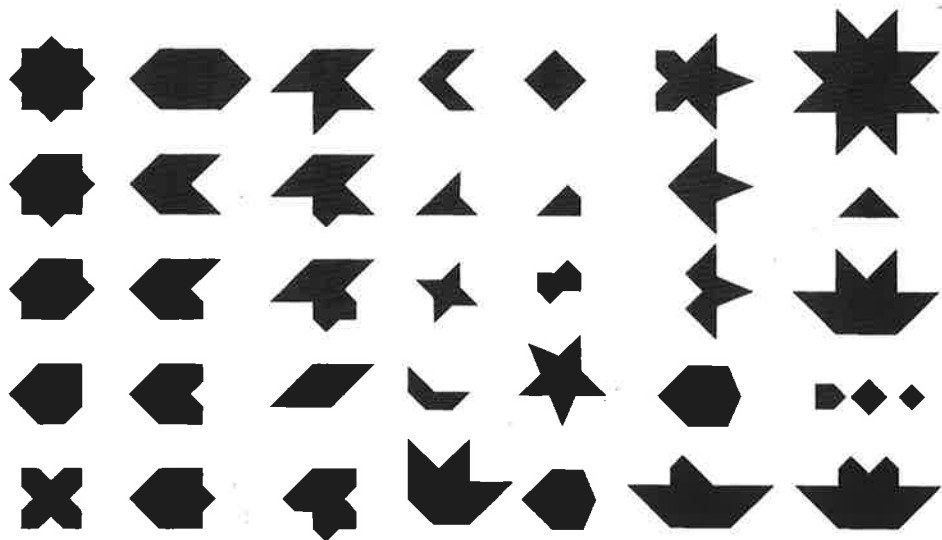


Figure (79) Examples of different geometric cells. Illustration by Castera (1999: 114).

Considering the different forms of creating geometric patterns reviewed in this chapter, it can be concluded that PMMD as a concept has a guiding role throughout the design process which influences all compositional procedures. The movement and flow of lines are essential qualities in a geometric structure which are realized through line continuity, interlacing, and variation of the presented motifs.

Chapter 5 - The role of PMMD in creating vegetal ornamentation

1 Introduction

Jan-Mark Castera writes: "*While polygonal geometric decoration belongs to the frozen world of crystals, to frozen time, and to the eternal present, cursive arabesques refer to the living world with its dimension of movement, growth and becoming*" (Castera, 1999: 38).

Vegetal or plant-like ornaments are another significant element of Islamic design which were consistently used to adorn all types of objects throughout the Islamic world. Transforming natural vegetal forms to purely abstracted decorative patterns, in which plants and leaves build up according to geometric rather than natural laws, can be considered as one of the most creative achievements of Islamic art.

Although Moroccan style shares the same basics of composing vegetal patterns with other Islamic orders, it has developed and perfected a distinguished artistic language. Generation after generation, the tradition grew and designers of every historic period invented new leaf and flower shapes, or created new compositions to enrich the vocabulary of the tradition. Craftsmen use the term *Tawriq* (from *waraq*, which means leaf in Arabic) to refer to the process of decorating with leaves alone, and the term *Tashjir* (from *shajar*, or tree in Arabic) to describe branched vegetal

ornamentation. However, the two words are general and many specific terms are used to identify methods, techniques, and styles.

Moroccan vegetal patterns are visually appealing and their banded structures of infinitely interlaced scrollwork are the first thing that draws the viewer's attention. To fully understand the visual experiences that these ornaments generate it is important to examine the methods of construction and the organization of line and shape, from the most basic leaf to the most complex compositions.

2 The formation of basic elements

Whatever shape a vegetal element takes, leaf, flower, or bud, it is formed by linking and relating the two unbroken edges of the outline. As explained in Figure (80), the way in which the lines on either side of the stem are connected, based on the designer's choice, gives the leaf its shape and divisions. Paccard (1979) suggested standard proportional models for leaf structures (see Figures (83) to (85)), but Bellamin (2006) commented that this system might work for some common forms but the majority of shapes are extendable and flexible and can be manipulated into any structure. Shapes are usually determined by other design components, and by the size and scale of the decorated surface.

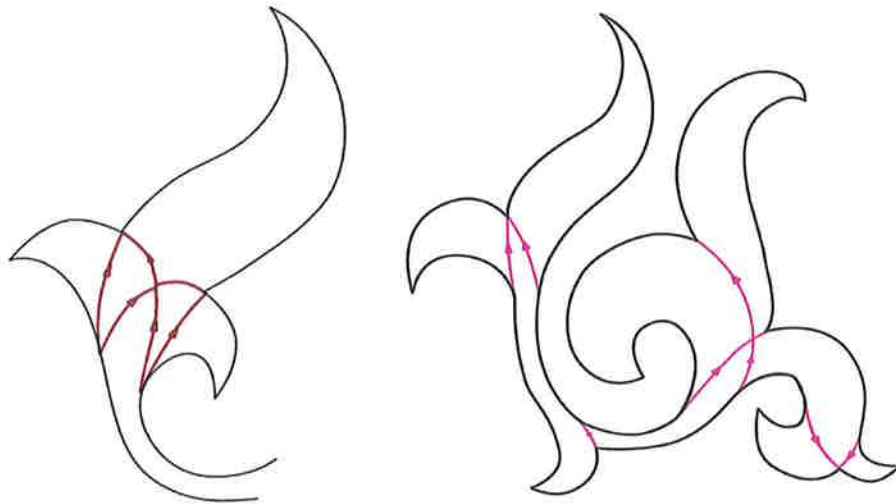


Figure (80) Examples of connecting the two edges of a leaf. Illustration by the researcher

One of the distinctive characteristics of Moroccan leaves is the embodiment of inner motifs which vary in form and shape. Some of these inner decorations take vegetal or geometric *Kufi* forms while others are merely curved or parallel lines which run in harmony with the outlines of the leaf, as shown in Figures (81) and (82).



Figure (81) Examples of leaves with internal decoration. Illustration by the researcher

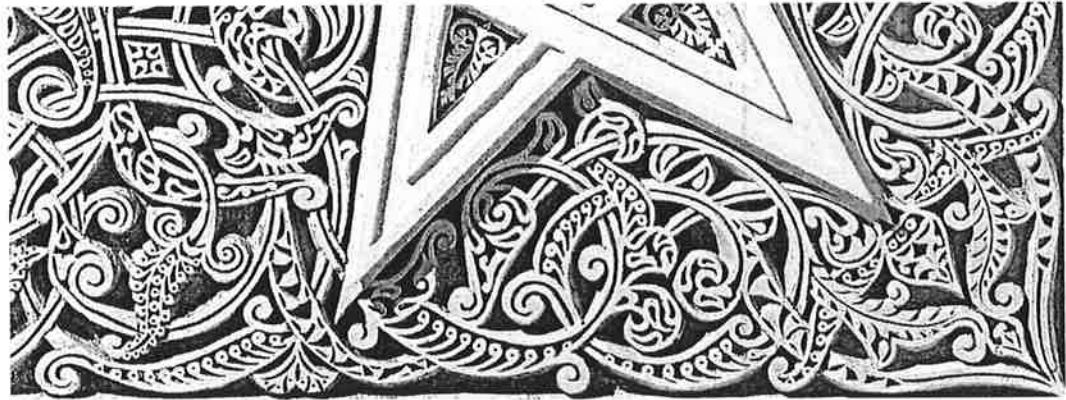


Figure (82) Carved stucco pattern adorned with various interior decorations. Photo by Paccard (1979: 147)

3 Historic leaf styles

Paccard writes in his book under the title *History as told by a leaf*. "*In tawriq decoration, the shape of a leaf is not a figural representation, but a symbolic form transposed from the leaf. It is always extremely elegant, partly because artists attach great importance to it. Throughout the centuries, it has reflected the character of individual dynasties. The Almoravid leaf retained the simplicity of Southern oases while borrowing charm and grace from Andalusia. The Almohad leaf reflects the return of the warrior monks to austerity. It is assertive and, in a decorative pattern, tends to resemble the scabbard of a dagger. The Merinid leaf is the image of gentleness and harmony; it resembles the great builders of Morocco. The Nasrid leaf, which was the only one left in Spain, reflects the exuberant joy of the art of Granada*" (Paccard, 1979:173).

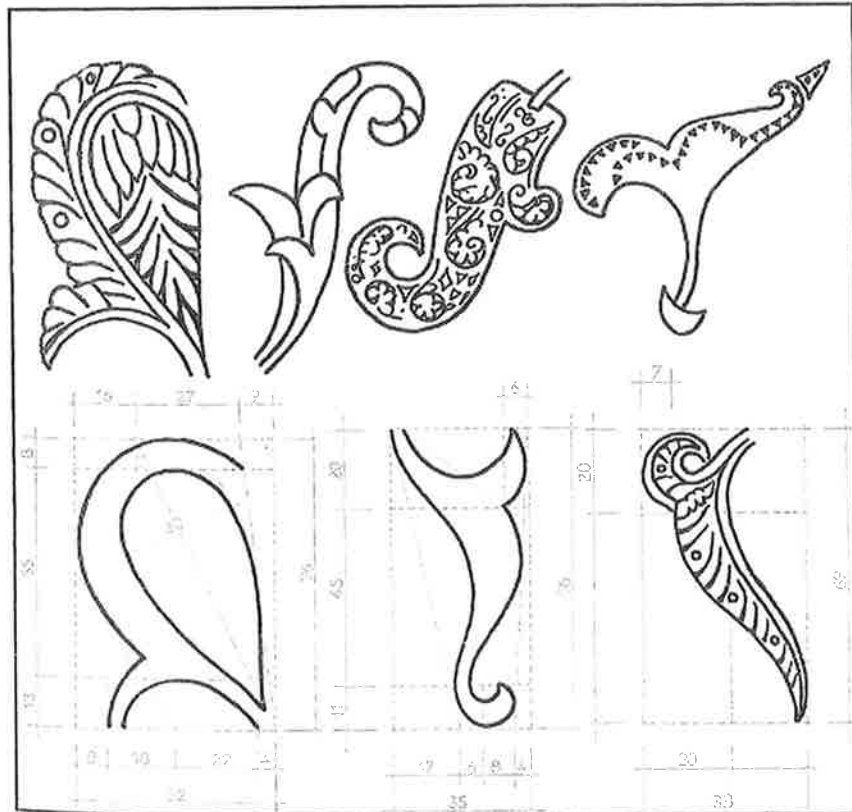


Figure (83) Examples of Nasrid leaves. Illustration by Paccard (1979: 173)

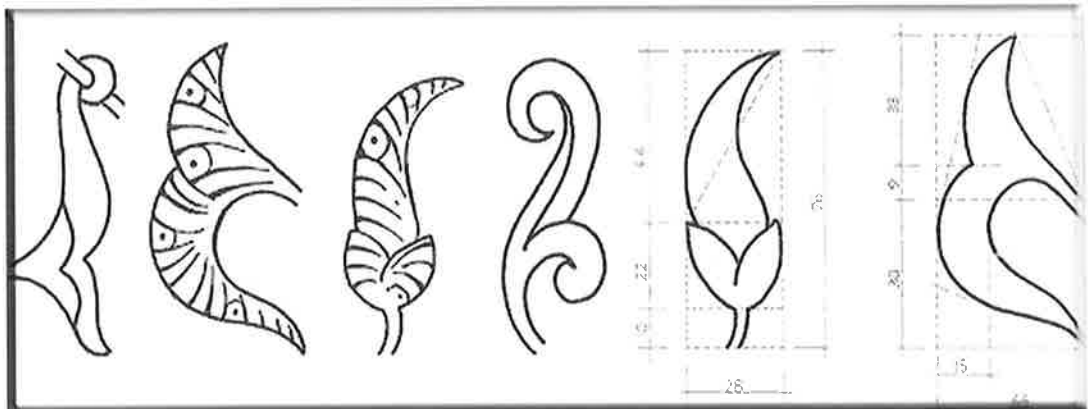


Figure (84) Examples of Almoravid leaves. Illustration by Paccard (1979: 172)

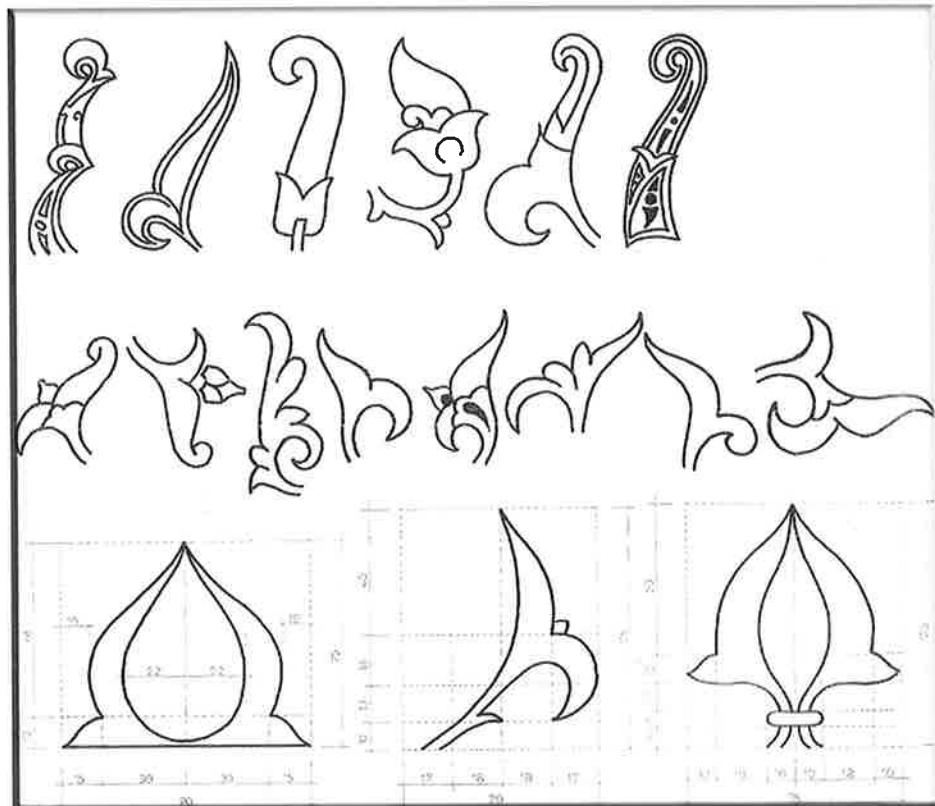


Figure (85) Examples of Almohads leaves. Illustration by Paccard (1979: 172)

4 Methods of constructing a vegetal pattern

Circles are the foundation of vegetal ornaments. They are set in a symmetrical framework to accurately shape the curved movement of the main stem and to perfect the regularity between the different parts. The circumference of each circle is adapted to modify the form of the rotated branches and leaves, and to provide the 'track' for a continuing evolution. Based on their complexity, vegetal pattern structures can be divided into simple forms, in which one level of ornamentation is used, or into multi-level compositions, in which two or more layers of ornaments are set. In simple patterns, few foundation circles are used, but in complex forms the

number, size and diffusion of these circles is greater. Foundation circles can be positioned in various ways, adjacent, interlocked, separated, or all of these together in the same pattern. However, there are many exceptions and often the designer creates his own system of composition.

Bellamin commented on the standard proportional models for leaf structures suggested by Paccard (1979) (see Figures (83) to (85)). He explains *"this system might work for some common forms; because the majority of these shapes are extendable and flexible and can be manipulated into any structure. The forms of vegetal ornaments are usually determined by other design components, and by the size and scale of the decorated surface"* (Bellamin, Personal interview 2006).

4-1 One-level vegetal patterns

Bellamin explains the process of creating a one level vegetal pattern: *"In a typical pattern of simple form, a set of circles is organized in symmetrical order. Their organization is determined by the pattern outline, which serves as a guideline for the way in which the main stems move. The main stem may split regularly, producing a series of leaves, and/or secondary branches. The same unit can be decorated differently using dissimilar foundation circles structures or different kinds of vegetal decoration"* (Bellamin, Personal interview 2006).

The following illustrations are examples of the arrangement of foundation circles, as presented by Paccard (1979). Figure (86) shows overlapping circles of one size organized in a parallel vertical-symmetry, and in Figure (87) the size of the circles decreases from the top to the bottom of the pattern. Figure (88) illustrates circles of different sizes, separated and attached in a variety of places.

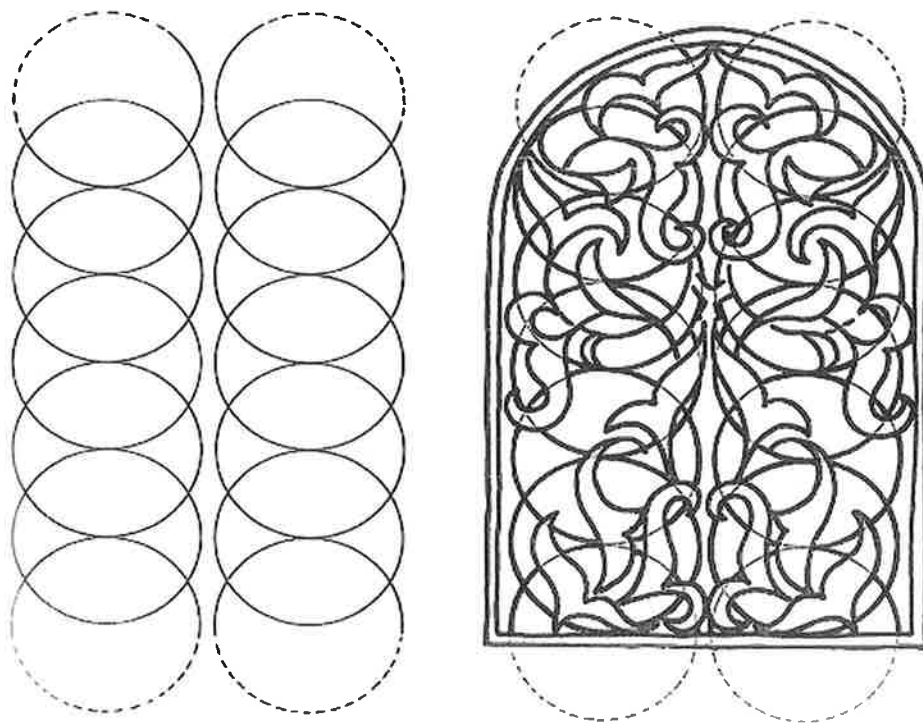


Figure (86) Vegetal pattern based on overlapping circles. Illustration by Paccard (1979: 268)

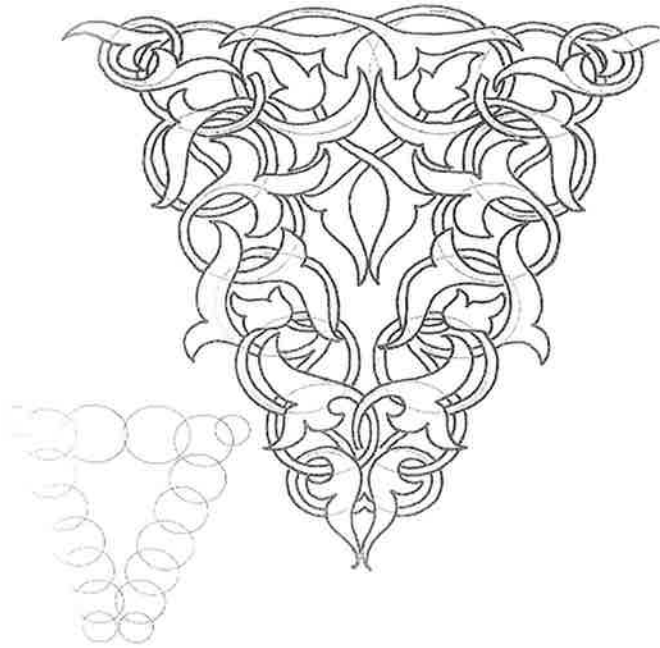


Figure (87) Vegetal pattern based on circles of different sizes. Illustration by Paccard (1979: 271)

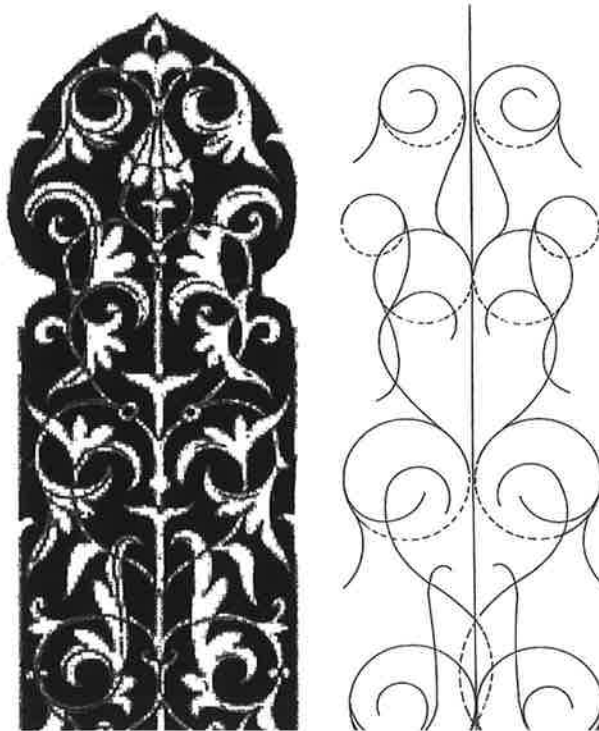


Figure (88) Vegetal pattern based on circles of different sizes symmetrically structured. Illustration by Paccard (1979: 272)

4-2 Multi-level vegetal patterns

Bellamin explains the multi-level vegetal patterns: *"These complex patterns are executed by adding more stems or dividing the main stem into a group of secondary branches which in turn may also split. Secondary branches serve to fill empty spaces in the pattern and they may return to be reintegrated into the main stem,"* as shown in Figure (89), (Bellamin, Personal interview 2006). Interlacing the lines (weaving over and under) is a method usually adopted on the stems but the leaves often stay in the foreground of the pattern. The use of calligraphic ornaments in such patterns adds an extra level to the structure which raises the degree of complexity.

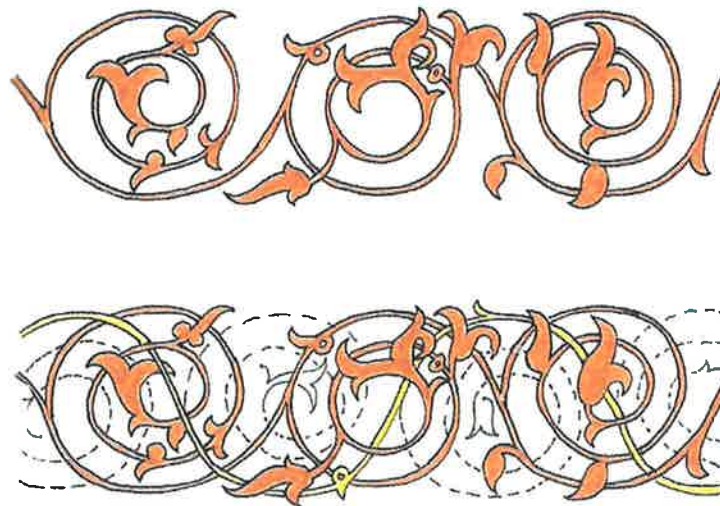


Figure (89) A frieze of vegetal ornamentation using a single stem (above), and adding more stems (below). Illustration by Castera (1999: 27)

In Figure (90), three illustrations from *Kutubiyya Minbar* by Habibi (1998: 96) clarify the design process of multi-level vegetal patterns all constructed in symmetrical

order with a central point. The top row of images shows the foundation guide lines, the middle row shows the plan of work, and the bottom row illustrates the final application.

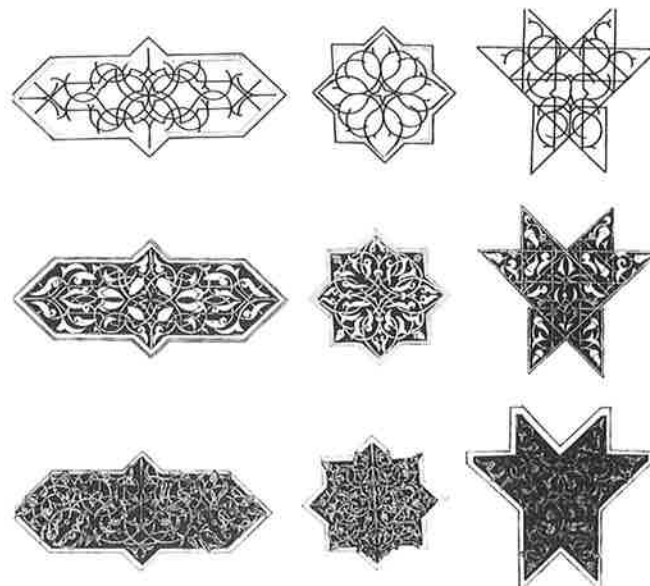


Figure (90) Vegetal ornaments from Kutubiyya *Minbar*. Illustration by Habibi (1998: 96)

Another example on interlaced vegetal patterns executed in carved stone from the Muhammad V Mausoleum in Rabat is shown in Figure (91). The design is based on a foundation of circles symmetrically organized around a pair of axes at an angle of 45 degrees. Unlike the previous examples where the exact leaf shapes are frequently repeated, in this pattern the only similarity is between the corresponding leaves across the axes. Each leaf is shaped to fill a specific space and its form is related to and commanded by the surrounding leaves and branches. In using flexible leaves, the diffusion of design elements in the pattern borders is accurately organised and balanced with empty spaces. Although the leaves take the role of foreground elements, and partly hide the running stems, it is clear that the designer

chose to display the stems where they intersect. As highlighted in the figure, the stems always cross in the centre of an empty space, presumably as intended by the artist.



Figure (91) Interlaced vegetal patterns. Carved stone from Muhammad V Mausoleum, Rabat. Axis of symmetry (in green) and stem crosses centred in empty spaces (in red circles). Original image from Castera (1999: 54)

This method of using flexible leaves can be used in different ways and the results can vary sharply. In Figure (92), which shows a carved stucco pattern found in the Saadian Tombs in Marrakech, the two types of vegetal ornaments are designed in the same way although they look entirely different. Here, each composition suggests a different visual interaction; in the lower section, the leaves form thin, extended shapes and their width is reduced in some places to almost the size of the stems, which allows more interlaced branches from the background to appear. In the opposite way, leaves in the upper section are thick, rounded, have interior

decoration and are adjacent to one another, hiding most of the interlaced stems.

While the first section is chiselled to a limited depth, the second is carved on several levels and its leaves twist to varying degrees, giving it a three dimensional appearance.



Figure (92) A carved stucco pattern at the Saadian Tombs, Marrakech. Photo by Castera (1999: 30)

4-3 Vegetal repeated units

Unlike the types discussed earlier in which vegetal patterns are shaped separately, another kind of vegetal ornament is designed and arranged based on geometric repetition. Bellamin explains this method as replacing a repeated geometric unit with a vegetal pattern which gains its characteristics of repetitive succession and

expands in all directions (Bellamin, Personal interview 2006). Figure (93) is a typical example.

Many examples of this method can be seen in Moroccan art and each pattern can be designed in a different way. Some repetitive units are formed using a single vegetal shape which is repeated in various symmetrical ways which might be a simple or multi-level vegetal pattern. Geometric vegetal patterns may contain calligraphic script in each unit, but do not, as a whole, serve as a background for calligraphy and usually embellish large surfaces or non-central designs.

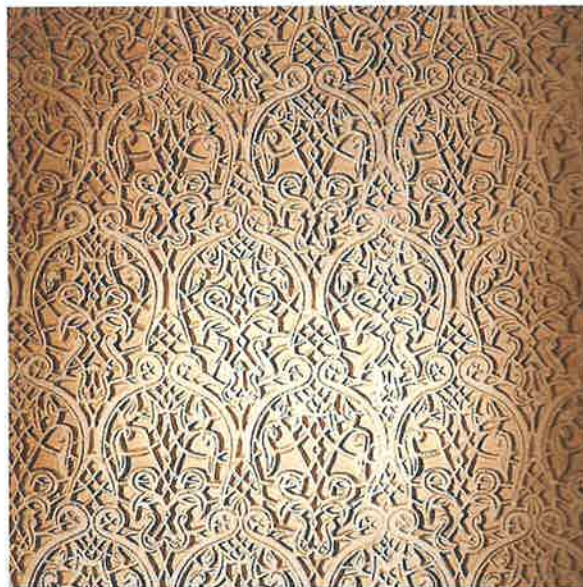


Figure (93) Vegetal repeated unit. Carved stucco, Stinyia Palace, Marrakech. Photos by Castera (1999: 50)

Figure (94) is an amazing example of vegetal geometric construction which can be seen in an intrados at Attarine Madrasa, Fes. This pattern reflects the designer's creativity in combining different techniques to invent a new decorative composition;

the pattern parts are inspired by internally decorated leaves but their shapes have been manipulated to correspond with the geometric organization of the structure. Due to the different lines of internally decorated leaves, and the changeable shapes of the curved parts, together with the varied levels of stucco carving, the pattern creates a visually interesting composition which motivates the viewer's eye to interact with and move between the different parts.



Figure (94) Carved stucco at Attarine Madrasa, Fes. Photo by Castera (1999: 56)

5 Variety and variation in vegetal ornamental structures

The rich multiplicity of vegetal ornamental forms arises from the diversity of methods and techniques used to create such structures. This variety originated from the different ways of shaping the basic elements, the wide range of methods of composition and the diversity of personal applications. The possibilities for creating new structures of vegetal pattern are endless as small changes in these components may produce new forms. This has resulted in an endless variety of forms and compositions which have ensured that vegetal ornamentation is of constant interest to the artist, as each change in structure may bring about an unexpected degree of variation. Likewise, the viewer is always presented with new compositions and engages with a different artistic experience in each pattern.

Unlike the construction of geometric and calligraphic structures, vegetal ornamentation is formed with fewer rules and the main concern in design is with the harmony and balance between different components which are practically achieved through lines and shape management. This has allowed individual creativity to emerge at the highest levels as the means of making and organising lines and shapes are the designer's choice. Castera comments: *"The movement of arabesques, born from spirals, contains the irreducible irrationality of life. Unlike mechanical movements, which are perfectly cyclical, and contain no surprises (simple shapes frozen in a four-dimensional space) there is always an aspect of the unexpected. This is the freedom of arabesques: the curves drawn are never*

mathematically perfect, the symmetry is rarely tyrannical, and the distribution of ramification contains a certain element of randomness. This is the dynamic, unstable equilibrium of life” (Castera, 1999: 38).

As with any other decorative art form, there are exceptional masterworks that differ from customary standards or mainstream types. The creative designers behind these excellent works celebrate the artistic wealth of the style and express their talent, skills and desire by introducing incomparable forms. Creativity, from Bellamin's perspective, should comprise three basic components: an inclusive knowledge of the field and vast skilful experience in its methods and techniques, a great desire and motivation toward development and change, and more importantly, the ability to imagine, criticize, and evaluate new ideas. He explains, *"creativity lies in finding new and interesting ways of combining and relating these elements; only he who has long experience and cultivated skills in design can carefully adapt traditional elements without changing their distinctive identity"* (Bellamin, Personal interview 2006).

Practically, they use the same basic techniques but each has fashioned his personal formula of methods and principles for shaping design elements and composing structure. Avoiding monotony through variation in the design elements is one of the common methods in creative design. Making changes in the form of units that will be repeated regularly will keep all parts of the work equally interesting. Figure (95) is an

example in which each unit of the four geometric shapes has a dissimilar vegetal construction.

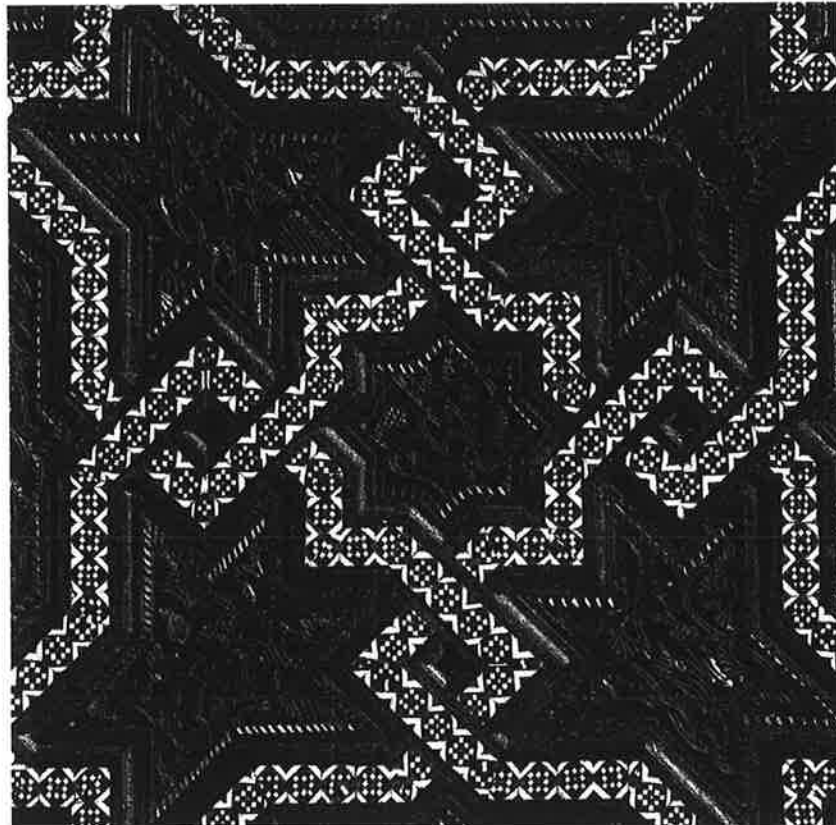


Figure (95) Four units of geometric units filled with different vegetal constructions. Photo by Paccard (1979: 199)

Figure (96) shows four units from Kutubiyya Minbar. Each has a slightly different construction but the lines of each structure suggest different directions of movement; lines between neighbouring units relate harmoniously with similarly shaped curves, but the directions of the lines within each unit are different.

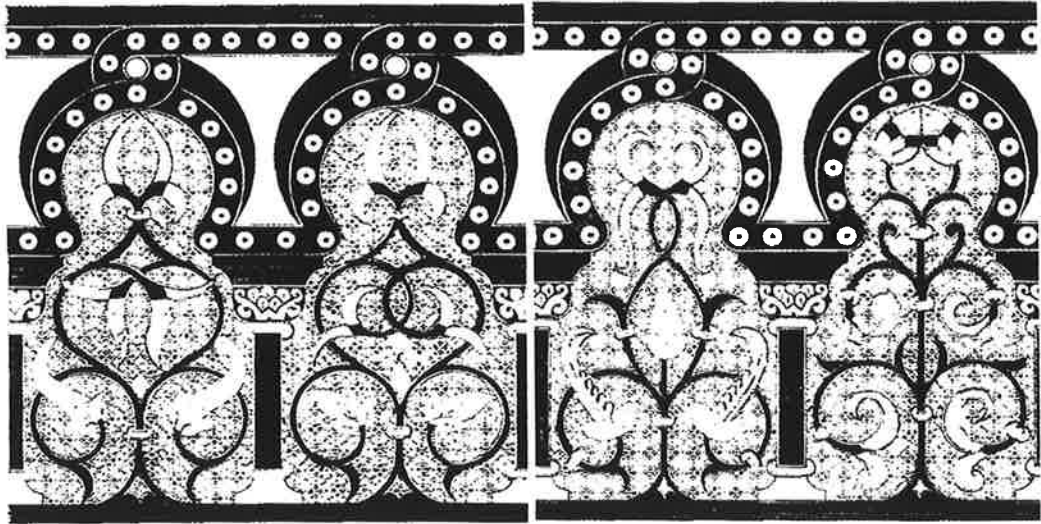


Figure (96) Four varied repeated units from *Kutubiyya Minbar*. Illustration by Habibi (1998: 96).

Taking all together, it is obvious that the nature of Moroccan vegetal elements which are made up of abstracted lines that accept change and manipulation, and the diversity of methods and techniques of shaping and organizing basic elements have resulted in the rich variety of vegetal ornamentation. However, by scrutinizing various examples, it is clear that the PMMD is the concept that guides all compositional procedures to realize the highest level of harmony and organization between design components. As with geometric ornamentation, the main guiding methods are line continuity, line interlacing and variation of presented material.

Chapter 6 - Movement in calligraphic decorations

1 Introduction

Nothing is more distinctive of Islamic art than the use of Arabic inscription; an extensive variety of calligraphic forms used to embellish all sorts of decorated objects and architectural surfaces, regardless of their size or scale. It is a unique art form conveying the beauty of meaning as well as the splendour of lines and shapes. *Alghat*, the Arabic word for calligraphy, has another meaning which is 'line'. Unlike the lines and shapes of geometric and arabesque decorations which suggest rhythmic forms of movement, in calligraphy, lines run in all directions with unexpected turns and changes in thickness and length, but also with order and harmony.

This chapter looks at the association between the PMMD and good calligraphic performance, highlighting this relationship in different styles of Moroccan calligraphy. Moroccan calligraphers set their own trend in developing different stylistic systems and in general introduced a sense of endless movement. To fully understand this relation it is important to take an overview of the role of movement in constructing different calligraphic styles.

2 The development of calligraphic styles

The numerous types of Arabic script can be divided into two main families; the dry *Kufic* styles, and the soft cursive styles, which include *Naskh*, *Thuluth*, *Taliq*, *Deewani*, *Rigaa* and *Jali-Deewani*. This division dates back to the pre-styles age when two types of writing were used; simple and formal. Figures (97) and (98) are an analysis of line movement in early cursive script and proportion methods of the early *Kufic* style, illustrated by Shakier H. Al-Said (1996: 117).

Mohamed Zakaria²¹ notes: *"Simple writing, used for every-day utilitarian purposes, was soft and fluid, written with a blunt pen. For formal uses, a script was employed that was written with a chisel-cut reed pen, which gave the writing a predictable body and proportion, a prerequisite for calligraphy. As the early Islamic governments grew in power and reach, they became more sophisticated in the ways of statecraft. The original simple script became the trunk from which branched a variety of scripts used in government chanceries, religious and educational institutions, and for business and personal communication"* (Zakaria, 2003).

21 Mohamed Zakariya is a calligrapher, artist, art historian and maker of custom instruments from the history of science. Born in Ventura, California, in 1942, he began his study of Islamic calligraphy in 1961. After continuing his studies with A.S. Ali Nour in Tangier, Morocco, and independently at the British Museum, he was invited in 1984 by the Research Center for Islamic History, Art, and Culture (IRCICA) in Istanbul to study with two celebrated Turkish calligraphers: Hasan Celebi and Ali Alparslan. From <http://aasilahmad.net/pictures/art/teacher/teacher1.htm>

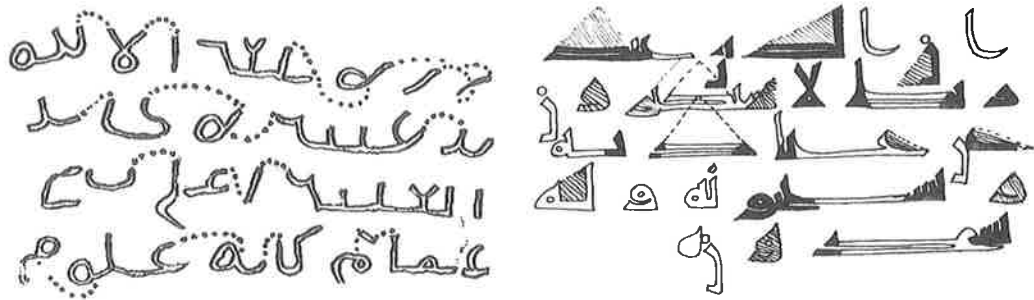


Figure (97) Left, analysis of line movement in early cursive script. Figure (98) Right, methods of shaping the early *Kufic* style. Illustrations by Al-Said (1988: 117)

Khatibi and Sijelmassi (1996) classified the development of diacritical marks as the breakthroughs in Arabic characters. The first development of the writing system came during the Umayyad era when Abul Aswad ad-Du'ali (d. 688) founded Arabic grammar and established the first system of *Tashkil* (vocalization), through the placing of diacritical marks and points that distinguish between similar consonants. The aim was to help many non-Arabic Muslims to accurately read the Holy Quran. The *Tashkil* system was refined by the Umayyad leader Al-Hajjaj Ibn Yousuf al-Thaqafi (694-714) who incorporated dots and certain vowel signs as differentiating marks. The dots were placed above or beneath the letter, either singly or in groups of two or three. The last reformation of the *Tashkil* system dates from around 786 when the philologist Khalil Ibn Ahmad al-Farahidi introduced new vowel signs to make it easier both to read and write. This system, which is still in use today, has been universally adopted since the early 11th century (Khatibi and Sijelmassi, 1996: 90-96).

Mamoun Sakkal argues that under the Umayyads and Abbasids, court requirements for correspondence and record keeping resulted in many developments to the cursive scripts, and several styles were devised to fulfil these needs. Abu Ali Muhammad Ibn Muqlah (d. 940), along with his brother, at an early age became accomplished calligraphers in Baghdad. Abu Ali became a Vizier (minister) to three Abbasid caliphs, and is credited with developing the first script to obey strict proportional rules. His system utilized the dot, as a measuring unit for line proportions, and a circle with a diameter equal to the *Alef's* height as a measuring unit for letter proportions (see Figure (99)).

Ibn Muqlah's system became a powerful tool in the development and standardization of cursive scripts, and his calligraphic work elevated the previous cursive styles into a place of prominence, making them acceptable and worthy to be used for writing the Quran. Notably, Ibn Muqlah conceived the idea of proportional measurement, but it was Ibn al-Bawwab (d. 1022) who refined and developed this proportional system, measuring and regularizing letters using the dot made by the nib of a chisel-cut pen (Sakkal, 1993).

Quran written originally in *Kufic*, and the same content written in *Naskh*. It looks as if the obscurity of *Kufic* is clarified in *Naskh*.



Figure (100) *Kufi* and *Naskh* inscriptions joined together in a manuscript

Naskh was the foundation for all other cursive styles which originated in the 11th to 14th centuries, including *Thuluth*, *Muhaqqaq*, *Rayhani*, *Tawqi*, *Nasta'liq*, and *Riqa'*, each of which may have their own sub-divisions. Cursive styles were mainly used in book art and occasionally in architectural decoration. *Nasta'liq* and *Thuluth* were exceptions. While the first was popular in Persia and neighbouring areas, the second was preferred and used in all Islamic styles. Sakkal explains: "*Thuluth is a more*

impressive, stately calligraphic style which was often used for titles or epigrams rather than lengthy texts. Its forms evolved over the centuries, and many variations are found on architectural monuments, as well as on glass, metalwork, textiles, and wood. Mamluk Thuluth of the 14th century was heavy and large, while the Ottomans preferred the simpler more refined version still practiced today" (Sakkal, 1993).

The development of *Kufic* script followed a different route, more related to ornamental uses. Due to its geometric nature, *Kufi* script was technically flexible, allowing it to be combined with other elements of design. This relationship with decoration resulted in forms of *Kufi* each connected with a specific ornamental theme: in floral *Kufic*, leaf-like ornaments were used to shape a letter's edges and surroundings; square *Kufic* was a typically geometric form in which lines were bold, straight and constructed in a perpendicular way; and in knotted *Kufic*, vertical lines were extended to create interlaced geometric shapes. These forms of *Kufi* were employed in Moroccan style to an exquisite level of perfection, as illustrated in Figure (101).

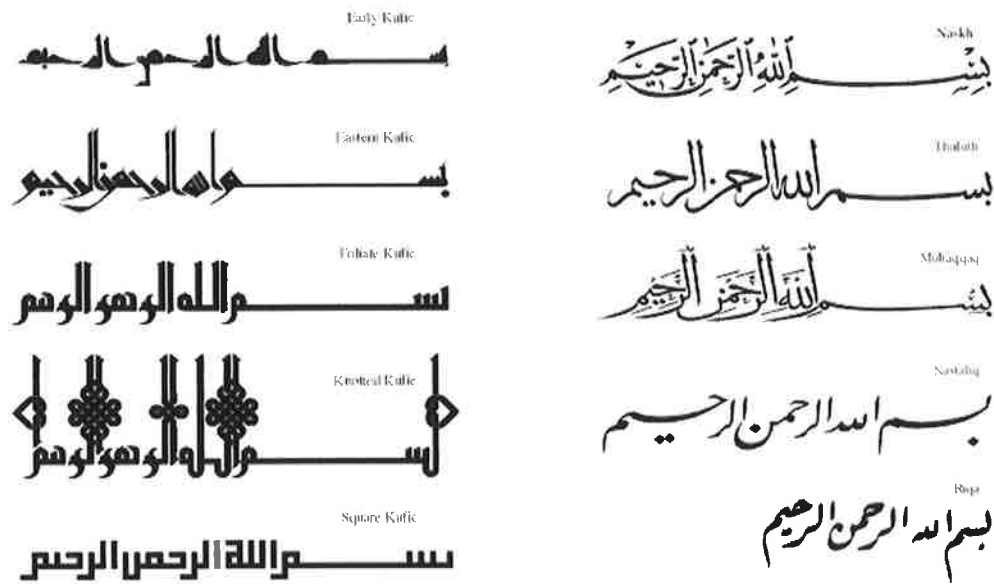


Figure (101) The "besmlah", written on the left in various *Kufic* styles. From top to bottom: *Early Kufi*, *Eastern Kufi*, *Foliate Kufi*, *Knotted Kufi*, and *Square Kufi*. On the right, examples of *Cursive* styles. From top to bottom: *Naskh*, *Thuluth*, *Muhaqqaq*, *Nasta'liq*, and *Riqa*. Images by Sakkal (1993)

3 Movement as a decisive factor in good calligraphic practice

Is the successful application of basic methods of measurement, proportion and regularization of letters enough to make inventive calligraphic works? Perfection in calligraphy involves more than mastery of the rules. Calligraphy, like any other art form, has its fundamental principles of construction which, besides the practical knowledge of proportion, include the rules of composition, and also of line structure to create unity, harmony, rhythm and movement. As Zakaria explains: *"To possess mastery in one aspect of the art doesn't guarantee perfection from every standpoint. It is, however, advantageous in developing perfection. One first should gain mastery in our topic; then it is necessary to come to a state of domination in all dimensions of*

the art. Just as it is not sufficient merely to be able to write this word for this or that script beautifully, it is also necessary to acquire competence and complete domination and successful application in each of the topics under consideration" (Zakaria, 2003).

Calligraphers use the term *Al-Harakkah*, which translates literally as 'movement', and refers to the streamlining and flow of the lines in written script. *Al-Harakkah* is an all encompassing method by which calligraphers judge and evaluate aesthetically the harmony of lines and their relationship to one another. *"The great calligraphers [of Baghdad in the Abbasid Period] Ibn-i Hilal and Yakut have expressed this as 'The pen should flow like the breath,' so that the effect of this flowing movement will be seen in the calligraphy, or that it must be seen"* (Zakaria, 2003).

Arabic script, by nature, is a combination of different lines, each of which suggest a sort of movement. Artist and calligrapher Muhammad Al-Sakkar, under the title *The implied and realized movement in Arabic calligraphy*, wrote as follows: *"Lines can be divided into two categories; straight lines, including vertical, horizontal and inclined, and curved lines which vary in shape. Straight lines in their nature are stable and suggest a single direction but when linked with other lines their inner energy is revived. Curved lines indicate position and direction and have an energy that appears to travel along their length"* (Al-Sakkar, 1996).

When looking at letters in their simplest form - abstracted from trinkets, dots, changeable thickness and other beautifying elements - they appear as lines made of one stroke/move or a set of moves with shifting-points in the course of those movements (Figure (102)). In writing, the sub-movement of letters is linked to create one continuous streamlining of the different moves. In the process, the good calligrapher arranges this connection in harmony allowing the lines to naturally travel through the curves, stop-points, and interruptions (see Figure (103)).



Figure (102) above, letters in their standard shape. Down, an analysis of their movement as lines.
Images by the researcher



Figure (103) The pen's movement and stop-points, in green. Image by the researcher

In unsuccessful calligraphic practice, letters might be regularized but joined and linked imperfectly. Figure (104) shows two comparative examples of *Taliq* script provided by Zakaria (2003). In the first work, words are written with standard shapes, but their composition does not express the movement required by the style. The

second example is executed with perfect harmony and organization; the lines move smoothly and flow naturally.

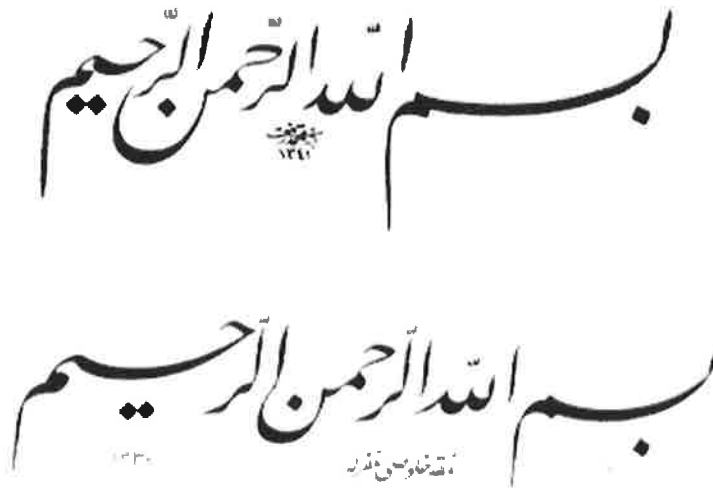


Figure (104) Two comparative examples. Bottom, the movement of the lines is harmonious and flowing. Top, the same script, but the lines are unsuccessfully arranged. Images from Zakariya (2003)

Al-Sakkar gives examples on how movement is enhanced by the creative management of lines. Figure (105) shows how they can be released from their usual form by extending some of the letters to flow outside the body of the work. Another method of increasing the amount of movement in a line is to change the usual horizontal way of composing words to a more uncommon orientation, as in Figure (106).

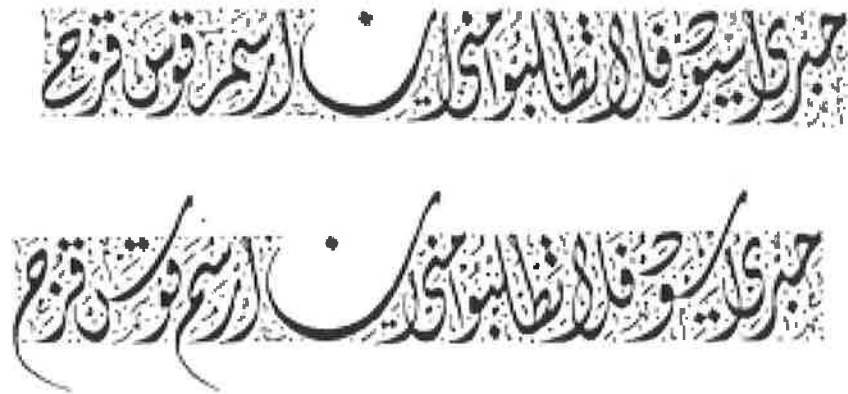


Figure (105) Two examples of *Jali-Deewani* script. The upper version is executed in the usual way, but in the lower example some of the words are extended as a way of increasing the dynamics of the lines. Illustration by Al-Sakkar (2003)



Figure (106) Right, composition of words on an inclined base. Left, the same script set on a horizontal base. Illustration by Al-Sakkar (2003)

In summary, it is obvious that perfection in calligraphy exceeds the mastery of its codified basics, rules and elements and depends essentially on the calligrapher's arrangement of lines. This is by nature an individual and inventive process. In good calligraphic works, lines flow in harmony and lead the viewer's eye to intricate and travel smoothly without enharmonic or uneven movement. Therefore, the movement of lines is an essential principle in constructing calligraphic structure, and has,

throughout history, been the key factor in the evaluation of calligraphic works. The most notable calligraphers are in fact those who have achieved the highest levels of perfection in harmonizing line movement.

4 Moroccan calligraphic styles

4-1 *Maghribi* style

Maghribi style appeared in the Western parts of the Islamic world in the 8th century. Generally speaking, the *Maghribi* script is divided into three styles depending on their place of origin: *Kairouani*, which is the oldest (see Figure (47)); Andalusian or Cordoban, which was developed and used in Islamic Spain (see Figures (49) and (108)); and the *Fassi*, after Fes, which has been popular since the 12th century (Figure (107)).

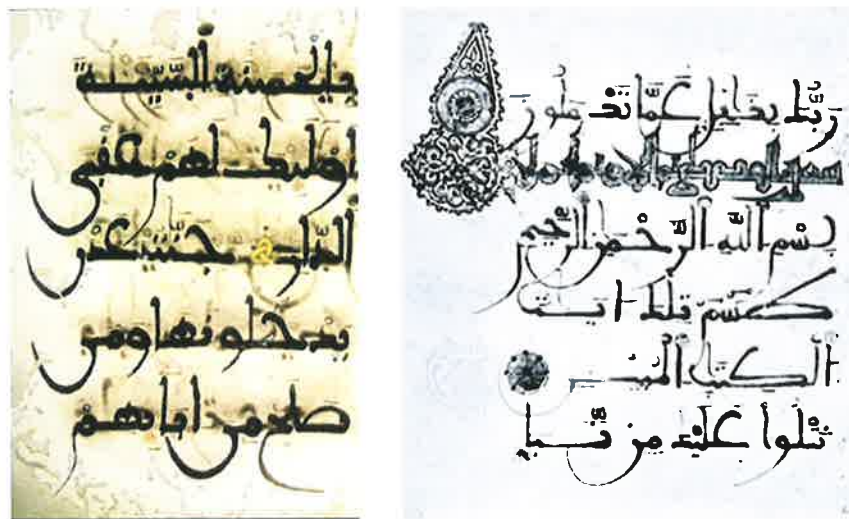


Figure (107) Right, example of *Fassi* script. Figure (108) Left, a page of the Holy Quran in Andalusian style. Collection of the British Museum

There is little difference between these types and in some cases it is difficult to classify a calligraphic work due to the muddling of different styles. However, it is clear that the style gradually became more cursive after the early forms of *Kairouani* which were strongly influenced by early *Kufi*. Words in Andalusian type are soft and dominated by elegant helixes and an infinite variety of filled and diacritical elements. The *Fassi* is distinguished by the extraordinary size of its vertical lines, rounded exaggerated extension curves and the limited use of diacritical marks.

In a personal interview Haneen clarified that: *"The maghribi style is a unique case in Arabic calligraphy; it has been creatively originated through joining together letters from Kufi and Nasgh scripts which realized a distinctive script that gathered characteristics of both styles. Yet, it is the only type of calligraphy that has no firm rules of measurement and proportion; words and lines might be shaped and unified in individual criteria and based on the calligrapher's artistic taste"* (Hanneen, May 2006). In addition, unlike other cursive styles which are written with a chisel-cut pen, a blunt tipped pen is used in writing which in practice gives the writer a greater ability to twist and curve the lines in free-movement. This freedom in shaping letters, together with the use of a brush-like pen, has allowed calligraphers to expose their personal creativity and is reflected in the wide range of forms. Haneen argues: *"Unlike Eastern styles, which due to the firm rules of proportion are usually in a standard form, in Maghribi you can recognise a calligrapher's artistic identity and individual characteristics"* (Hanneen, Personal interview May 2006).

Maghribi is characterized by fluid lines and rounded curves, edges are regularly twisted and final letters have open curved lines which are exaggerated and extended. The script is easy to read and write and was usually written in brown ink, with vowel and reading marks applied in colours such as, red, yellow, and green. Another distinguishing element of the *Maghribi* style is the system of placing diacritical marks and dots which is the only exception of all types of Arabic scripts (Figure (109)).

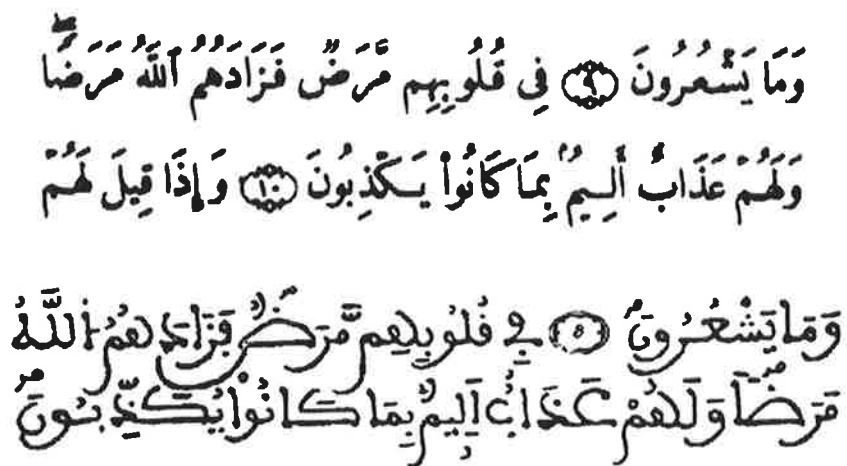


Figure (109) Comparing *Maghribi* script, lower example, with *Nasgh* style

Although the use of the *Maghribi* style in architectural decoration was minor in comparison to *Kufi* and *Thuluth*, its methods of placing diacritical marks and techniques had a strong influence on the development of Moroccan *Thuluth* script. Haneen elucidated that "*calligraphers mixed the Thuluth with their existing calligraphic culture which was represented in Maghribi script*" (Haneen, Personal interview May 2006).

4-2 Moroccan *Thuluth*

Thuluth style is a most elegant cursive script that has enjoyed enormous popularity all over the Islamic world as an element for calligraphic decorations. *Thuluth* script is characterized by remarkable beauty and plasticity of curved letters which flow with ample and often complex proportions. The word "*Thuluth*" means 'a third' in Arabic, due to the size of the *Thuluth* pen compared to the *Tumar* pen. According to Hanneen, two types of *Thuluth* were used in Moroccan art; the classical type, which has features closely related to the Eastern form, but is written with a slightly thicker pen, and ornamental *Thuluth*, in which essential changes are made to the system to make it more flexible for decorative use. The classical type (see Figure (110)) "*was rarely used in architectural decoration but widely employed in books, manuscripts, and royal correspondence*" (Hanneen, Personal interview May 2006).



Figure (110) Classic Moroccan *Thuluth* script on a ceramic panel from the Saadian Tombs. Image by Castera (1999: 35)

Bellamin confirms that ornamental *Thuluth*, as a design element, may be the most plastic of the Arabic scripts ever used in Islamic art; "*it is extremely adaptable and*

accepts manipulation in various ways to fit harmoniously with design requirements"
(Bellamin, Personal interview May 2006).

According to Hanneen, when Moroccan calligraphers began to adopt the *Thuluth* in around the 12th century, they mixed the new style with their existing calligraphic culture which was represented by the long established Maghribi script. Classical *Thuluth* was transformed by *Maghribi* methods and techniques; the blunt tipped pen used for writing, the *Maghribi* system of diacritical marks and dots which were used in place of the Eastern order, and more importantly, the freedom of breaking the rules of proportion (Hanneen, Personal interview May 2006).

This marriage between *Thuluth* and *Maghribi* methods, joined with the freedom to break and change the basic rules, resulted in a most flexible and dynamic decorative script in which lines are excessively plastic, and the curves display marked contrast in line width. In some cases, ornamental *Thuluth* was drawn instead of inscribed; in Figures (111) and (112), for example, the thickness of line changes rapidly from the heaviest to the thinnest possible. These two examples also show how far Moroccan calligraphers were free to join the *Thuluth* with *Maghribi* letters; where the letter (ج) is used, the twisted edges are in *Maghribi* form. Figure (113) is another example of breaking the rules of *Thuluth* script, where the letter (ج) is unusually extended. This has been done to achieve balance with other parts of the work by lengthening the letter to fill the empty space.



Figures (111) and (112) Two examples of drawn *Thuluth* manuscripts from the 19th century.

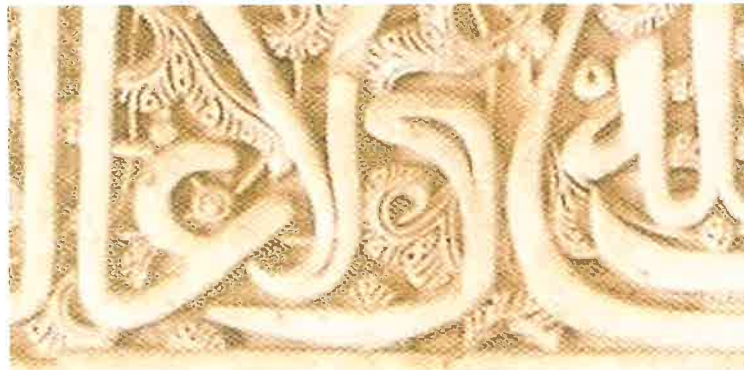


Figure (113) Example of the freedom to extend letters in Moroccan *Thuluth*. Image by the researcher

In using *Thuluth* in other Islamic orders the proficiency of calligraphic application is a priority; the characters are written first in the design process, and then secondary elements (usually vegetal ornamentations) are placed to balance the design parts. In this way the calligraphic forms appear to be perfect and to comply with the script's rules of proportion but their harmony with the background depends on the designer's skill in relating the work's lines to one another (see Figure (114)). Moroccan design, however, is essentially different, as Haneen explained: *"All design elements share the same importance and they are all the subject of change and modification. The flexibility of ornamental Thuluth allows the designer to adapt and shape characters based on his individual principles of composing as no strict rule or method was*

officially proposed" (Haneen, Personal interview May 2006). Castera also noted: *"When a calligrapher creates something to be used for architecture, he worries little about the content; the same holy names, Koranic surats and dedicatory formulae are used recurrently [...] the calligrapher's main preoccupation is harmony. This is where the freedom he has acquired can be exercised, within the limits of certain conventions"* (Castera, 1999: 20-21).

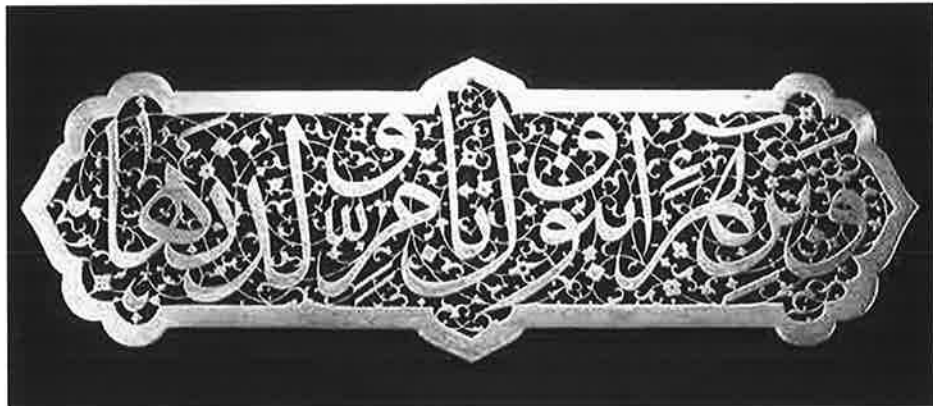


Figure (114) Example of classic *Thuluth* script. Cut steel plaque, Iran, 17th century. Original in the Metropolitan Museum of Art, New York

The variety of forms of ornamental *Thuluth* which have appeared throughout the history of Moroccan art are in fact the results of exercising this freedom.

"Individuality is clearly observed and felt in this unique style and the variation between different artistic attempts allows us to evaluate which is distinctive and which is customary" (Haneen, Personal interview May 2006).

An exceptional artistic achievement of ornamental *Thuluth* can be seen in the scripts of the Alhambra. The example shown in Figure (115) is a stucco frieze of about

25cm in width which runs horizontally above an item of *Zillij* work. In this masterwork the characters are extremely smooth and they flow in a wonderful harmony. It is an excellent utilization of the script's flexibility. Letters are adjacent, inserted and cunningly interspersed in the lower half of the frieze. Vertical lines of *alif-lam* (ا ل) letters are extended, few vowel marks are used, and large areas remain empty. This type of composition is influenced by *Kufic* style structures as in traditional *Thuluth*, such as in Figure (116). The calligraphic script is usually centred in the middle of the decorated panel and vertical lines are always in the standard form. However, keeping some spaces clear from calligraphic decoration allows vegetal ornamentation, which is edged with highly detailed *kufic*-like strips, to come into view and to contrast with the script's smoothness. This can be clearly observed in the section shown in Figure (116) where a large area is left devoid of calligraphic decoration. Looking more closely, the flowing movement of the script lines has an extreme and rather wonderful flexibility; they are designed to run smoothly, are of variable thickness, interlaced in some places, and end in soft edges. See Figures (117) and (118).

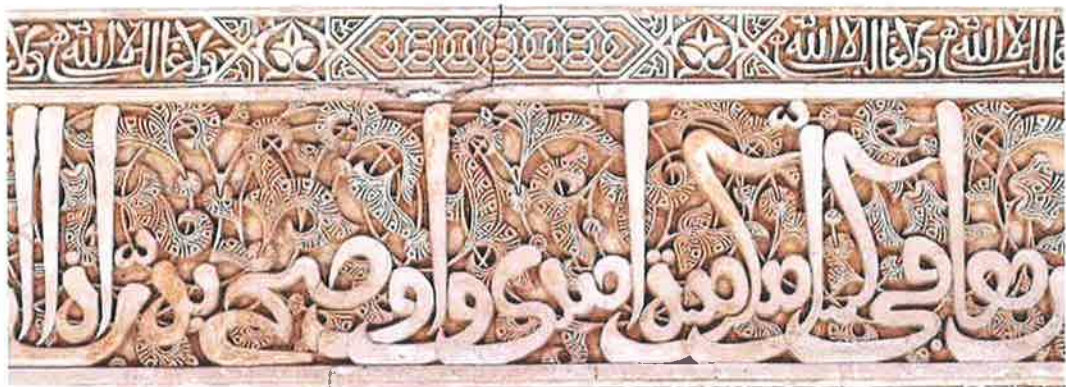
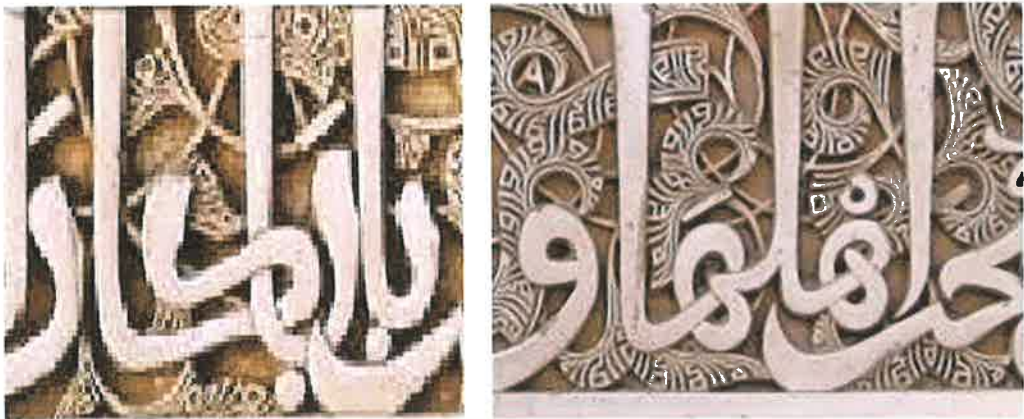


Figure (115) Ornamental *Thuluth* script on stucco frieze at the Alhambra



Figure (116) Another part of the same frieze. The calligraphy is un-centred with a large free space on the left.



Figures (117) and (118) Close-up of interlaced lines

4-3 *Kufic* styles

4-3-1 Floral *Kufic*

Floral or Foliate *Kufic* is the most common decorative script of all orders of Islamic art. Although vegetal ornaments were combined with early *Kufic* script from the middle of the 8th century, they were used as filling elements and their lines were not linked or connected with the calligraphic body. Sakkal explains "When the cursive

styles were becoming popular and refined in the 10th century, Kufic responded by overemphasizing many qualities of the cursive scripts in a geometrical style called 'Eastern Kufic,' where slender vertical strokes and oblique strokes animate the more rigid early Kufic" (Sakkal, 1993). Eastern Kufic was largely used in book art rather than in architectural decoration, but in general, it was the basis for many decorative kinds of Kufic script.

Calligraphers started to beautify the ends of letters with trinkets of flower and leaf shapes. There is no specific rule to this combination, but in general, beautifying elements were formed on the top-end of vertical lines, and non-vertical lines were exaggerated to culminate in leaves. As the manner of shaping and forming flower and leaf-like elements is the calligrapher's choice, the quality of compositions depends on his skills and talent in inventing connecting and relating lines. As a result, different types and styles of floral Kufic script appeared throughout the Islamic regions, each one of which might bear signs of personal creativity.

In Moroccan art, the script has been used since the building of the monuments of the Umayyad dynasty, and, as with all types of Moroccan art, it followed its own developmental trend, away from Eastern influences. An impressive and perfected form of floral Kufi can be seen on the *minbar* of Kutubiyya Mosque in Marrakech, which was made in Cordoba in about 1137. There is great variety here. Letters are constructed in a fascinating and varied way, such that every letter appears in different appealing shapes. For instance the upper part of the *kaf-ta* group (ك ت) is turned in diverse directions, and the paired verticals of the *alif-lam* (ا ل) group are

interlaced in several imaginative ways (see Figure (119)). Looking at the character forms in general, they were carefully created with a great sense of balance and harmony between curved and straight lines. Hbibí explains that Foliate *Kufic* in Moroccan decoration is usually joined with a background of vegetal elements that have the same shape and colour as the script. This fills up the voids, relates the script to the background, and creates a visually balanced and unified structure. Figure (120) is a typical example of this (Hbibí, 1998: 93-94).



Figure (120) A typical example of the use of Foliate *Kufic*, in which vegetal ornaments in the background have the same colour and shape as the script. Image from Castera (1999: 26)

							الحروف ALPHABET	
ا	ا	ا	ا	ا	ا	ا	Alif	ا
ا	ا	ا	ا	ا	ا	ا		
		ب	ب	ب	ب	ب	Bā' Tā' Thā'	ب
ج	ج	ج	ج	ج	ج	ج	Jīm Hā' Khā'	ج
ج	ج	ج	ج	ج	ج	ج		
د	د	د	د	د	د	د	Dāl Dhāl Rā' Zay Sīn Shīn	د
ذ	ذ	ذ	ذ	ذ	ذ	ذ	Tū Dhū	ذ
ر	ر	ر	ر	ر	ر	ر	Qād Rād	ر
ز	ز	ز	ز	ز	ز	ز	Zay Ghayn	ز
ز	ز	ز	ز	ز	ز	ز		
ح	ح	ح	ح	ح	ح	ح	Hā' Qāf	ح
خ	خ	خ	خ	خ	خ	خ	Kāf	خ
ل	ل	ل	ل	ل	ل	ل	Lām Mīm	ل
م	م	م	م	م	م	م	Nūn	ن
ن	ن	ن	ن	ن	ن	ن	Hā' Tā' Wāw	ن
ن	ن	ن	ن	ن	ن	ن		
ي	ي	ي	ي	ي	ي	ي	Lām alif Yā'	ي
ي	ي	ي	ي	ي	ي	ي		

Figure (119) Inventory of the Floral Kufic letters used in the inscription of the *Minbar* of Kutubiyya Mosque. Image by Hbib (1998: 94)

4-3-2 Square *Kufic*

This is also known as geometric or rectilinear *Kufic*. "During the 13th and 14th centuries, Square *Kufic* developed out of the use of calligraphy in buildings. Its simple forms contrast with the trend to develop more complex calligraphic compositions" (Sakkal, 1993). Square *Kufic* is usually attached to geometric ornamentation such as in the text below (Figure (121), the Benediction of Muhammad, which is based on a square grid (Paccard, 1979: 314).

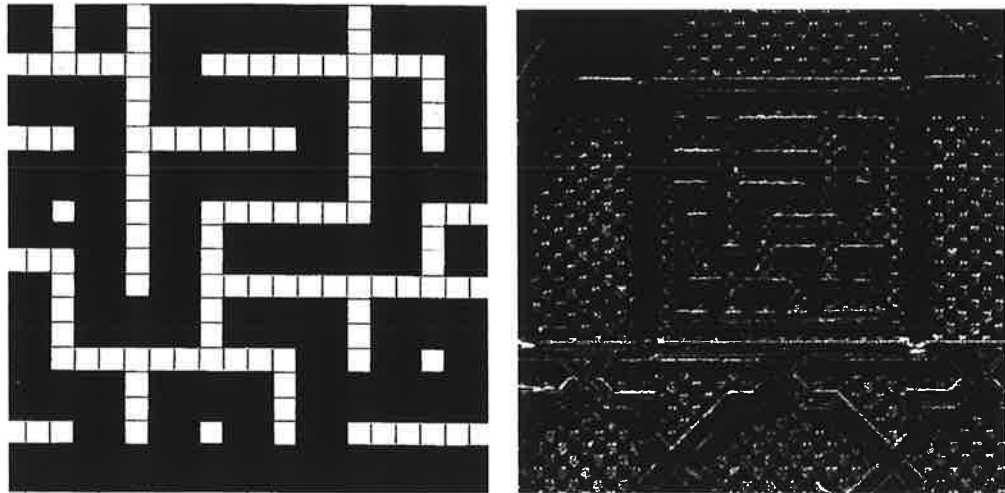


Figure (121) A popular square *Kufic* pattern which appears in many scales and materials, "The Benediction of Muhammad ". Images by Paccard (1979: 314)

One amazing example of square *Kufic* script is the text used on the famous *minaret* of Moulay Idriss Mosque (Moulay Idriss city), the only cylindrical *minaret* in Moroccan architecture (Figure (122)). Two types of *Kufi* in *Zillij* cover the entire *minaret*; while the lower phrase "*la ilaha illa Allah, Muhammad rasul Allah*" is written in typical square *Kufic*, the upper part of the text is an exceptional combination of *Maghribi* and square *Kufic* (Paccard, 1979: 315). Because it was designed to be

executed in square tiles, the result is a hybrid form which joins the rectangular lines and angular curves of square *Kufic*, and the common features of *Maghribi*, such as the diacritical and vowel marks which are never used in *Kufic*. This unique case is another sign of the freedom to change and develop the rules of Moroccan design.



Figure (122) Square *Kufic* script on the slender *minaret* of Moulay Idriss Mosque.

4-3-3 Knotted *Kufic*

Knotted has been included in *Kufic* script since the development of the early Eastern style. More likely, it started with the vertical letters of the *alif* and *lam* group

(ا ل) which actually cross as lines in writing when *lam* comes after *alif* making *laa* (لا). This natural intersection of *laa* was artistically transformed to create different forms of interlaced composition, as in Figure (123). Likewise, when *alif* comes before *lam*, the two letters create two parallel lines that can be interlaced in different ways (Hanneen, Personal interview 2006). See Figure (124).

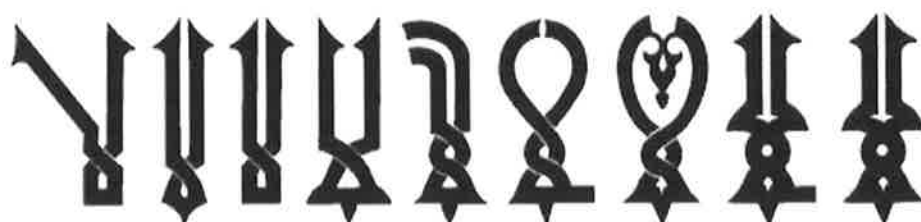


Figure (123) A variety of knots in *laa* (لا) form. Images collected by the researcher

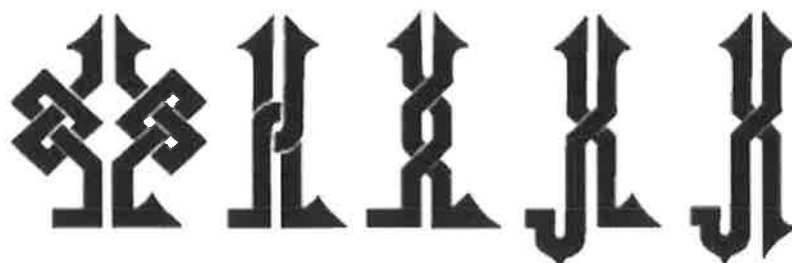


Figure (124) A variety of knots in *alif-lam* form. Images collected by the researcher

The method of knotting was developed by extending and connecting vertical lines to travel and interlace with each other in a balanced structure, as shown in Figure (125). Various types of knot have been invented and, as explained in Figures (126) and (127), the knots may be created in a variety of forms and might be in a simple or more complicated woven shape. Figure (128) is an example on using varied types of

knots in a single inscription panel as a way of avoiding monotony and providing variation in the composition.

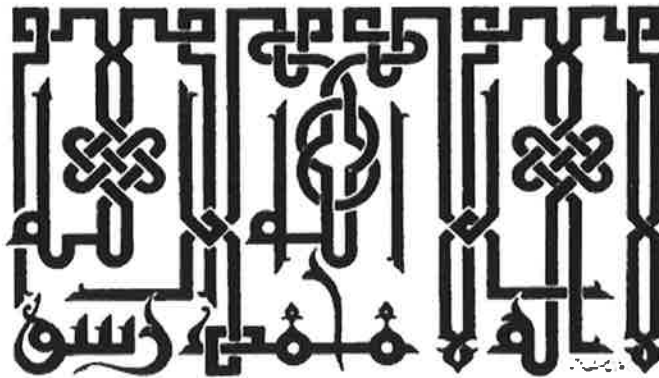


Figure (125) Example on knotted *Kufic* script. Images by Sakkal (1993)

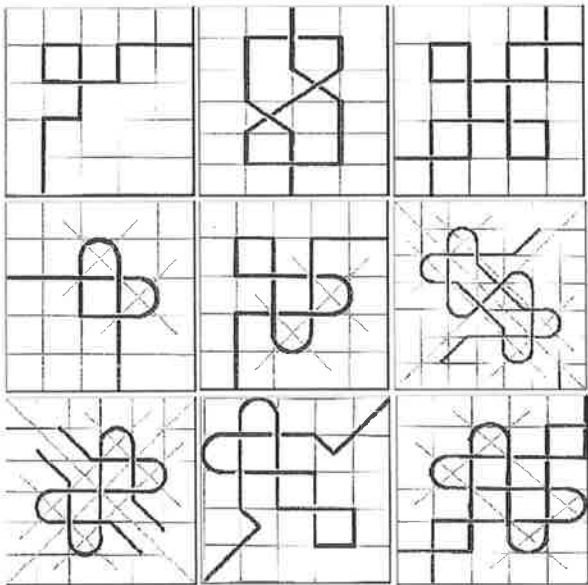


Figure (126) A variety of *Kufic* knots. Illustrations by Paccard (1979: 158)

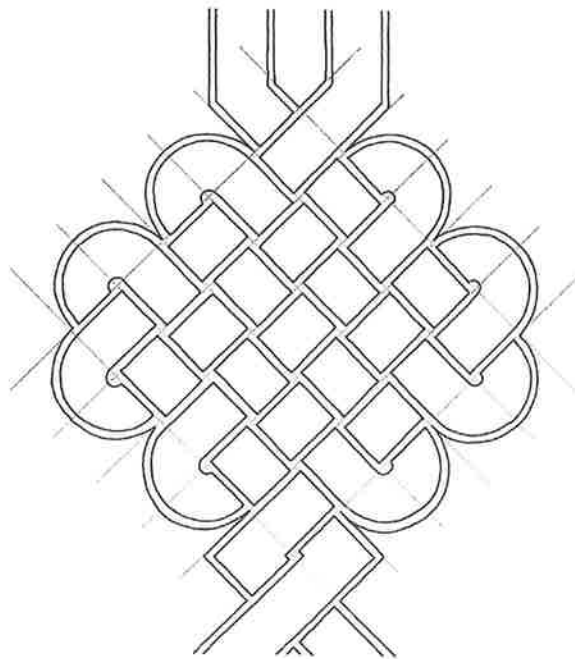


Figure (127) The structure of a diagonal knot, one of the most prevalent knots in Moroccan art.
Illustration by Paccard (1979: 156)



Figure (128) Example of variation in *Kufi* knots. Plaster work from the Alhambra. Image by the researcher

5 *Kufic* decoration

As the name suggests, *Kufic* decoration is a type of ornamentation evolved from *Kufi* script knots. Sakkal (1993) explains, "*In the 11th century the letters themselves started to be modified and used as ornaments, and new geometric elements started to appear in the form of plaiting, knotting, and braiding. The exaggerated use of such ornaments created complex compositions, which were difficult to decipher at times*".

Simple forms of *Kufic* decoration consist of interlaced lines that interrelate different parts of the design through the border and frame. In advanced compositions, they play more than a connecting role; they themselves become a major design element that has equal importance with other ornaments. *Kufic* decorations may be set on a base of geometric construction, such as in Figure (129), or be freely constructed as major ornaments within a defined area, such as in Figure (130), a carved wooden ceiling from Hassan II Mosque which displays exceptional management of *Kufic* decoration. The two black lines that make the knots move continuously, passing through cells, and forming a different *Kufic* bond in each cell.

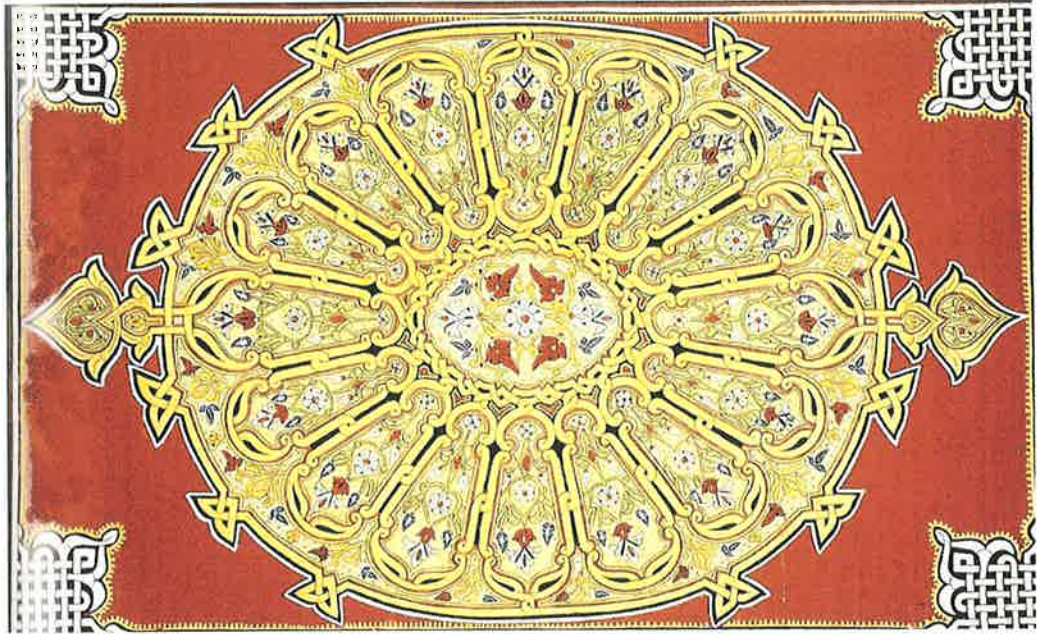


Figure (129) A coloured wooden panel (*Ziwaq*), designed using elements of *Kufic* decoration. Image by Castera (1999: 69)

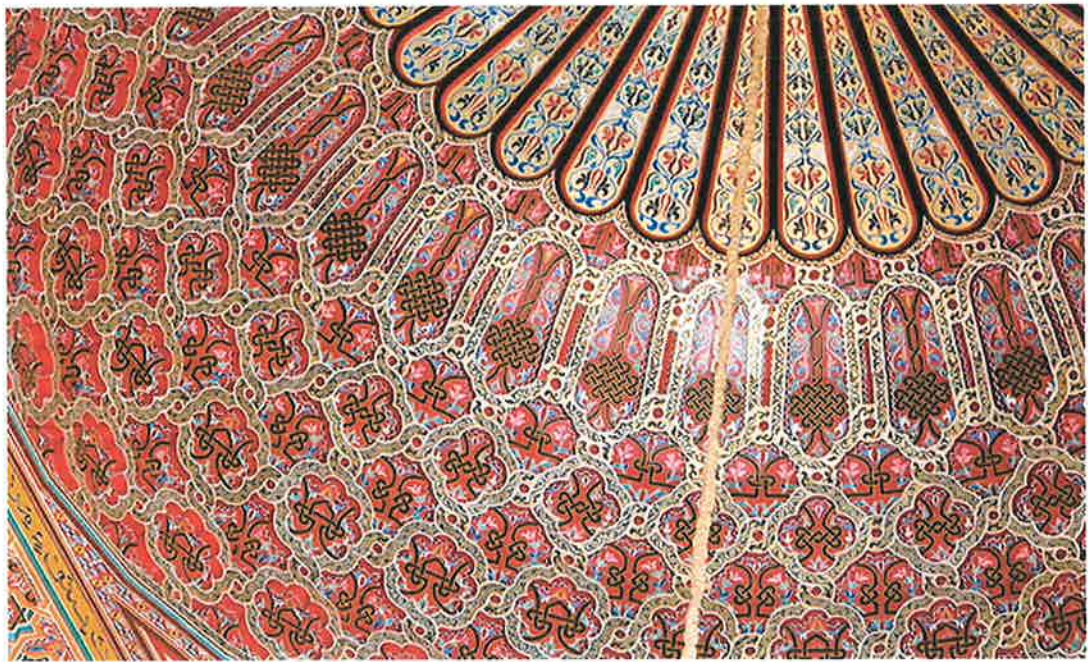


Figure (130) Wooden ceiling from Hassan II Mosque. A *Kufic* design with knots, in black, as the major element. Image by Bellamin (2006)

Considering the types of Moroccan calligraphy overviewed in this chapter and the varied ways in which they can be employed, it is clear that calligraphers creatively set their own trend in developing different stylistic systems which are adopted to realize the highest level of relativity and harmony within calligraphic structure. The PMMD as a concept plays a central role in each proportional system of the three styles (*Maghribi*, *Kufi*, and *Thuluth*) as it governs the formulation of letters and their relationship to one another.

Chapter 7 - The role of PMMD in composing design elements

1 Introduction

To this point, we have explored the important role of PMMD in the formation of each separate element of Moroccan design, and outlined the viewer's interaction with various forms of single-element structures. In combining two or more dissimilar elements, it appears that designers depend entirely on line manipulation to achieve the visual qualities and principles of good design. Due to the unified nature of the design elements (basic structures consist of lines and abstract shapes), the management of lines is a common factor and an effective method of organizing the relationship between them.

The organization of lines of composition may be considered more important than the regularization of elements; in many cases element shapes are changed and manipulated from their standard form to achieve harmony within the design structure. The adaptation and reformation of calligraphic characters to accord with their surroundings is possibly the most obvious evidence of the precedence of structural perfection over the accuracy of the design elements. Therefore the PMMD can be described as a high level artistic practice in which talented designers use line management to create appropriate compositional elements in order to enhance and control the organization of visual relations and interactions in design structure.

But are there defined concepts or firm rules that direct the process of line arrangement? The discussions with Bellamin (2006), Hanneen (2006), and other master-craftsmen showed that there is a set of common compositional basics and technical procedures that are followed by all designers, however, each designer might interpret them differently. These basics can be classified into four main categories; 1) line continuity, 2) line interlacing, 3) line connectivity and 4) line relations and interactions.

These concepts can be applied to all forms of element by controlling the size, thickness, direction and placement of lines. However, all might be undertaken at the same time within the same pattern and, as seen in many cases, the designer may invent his individual formula for composing and relating design lines and shapes.

2 Continuity of lines

Line continuity is one of the hallmarks of Moroccan design. As a compositional method, it contributes to the formation of all sorts of elements as well as to the blending of dissimilar lines and shapes. In practice, all lines and shapes in a design structure may be considered as alternating links, and their contours, size, orientation and thickness are subject to this concept.

Line continuity can be achieved by relating and connecting lines to one another, arranging shapes so that the line or edge of one shape leads into another, or

creating visual relationships between the lines so that they are seen as one continuous group. Lines pass throughout the composition, relating different parts and fastening the design structure together in a sense of cohesive unity. The role of line continuity in design composition will be explained further in the descriptions which follow of the technical methods used to connect and relate a series of different design elements.

3 Line interlacing

As explained in the previous chapters, this stylish way of relating lines can be applied to all forms of elements and used in various ways in ornamentation. Line interlacing is achieved by overlapping lines so that they appear above and below each other in the form of knots, bonds and braids. They might be visually clear and constructed in alternate order, such as in geometric and *Kufic* decoration, or applied in a complicated and unsystematic order, such as in multi-layered vegetal ornamentation and complex calligraphic panels. Moreover, as it can be adopted in different ways, line interlacing is one of the key methods used to link a series of dissimilar elements.

Line interlacing raises the aesthetic quality of a work by creating a three-dimensional space, and adds a sense of dynamism that activates and highlights the relationship between different parts of the design. Overlapping shapes form visual interruption points in the composition, capture the viewer's attention and suggest a specific

direction for the eye to follow. Moroccan designers utilized this method to demonstrate their creative skills and many inventive forms reflect their dexterity in line management, particularly in multi-element designs.

4 Methods of connecting a series of different design elements

Extending the line to move from one element to take a place within a dissimilar ornament is one of the most distinctive features of Moroccan design. This sort of connection relates the varied elements of design and unifies the structure with continuous lines. Despite the variety of ways of connecting multi-element designs, they are all composed of primary geometric grids. The interview with Bellamin shows that the line connecting method can be divided into two main processes; 1) connecting the lines of multi-unit patterns, 2) connecting interior lines of a single unit (Bellamin, Personal interview May 2006).

4-1 Connecting lines of a multi-unit pattern

According to Bellamin, connecting lines of a multi-unit pattern, the most common way to relate lines, is achieved by flexing a group of straight lines from a geometric primary plan and converting them into curved lines to produce a vegetal-like shape. In the simplest forms, the designer transforms lines of a chosen part of the primary plan and manipulates them to create a vegetal unit (Bellamin, Personal interview May 2006). Figures (131) and (132) are examples of line flexing technique which

show the replacement of straight lines with rounded ones drawn with a compass. Paccard explained that this procedure results in the division of the design into a group of connected units, with shapes which swing between geometric, semi-geometric and vegetal-like patterns (Paccard, 1979: 265). Bellamin clarified: *"The designer may enhance the variation in the pattern by giving each unit a distinctive or variable filling, but all accompaniments should be placed in harmony with other components"* (Bellamin, Personal interview May 2006).

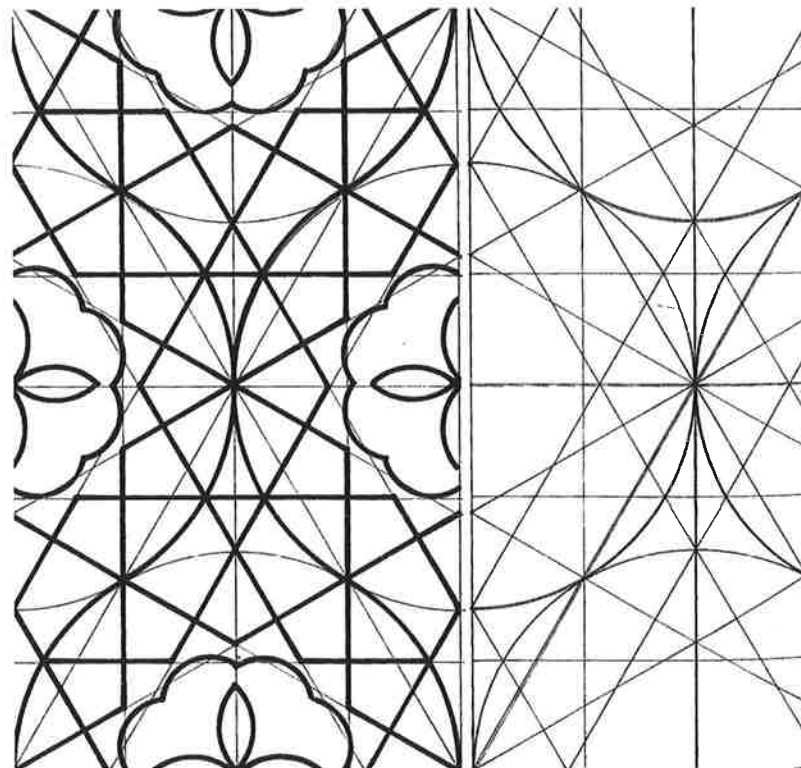


Figure (131) Example of line flexing based on a geometric plan. Illustration by Paccard (1979: 265)

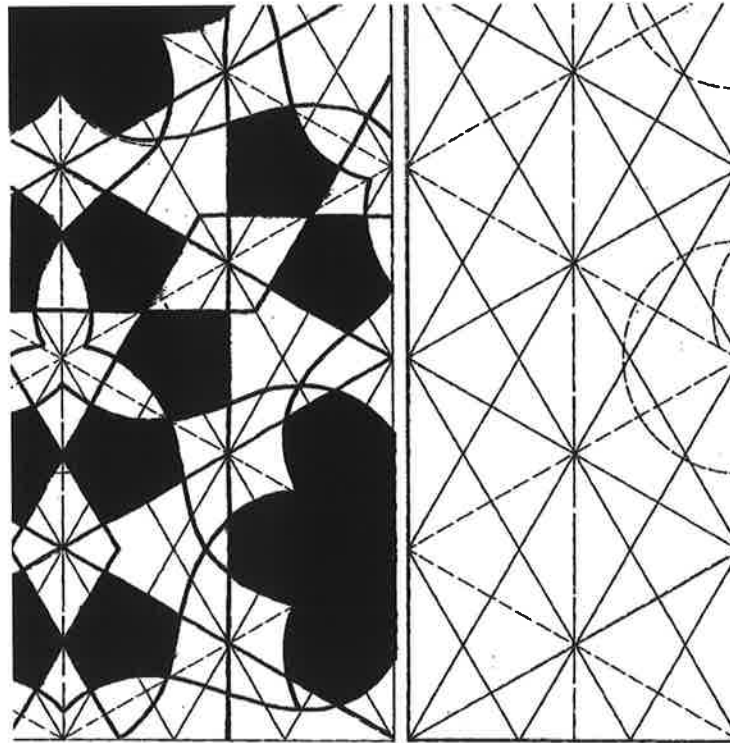


Figure (132) Example on line flexing based on a geometric plan. Illustration by Paccard (1979: 265)

In more complex designs, the linking-lines (lines that connect units with surrounding geometric forms) might be thickened and interlaced, and the cells of all parts might be filled with related and connected elements. Figure (133), a typical example in which all compositional basics have been applied, shows a stucco pattern from the Alhambra in which the primary geometric base has been transformed into a number of repeated units. To realize line continuity, the method of connecting lines has been applied to all elements and each unit has been filled with different interior decorations. The major linking-lines are thickened, overlapped and embellished with tiny ornaments in the foreground of the design while another group of lines runs throughout the structure, acting as a set of secondary linking lines (see Figure (134)). A variety of vegetal ornaments are used, the lines of which are also extended

and connected. Some fill empty spaces in the background and move continuously between cells, and others are linked with the bodies of interior ornaments.

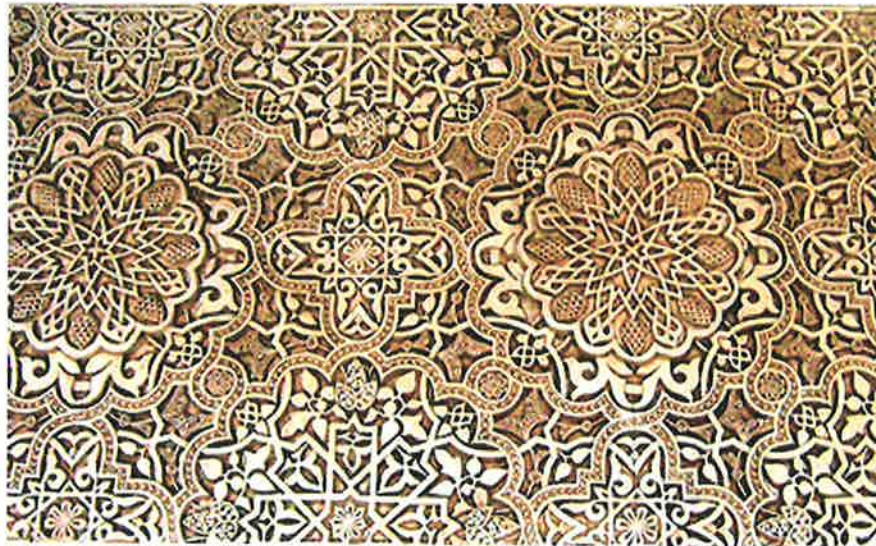


Figure (133) Stucco pattern from the Alhambra. An example of connecting lines in a multi-unit pattern.

Image by the researcher



Figure (134) A close-up of Figure (129) with major linking-lines in the foreground (in red) and secondary linking-lines in the background (in blue)

4-2 Connecting the interior lines of single units

Unlike the previous method, which aims to connect the lines of various units, the focus here is on joining the lines of two or more elements combined inside a single unit. Usually the unit has a geometric frame such as a circle, square or hexagon and the interior structure is not connected with the decoration outside this frame. A new geometric grid is specially created to act as the base for the invented combination. The formulation of the structure and the way lines are shaped, transformed and connected are completely individual innovations for which the designer depends on his skills and experience. As seen in Figure (133), each unit might be filled with different content which adds variation to the design structure.

In simple forms, such as in Figure (135), two elements are connected by extended lines. Here, the lines of an eight-point geometric star, which is central to the composition, are extended and transformed into the stems of vegetal ornamentation. Figure (136) is a remarkable example of line connection as applied to three types of element; lines in the centre start from a simple eight-point star, the edges of which are linked to vegetal ornaments in the middle and end in foliate *Kufic* calligraphy. Units of this kind attract the viewer's attention as they emphasise points in the composition. By placing dissimilar units in certain positions the eye will move and return to these specific areas, following the lines, comparing and evaluating the difference between units.

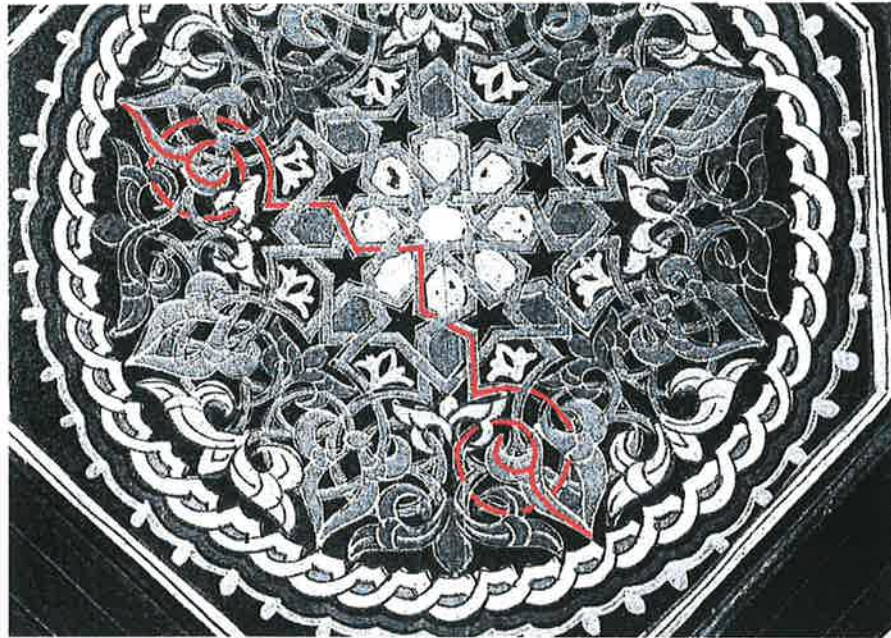


Figure (135) Connecting lines in a single unit; lines of an eight-point star linked with vegetal ornaments. An example line is highlighted in red. Original image from Paccard (1979: 261)



Figure (136) Stucco pattern from Ben Yusuf Madrasa, Marrakech. Example of lines linking three types of element in a single unit; eight-point star, vegetal ornaments and foliate *Kufic* calligraphy. Original image from Castera (1999: 80)

5 Methods of relating lines of different elements

The arrangement of the lines of different elements to interact in specific relation to one another is a visual organization process that depends entirely on the designer's creativity and practical knowledge. However, three forms of line relation can be observed in all Moroccan designs; contrast, similarity and proximity. Usually, Moroccan designers use the term '*rabt*' to define the different forms of line relationship, and the term '*mukhalaffa*', which means distinction in Arabic, to refer to contrast between design components. In practice, they might be used separately or together to organize and create order in line and shape formation. In many crafts, colour plays a part in achieving these goals but in single-coloured and natural-colour works (such as carved plaster, stone and woodwork) the design depends completely on line and shape management for the creation of order.

Based on the nature of their lines, all design elements can be divided into two main families; 1) soft and curved lines, such as vegetal ornamentation and cursive calligraphy, and 2) angular lines, including *Kufic* scripts and geometric decorations. In the early stages of planning, the designer controls the relationships within the presented material by selecting the appropriate elements for the composition and the type of change and manipulation to be applied to the standard forms.

5-1 Contrast

The purpose of contrast in design is to create maximum visibility. To achieve a visual conflict, two elements that have different line forms (from the 'soft' and 'angular' families) are combined to realize a degree of opposition. The more contrast there is the more obvious the elements are. The designer, based on his viewpoint, decides on the amount of contrast needed, chooses the appropriate components and organizes the relationship between size, placement, colour and texture of the elements. The right amount of contrast engages the viewer and guides his/her eye around the decorated surface to compare various components of the work.

Figure (137) is a typical example of line contrast; a repeated unit of symmetric *Kufic* script is executed with flat, smooth lines joined in the background with deeply carved, rough twilled leaves. This type of relationship can be seen in many calligraphic panels which are combined with a background of vegetal decoration. The degree of contrast may vary from one work to another.



Figure (137) Carved wooden lintel at the Marinid Madrasa-Sale. A symmetrically repeated word, 'Mohammed', in *Kufic* script, joined and in contrast with detailed vegetal ornaments. Image from Castera (1999: 29)

5-2 Similarity

Similarity is another common concept which governs the process of relating different design components. Similarity creates a visual relationship between dissimilar elements and unifies them into organized groups which realize unity, consistency and harmony in composition. Similarity is achieved in Moroccan design by mimicking the lines and shapes of combined elements, or part of their structure, to give them a unifying thickness, texture, direction, or rhythm.

The designs at the Alhambra are classic examples of relating design elements through contrast and similarity relationships. The plaster work shown in Figure (138), from the Hall of the Two Sisters, is a sophisticated masterpiece of Moroccan art. It is composed of two contrasting groups: first, flat, smooth lines of *Kufic* script and similarly treated vegetal leaves, and secondly a group of leaves with exceptionally detailed interior decoration. At the same time, elements of each group correspond to one another because of their similarity. The vertical lines of the *Kufic* script are extended and at the edges join with leaves that have similar shapes to the surrounding vegetal ornaments (see Figure (139)).

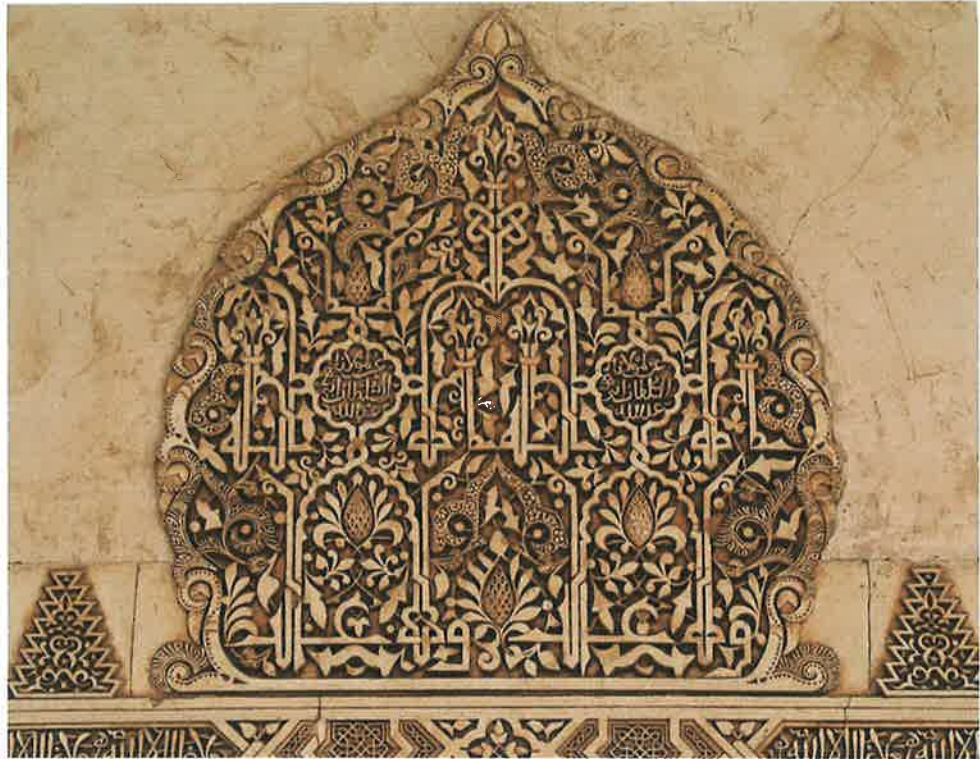


Figure (138) Plaster work from the Hall of the Two Sisters, the Alhambra. An example of dividing design elements into two contrasting groups. Image by the researcher



Figure (139) A close-up of Figure (134) showing the similarity in shape and texture between script edges (in red circles) and surrounding vegetal ornaments

In inventive applications, similarity and contrast are used together to promote variation and create dissimilar visual experiences within the design structure. The stucco work from the Saadian Tombs, Marrakech, is a good example (see Figure (140)). It consists of two parallel strips of calligraphic decoration, one showing similarity with its background, the other showing a contrast. Each composition, however, also uses the opposite method in its structure. The *Thuluth* script in the upper strip with its background of plain and overlapped scroll vegetal ornaments has a similar edge shape and thickness but varies in line direction which increases the level of cohesiveness and complexity of the lines. In the lower strip, the *Kufic* script and the vegetal ornamentation are of the same thickness but leaves only ornate with tiny detailed items while the characters remain plain which promoted the level of contrast.

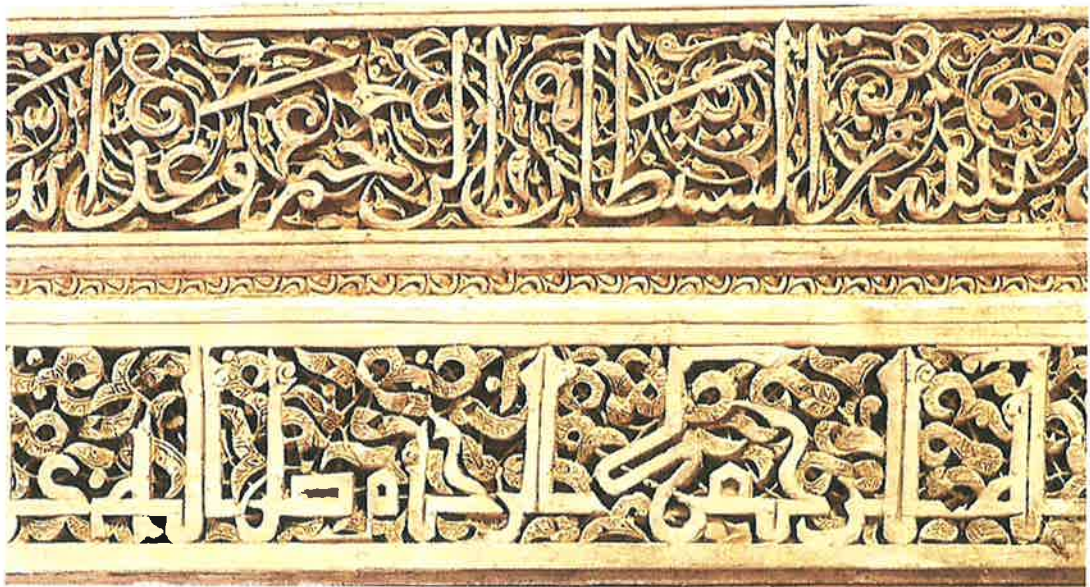


Figure (140) Two parallel stucco strips from the Saadian Tombs, Marrakech. Top, *Thuluth* script joined with plain and interlaced scroll vegetal ornamentation. Bottom, *Kufic* script joined with inner detailed vegetal ornamentation. Image from Castera (1999: 30)

5-3 Proximity

When two elements are combined in a contrasting relationship a third element might be used as a relating device which has features of both. This in-between element serves to bind together the various parts and adds variety and closeness to the design structure. Good examples of this method can be seen in calligraphic-vegetal compositions. The third element, which is usually a leaf shape, sits in mid location between the foreground script and the vegetal decoration in the background (see Figures (141) and (142)). This method may be used at different levels and combined with other techniques (similarity and contrast) within a single pattern, such as that in Figure (143). Here, the intermediate leaf has been partially designed to include features of both contrasting groups (detailed and plain).



Figure (141) A carved plaster lintel at the Bouinania Madrasa, Meknes. A stylized *Thuluth* script joined with similar leaf shapes (in red circles), which sits in mid location between the forefront script and the vegetal decoration in the background. Image from Castera (1999: 29)

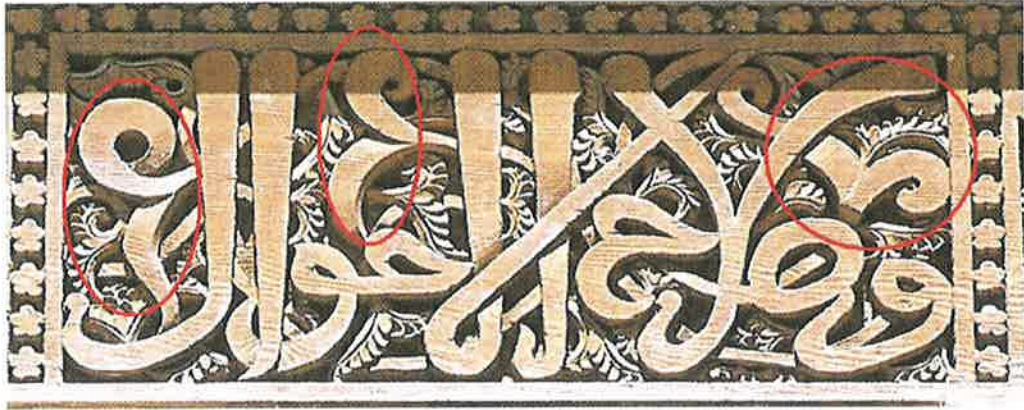


Figure (142) Carved wooden lintel at the Marinid Madrasa, Sale. *Thuluth* script joined with similar leaf shapes (in red circles) and detailed vegetal decoration in the background. Image from Castera (1999: 29)



Figure (143) A close-up of Figure (134). Intermediate leafs (in the red circles) which are partly designed to include features of both contrasting groups (detailed and not-detailed). Image by the researcher

6 PMMD as an underlying concept in Moroccan design

Considering all the methods and techniques reviewed above with regard to the management of design structure and the various ways of forming and combining elements, it is clear that PMMD plays a fundamental role throughout the design process as an underlying concept which directs all compositional procedures. Not only does it provide the designer with effective and efficient ways of organizing the exhibited materials, but it serves as a guideline for the enhancement of the aesthetic and visual language.

Unity is an attribute of good design and the final target of all methods and procedures adopted during the design process. When looking at Moroccan designs, the viewer's first impression is of the coherence of the whole; the sense that all of the parts are working together. Kammal Bellamin describes the relationship between the PMMD and other design principles as a "*mutually dynamic association*" in which all aesthetic qualities work on creating a unified and correlated visual effect (Bellamin, Personal interview 2006). This is granted when all design components are constructed in harmony, and gives the viewer a fulfilling sense of relationship, cohesiveness, and belonging. Basically, unity is achieved when the design principles (balance, harmony, movement, emphasis, proportion, variation, repetition and rhythm) have been properly applied. According to Bellamin, the management of lines is key to accurately realizing all these principles and raising the level of unity in

design structure. The following section looks into the role of PMMD in enhancing the main principles and qualities of design.

6-1 Balance and symmetry

Both balance and symmetry apply to the organization of parts around a dividing axis. While symmetry is achieved by repeating similar elements (mirror-reflection; see Figure (144)), balance is achieved through visual judgment and comparative observation of the organization of the relationship between dissimilar parts. As each part of the design suggests a certain visual weight - a degree of lightness or heaviness - visual balance is achieved when the weights of all individual parts are in equilibrium and organized in the composition.

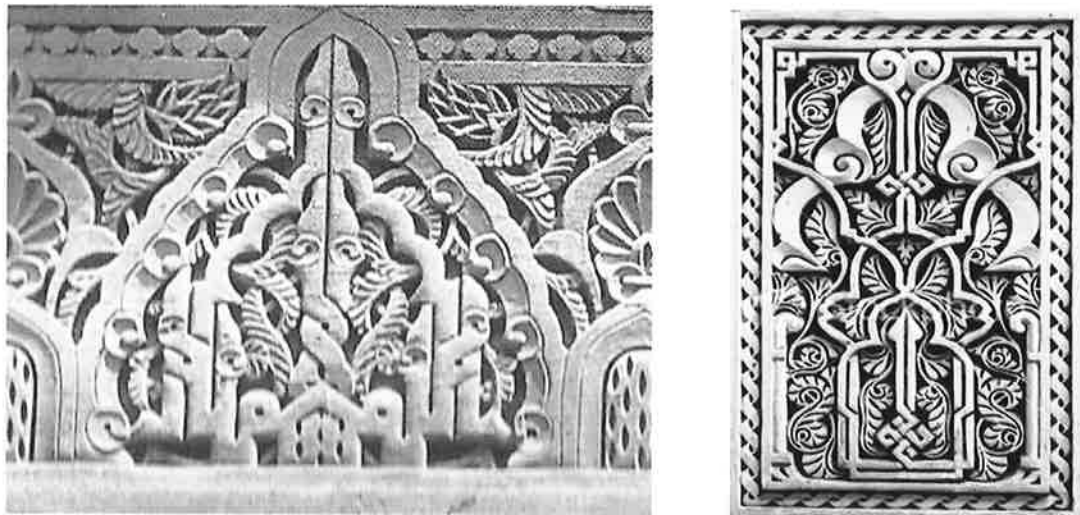


Figure (144) Two stucco patterns from Ben Yusuf Madrasa, Marrakech. Typical example of mirror-reflection symmetry. Images by the researcher.

According to Bellamin, perfection in Moroccan design depends entirely on the arrangement of lines to manage the visual balance between different parts of a design as each decorative form has a specific weight that can be raised or lowered. For example, a simple vegetal decoration appears lighter in weight than a multi-layered one, whilst interlacing and characters, and areas of repeated units seem to weigh visually less than areas that include dissimilar individual structures. Therefore, the management of size, thickness, and direction of lines is a key factor in controlling the visual weight of patterns and is a method of balancing the different weights within a design (Bellamin, Personal interview 2006).

Bellamin confirms that formal symmetry was commonly used as a method to realize balance and stability in design structure. However, many sophisticated works display creative and invented applications of anti-symmetry where, unlike with mirror-symmetry, the divided parts are filled with dissimilar fillings that have equal visual weight. This kind of line management is achieved through the appropriate sizing and formation of lines and shapes in each section.

Figure (145) is a good example of anti-symmetric proportion; the visual weights on the two sides of the dividing axis are equally distributed and managed by filling analogous parts with different patterns (see parts numbered 1 and 2, 3 and 4, 5 and 6, 7 and 8 in the figure). In this type of composition the viewer's eye moves from one part to its counterpart to compare and discover the similarities and differences between them.

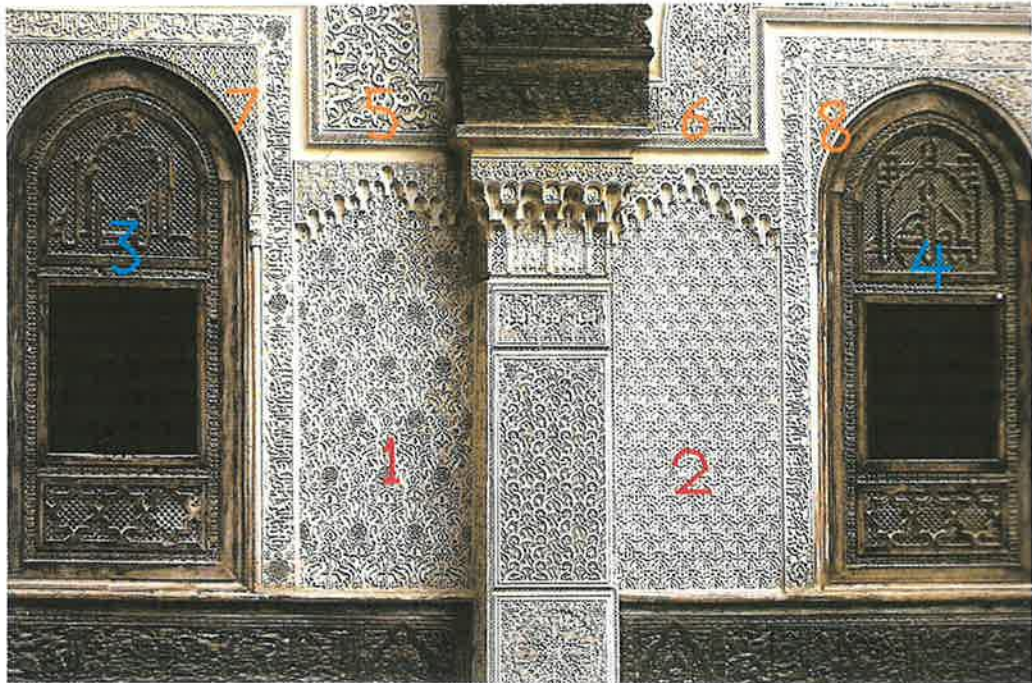


Figure (145) plaster and wood works from Ali bin Yusuf Madrasa, Marrakech. An example of anti-symmetric organization. Image by the researcher

6-2 Proportion

According to Bellamin: *"Proportion refers to the harmonization and achievement of agreeable visual relationships between parts, size and weight within the whole"* (Bellamin, Personal interview 2006). Although all proportions in Moroccan design are determined by geometric necessities, designers use line management to perfect the proportionality relationships between different sections. Size, thickness and line direction, and their distribution are the main elements in controlling comparative relationships, and are the way to render accurately the relative importance of the constituent parts. Figure (146) is a good example.



Figure (146) Plaster work from the Hall of the Two Sisters, the Alhambra. Image by the researcher

Varying size, thickness and line direction in order to realize multiplicity creates instability which generates a kind of visual movement. For example, when organizing elements in changeable size, thickness or direction, this change captures the viewer's attention and leads his/her eye to move and to follow the way the lines and shapes become smaller or larger, thicker or thinner.

6-3 Repetition and rhythm

Repetition is a way to tie various areas of the design together in order to achieve unity. Repetition develops an interior consistency and a sense of order that creates a visual rhythm. Units may be repeated regularly or irregularly, in a specific order or even in various parts of the composition. As geometry and symmetry are the main

tools for constructing all types of repeated units, the resulting rhythm of such patterns is steady and periodic and creates a predictable type of movement. Figure (147) is a good example. However, to avoid monotony and break the steadiness and regularity of repetition, designers use line management to vary the rhythm of design structure. This is done by reducing the amount of exact duplication and using similarity or contrast to create breaking points in the repetition of units, and therefore in the visual rhythm.

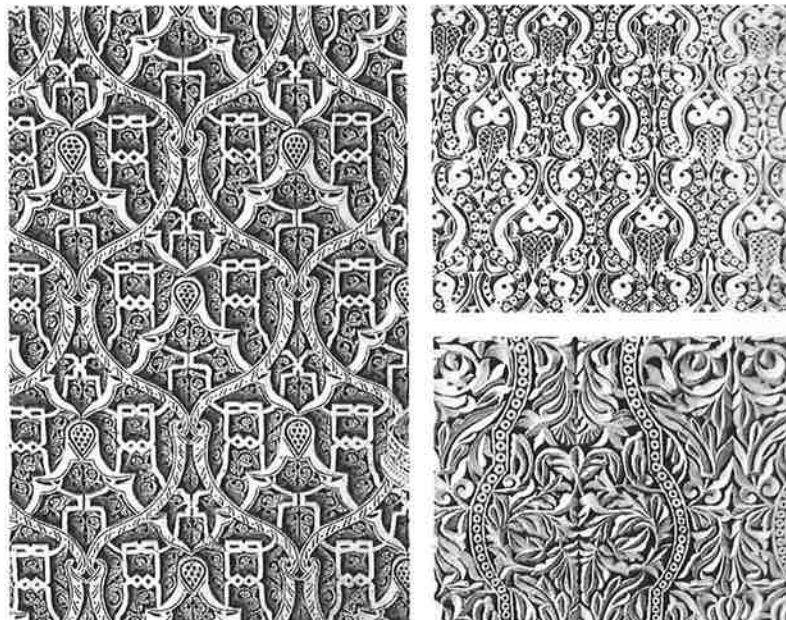


Figure (147) Plaster works from the Alhambra. Examples of the repetition of a single pattern. Images by Castera (1999: 51)

The repetition of a unit might be slightly changed with each alteration in size or inner content by manipulating the length, weight, or direction of lines to produce a harmonious transformation in the rhythm. Alternatively, a repeated pattern may be interrupted by an entirely new unit consisting of a different structure of lines which

generate a visual stoppage or a more interesting point in the eye's movement through the design. As calligraphic panels suggest irregular forms of rhythm, they were effectively used to vary the regular repetition of vegetal and geometric ornaments. This way of altering the repetition of elements produces various types of rhythm that render different parts of the composition equally interesting; the viewer, recognizing that there are similarities and differences between each form of repetition, seeks to discover more about the way the elements are constructed. This differs from single-order repetition where, once they identify the rhythm, the viewer is satisfied and understands the whole.

6-4 Variety and avoiding monotony

One of the main characteristics of Moroccan design is the multiplicity of presented elements in ornamentation. Creating differences and avoiding boredom and monotony in a composition appear to be common concepts which are used to keep the decorated surface visually interesting. Designers utilized the wealth of their ornamental culture by varying the forms of elements to enrich the content of their patterns. A single panel, such as in Figure (148), may include varied styles of calligraphy and/or dissimilar compositions or types of vegetal and geometric ornaments. Although size, texture, and colour contribute to the variation process, line management is central to organizing the relationship between the various components.

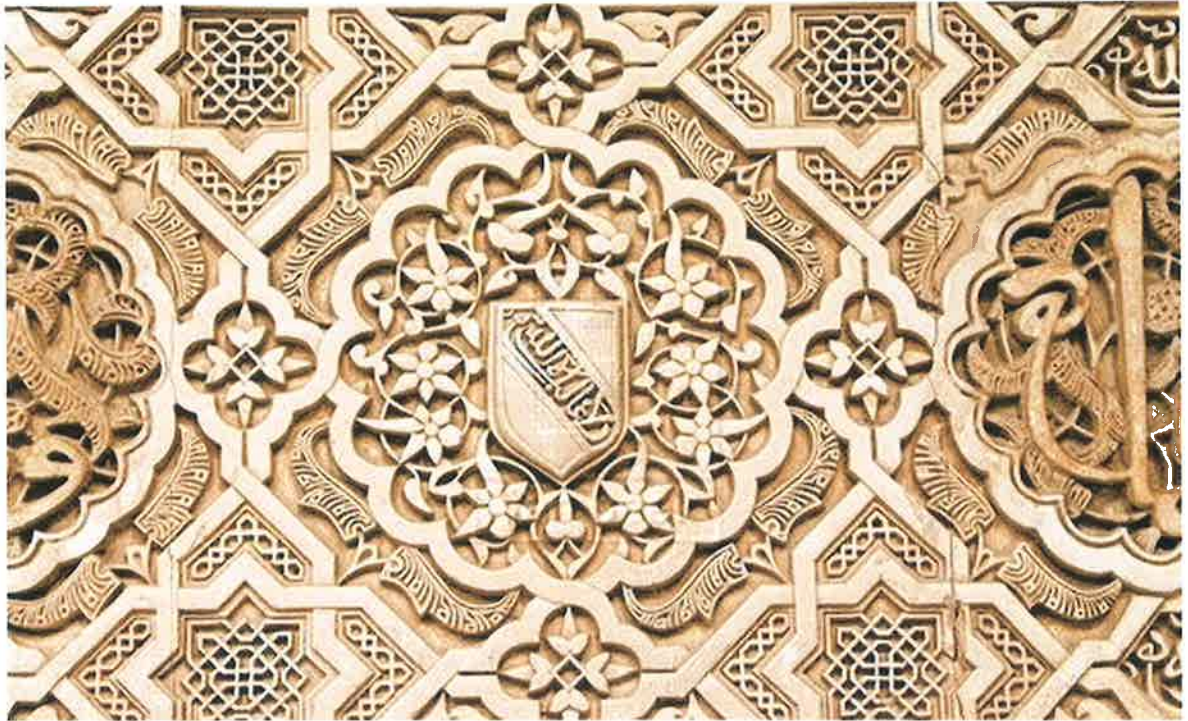


Figure (148) Plaster work from the Alhambra. An example of variation in a single panel. Image by the researcher

As the main aim of variety is to present dissimilar visual experiences, varied elements are selected to realize this task, but their lines and shapes need to be manipulated to harmonize with the design structure. In good applications of variety, such as the example shown in Figure (149), every repeated shape has a distinguishing type of visual interaction and draws the viewer's attention because of its unfamiliar elements, nevertheless the whole structure is unified by interrelating the lines and shapes in groups of similar thickness, size and texture.

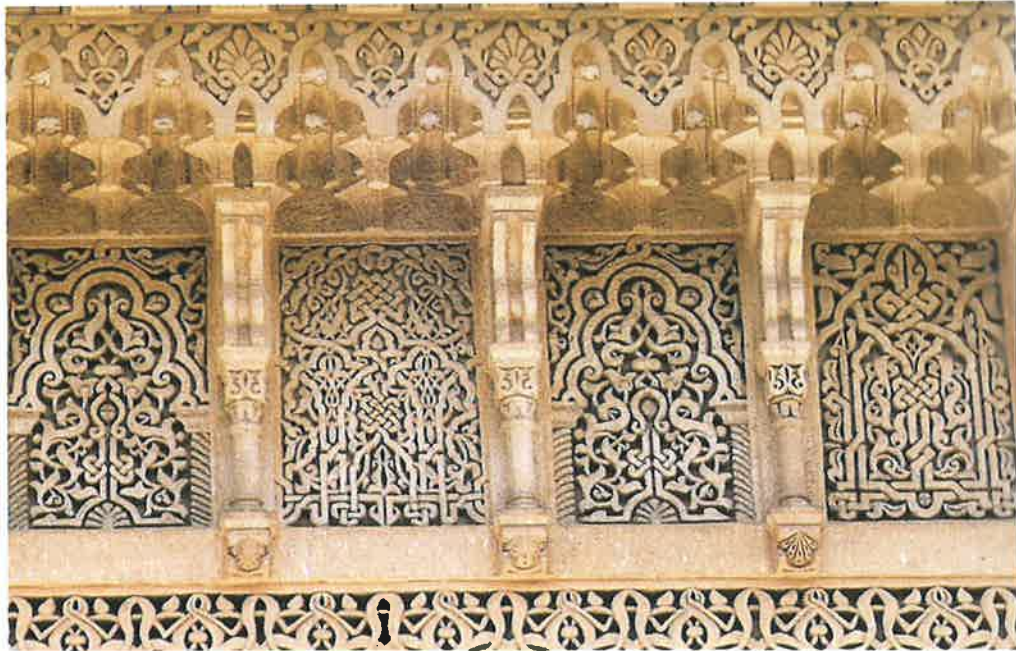


Figure (149) Carved stone from Muhammad V Mausoleum, Rabat. Image by the researcher.

6-5 Emphasis

Emphasis in design can be described as the point of focus or the location that draws most attention. According to Bellamin: *"In a typical Moroccan design there is a primary point of emphasis, with secondary and perhaps tertiary emphasis in other parts of the composition. The primary point is the first thing that attracts the viewer and the start point of his/her visual interaction. When there is more than one emphasis point, each serves as a break in the rhythm or as an interruption to the viewer's eye movement"* (Bellamin, Personal interview 2006). Emphasis areas are the most important points in a design, where the designer focuses to show off his/her best skills and talent through the accurate presentation and visual weight of the selected element. Emphasis can be achieved in several ways: centred elements

attract attention more than those at the edges; contrast may make some forms more visible than other components; repetition creates emphasis by calling attention to the repeated shape; framing may emphasize a form; complexity engages the viewer for longer interaction; or the designer may join two or more of these methods together. Figure (150) is a typical example of centring the primary point of emphasis (in red), with secondary points (in blue) that represent less visual attraction than the primary point, but more than the background patterns.



Figure (150) Plaster work from the Alhambra. An example of the organizing of emphasis points.

Images by the researcher

However, balancing the relationship between emphasis points and other parts of the design is an essential process that depends entirely on the organization of lines. The element chosen for the emphasis point should not be isolated in the composition or

take all the attention, but should interact and work in a unifying harmony with all other surrounding elements. Good relationships are achieved through line management using contrast, similarity and proximity. A good example, organizing the relation between emphasis points through the management of lines, is the carved stone at the Muhammad V Mausoleum in Rabat (Figure (151)): all lines of the composition are harmonised by unifying the breadth and the size of empty-spaces between them.

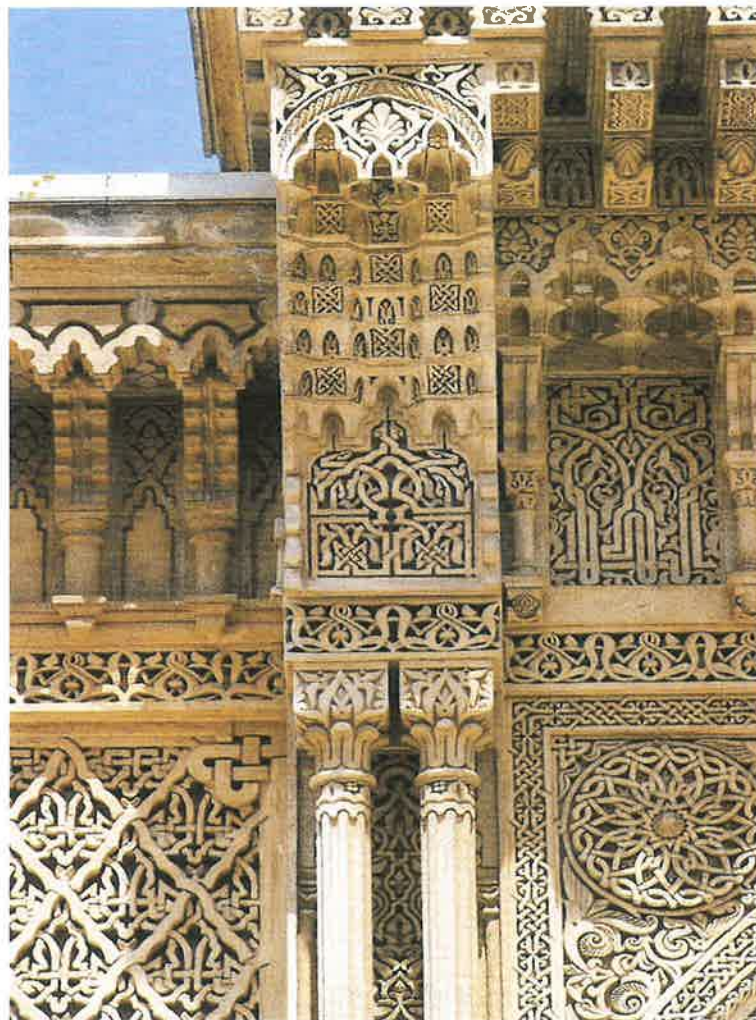


Figure (151) Carved stone from Muhammad V Mausoleum, Rabat. Image by the researcher.

Chapter 8 - Artworks of the study

1 Introduction

In this chapter I shall attempt to clarify how I employed the traditional compositional concepts of PMMD in my artistic practice. I will interpret the connections between my artworks and the explored techniques, explaining the methods and procedures I have adopted to utilize, change and transform the traditional forms.

In my artistic practice, I have worked on developing a dynamic visual language based on lines and shape relations, aiming to present beautiful, explicable and interesting compositions that interact with the viewer and at the same time are capable of expressing my thoughts and ideas. My purpose was to create works that speak the same aesthetic language as Moroccan designs but without relying on traditional forms as the only source of inspiration. My interpretations focus on explaining the compositional and technical methods I have used. Intellectual ideas and emotional, moral and cultural meanings which are personal to me and are reflected in the compositions are not discussed.

The featured artworks range from those which obviously include traditional elements, such as a specific script or pattern, to independent abstraction in which familiar characteristics of Moroccan art are no longer recognizable. In the abstraction group I decided to use the methods of line management without recourse to the

traditional elements. My intention was to focus on the concepts of construction, the relationship of elements within the artwork space, and the viewer's perception and interaction with varied compositions. However, the development of thoughts and the formulation of each artwork are explicated, and the resulting spatial relationships of each composition are discussed.

My artworks are not realized through one specific order or formula. Each work is the result of re-casting my previous experiences, technical abilities, personal judgment and the explored methods. Every work starts when I have an idea to express or an objective in mind. Selecting and adapting sources of inspiration and tackling the components in my imagination are both vital parts of the early stages of my work process. If these are omitted, the result is unstudied or uninteresting work. The idea should be evaluated in the light of previous works, of what new composition it presents, and of how the elements are adapted differently. This is the first step in the invention of each of my artworks, and creativity resides in the process of execution through selecting the appropriate elements and ways of adapting them.

2 Practice guiding themes

Although the artworks vary in their implementation of traditional elements and are executed in different materials, they can be grouped according to certain conceptual themes which I have used as guidelines throughout my practice. Listed below are

the principles which have guided my work when dealing with traditional elements in general, and methods of PMMD in particular;

1. Centring the attention on utilizing the beauty and elegance of Arabic scripts by abstracting them from their legible meanings and rules of proportion. This has been achieved by composing them in new and invented modules based on the relation of lines and shapes.
2. Librating vegetal and geometric ornaments from mathematical and symmetrical methods of organization by changing and replacing these strict systems with new and more liberated ways of construction.
3. Making use of specific types of visual movement or compositional achievements, which have appeared in distinctive masterworks, in the creation of new applications.
4. Creating works with familiar or natural elements and bestowing on the traditional forms a realistic treatment of light and shade.
5. Developing new forms of group movement through traditional methods of relating lines: 1) a major element with a background; 2) static and dynamic elements; and 3) dissimilar elements.
6. Using the traditional concepts of: 1) line continuity; 2) line interlacing; and 3) line relationships, in enhancing the harmony and unity in artwork construction.
7. Investing the methods of creating and shaping sub-elements in the origination of new shapes that consist of similar active inner-energy.

3 Artwork (1), *The white composition*



Figure (152) Artwork (1), *The white composition*, 100 x 115 cm, oil on canvas, 2007

In essence, this painting was inspired by the wonderful plaster works which are to be found in Morocco. These objects are simple in their construction and use of material yet they appear amazingly complex and attractive, motivating the viewer to scrutinize and explore their sophisticated beauty. I attempted to simulate the cohesiveness that results from varying tones of white which are a product of different depths of carving and the effects of age. To achieve unity, in addition to the use of white tones, I have standardized the thickness of the lines that cross all parts of the painting, together with variations in direction and carving.

In this work I have used the original aspects of multi-layered calligraphy, with its complex and overlapping lines, by using the ornamental *Thuluth* script. The structure is based on a primary grid of a repeated geometric pattern (a pentagonal base), which can be transformed to several geometric and semi-geometric star/rosette shapes. In addition, I have used a number of traditional composition concepts such as line continuity, formal interlacing of geometric patterns, variation in repeated patterns, and methods of line relationship and connection. However, each of these methods were developed and changed to comply with the different requirements within the painting structure.

Figure (153) is arranged such that Section A is the first part viewed; letters were constructed randomly with variations in size and thickness, and overlapped into multi-level shapes that move from clear and observable forms to escape into the darker depths. The letters are slightly twisted and, with light and shade, they simulate a three-dimensional scene. The complexity of the lines and the contrast of the colours create a high level of visibility that gives this section a heavier visual weight than other parts of the painting.



Figure (153) Close-up of Artwork (1), Section A

In order to balance the visual weights, I have placed a semi-geometric rosette on the right-hand side of the painting (Section B). Its colour value is equal to that of Section A but it differs in its ordered and organized structure (Figure (155)). As a result, Section B is the second point of emphasis as it has less visual weight than Section A, but is heavier than other parts of the painting. Based on this, the viewer's eye movement can be expected to begin in Section A and move to Section B. From there it may take any direction as the rest of the painting is of equivalent weight. This is outlined in Figure (154).



Figure (154) The visual movement from Section A to Section B

In the rosette, which is one of three different pentagonal forms used in the painting, I attempt to reduce the amount of repetition and change the rhythm of interlacing by breaking the prevailing pattern of overlapping lines. As explained in Figure (155), this is achieved by keeping a chosen line in the background, not interlacing it over any other line, and by maintaining another line in the foreground, uncovered by any other line. The geometric characteristics of the other two star-shapes have been expunged by obliterating and reforming their lines. As a result, each of the three shapes produce a dissimilar visual experience which efficiently engages the viewer, encouraging them to look more closely and to compare these forms with each other and/or with their original features. See Figure (156).

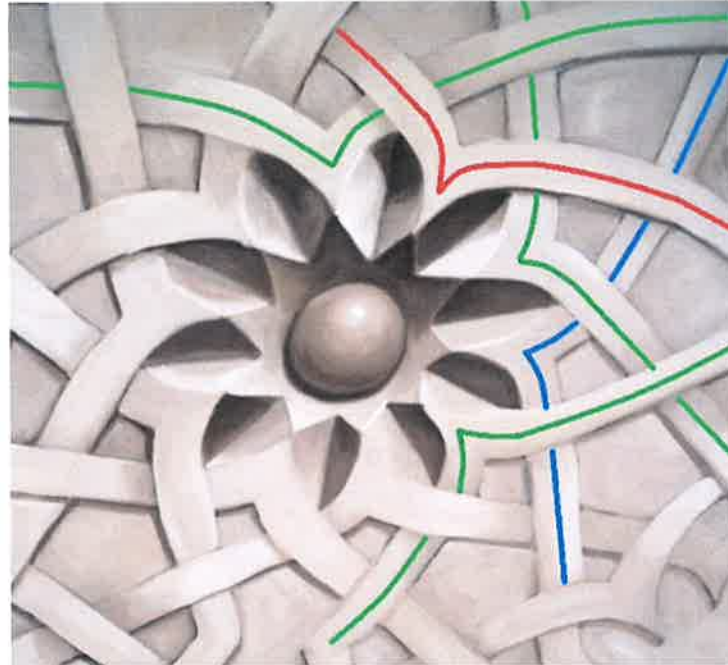


Figure (155) Breaking the regulation of overlapping lines. The usual interlacing is highlighted in green while the red marking identifies a line which sits above the design and the blue line shows one which remains below



Figure (156) Two pentagonal forms, each manipulated in a different way

The final result of this composition is a unified and related structure whose colours, shapes and lines work in harmony, yet it consists of various types of line movement. The painting is organized to suggest a visual experience which is planned to

consider the viewer's engagement with each part of the structure and the way his/her eye moves and interacts with the composition. The complexity of the lines in Section A is the first part to catch the viewer's attention, as it consists of layers of various overlapping letters which are unsystematically interlaced, with great variation in colour tones, line thickness and direction.

Then the eye is attracted to the second area which has similar colour tones to Section A, but an uncomplicated line structure; its geometric organization can easily be understood. The other parts of the painting are coloured in lighter tones and consist of different forms which all originate from one strip. However, the strip is extended to run throughout the structure, to interlace in various ways, and to create, in two specific positions, unobtrusive geometric stars. This treatment has developed this area in contrast to Sections A and B.

4 Artwork (2), *The three lines*

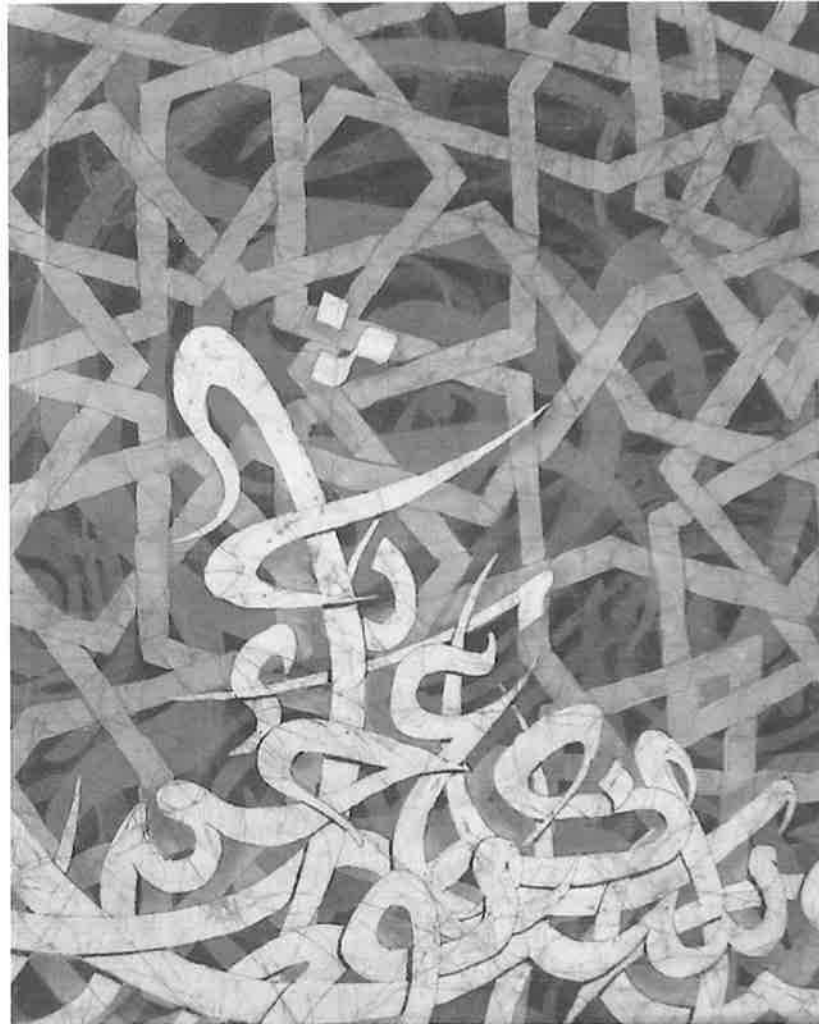


Figure (157) Artwork (2), *The three lines*, 90 x 70 cm, batik on cotton fabric, 2007

In this painting I have worked on setting calligraphic patterns directly onto a geometric decorative background. This combination is rarely seen in traditional Islamic art; calligraphy is usually joined with a background of vegetal ornaments which are placed after the inscription is complete. I have attempted to create such compositions in many previous works, one of which, shown in Figure (158), is

achieved by combining *Taliq* script with a ten-point star pattern. Although this type of structure may look classical, especially when the calligraphic panel has a legible meaning, the process is, in essence, a marriage between two dissimilar types of line; one which I have tried to explore again in a more abstract way.



Figure (158) *Is not Allah sufficient for his worshipper?*, 70 x 90cm, batik on cotton fabric, 2003

The composition consists of three elements: 1) an assemblage of abstracted and overlapping ornamental *Thuluth* letters, placed in the lower part of the painting; 2) a geometric lattice which covers the whole painting and contains an off-centre ten-point star pattern; and 3) scroll shaped vegetal ornaments which are situated deep in the background. Here again I used the cohesiveness of single colour (brownish grey) which appears in light hue in the foreground letters and gradually darkens as the elements move further away; similar to the natural colour-escape at nightfall.

This technique is used to produce a familiar colour change to which the viewer can easily relate.

The interlaced *Thuluth* letters with their light tone are the most attractive part of the painting and will hold the viewer's eye in this area (Section A in Figure (159)) before it moves to the second emphasis point which is the star pattern (Section B). This in turn is supported by the vertical *Alif* letter which serves as an arrow aimed at the centre of the star. Then the viewer can be expected to move on to look through the geometric screen to discover the continuous rotation of lines in the deep dark background.

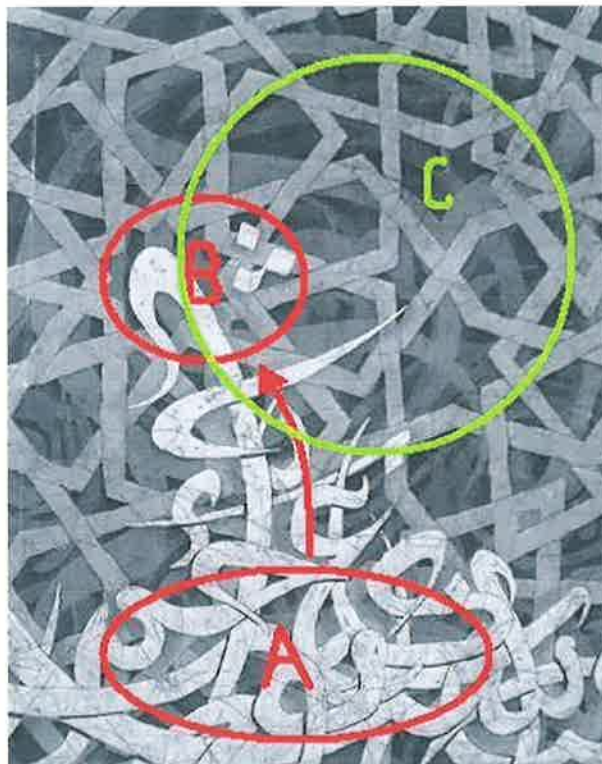


Figure (159) The route of visual movement in Artwork (2), starting from Section A, then to Section B, and finally to Section C

Three types of line movement combine in this painting to achieve multiplicity in visual interaction. The letters are manipulated to suggest a unified and related group of pliable shapes with edges tipped and curved to smoothly start or end the eye's movement. The interlacing of the calligraphic part has resulted in clear, rounded and uncomplicated lines (compared with my other works), which contrast with the sharp edges of the geometric background. The rotational motion of the lines in the deepest setting realizes a third kind of movement, which differs from both of those at the front of the work, by suggesting circular routes for the viewer's eye to follow.

5 Artwork (3), *The 14th night*



Figure (160) Artwork (3), *The 14th night*, 100 x 130 cm, batik on cotton fabric, 2006

In this work I have used the same approach to shaping and interlacing *Thuluth* letters as in the two previous works but have also related their shapes to the background. The main theme was inspired by the traditional method of linking the scroll lines of vegetal ornaments in the background to a central calligraphic pattern. Usually, the vegetal ornaments are shaped after the creation of the script, the structure of which is subject to strict rules of calligraphy. In other words, only the lines of the background are manipulated and changed to produce the relationship. However, in the creative works studied earlier in this research, Moroccan designers have partly liberated their calligraphic practice from standard regulations, shaping their text in relation to other components.

In this painting I attempt to utilize the flexibility of ornamental *Thuluth* together with the aesthetic values of line relations that are achieved in creative Moroccan patterns. The calligraphic composition is centred in the painting so that the letter placement complies with both the centralization of scripts and the interaction with the background. Some letter edges are tipped and manipulated to allow smooth continuity of eye movement from one shape end to another. A group of abstract strokes that differ in size, thickness, direction and colour tones was placed in the background to suggest a unifying movement toward the centre. This was combined with interlacing of the strokes in varied ways to give a sense of depth. See Figure (161).

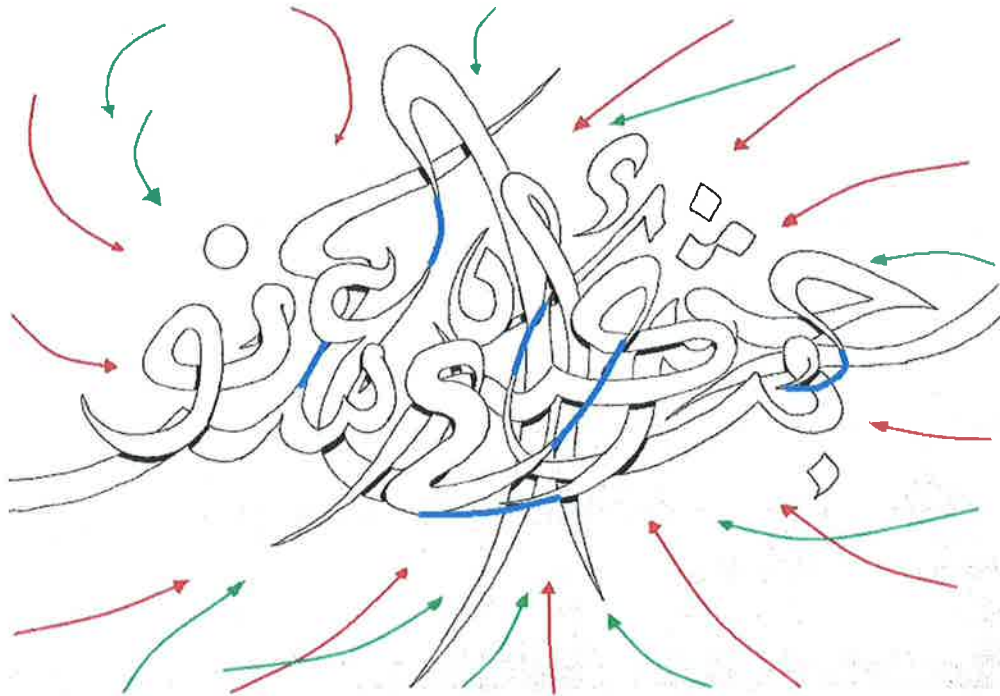


Figure (161) The relationships between lines in Artwork (3). Manipulated and connected letter edges in blue, elementary background strokes in red and secondary strokes in green

A rounded dark area in the upper left-hand corner of the painting is kept empty, except for a single deep stroke, which breaks the repetitiveness and a light dot in the centre which creates a secondary emphasis point. The strokes in each section are situated to contribute to the general drift towards the centre and to conform to the shapes of nearby letters. The strokes might be in parallel with the letter lines, or continue their direction, or might even move in opposition to some lines which are not aiming towards the centre.

6 Artwork (4), *The Dark Thursday*



Figure (162) Artwork (4), *The Dark Thursday*, 370 x 170 cm, two pieces, oil on canvas, 2006

In this work I have attempted to create an atmosphere of complex and active motion which originates from the movement of two groups of lines and shapes. The methods of grouping lines and shapes explored in this research offer varied types of grouping relations. The idea was developed from a previous gouache-colour sketch (Figure (163)) in which I tried to reverse the usual way of displaying vegetal ornaments, as a secondary element, by locating them in the foreground. My aim was to give more importance to such shapes and to show the beautiful and active structure they might produce. The vegetal form was very inspiring as its dynamic structure can be developed into several artistic applications, one of which can be achieved by decomposing it into a group of abstract shapes; that is, a group of

individual shapes where each has its own characteristics whilst taking part in a general theme.



Figure (163) Gouache-colour sketch, untitled, 30 x 45 cm, 1998

In artwork (4) I have used letters from the formal Moroccan *Thuluth*, set in the foreground of the upper left-hand corner, lines of which are slightly thicker than the Eastern style. They twist, connect and interlace in a three dimensional way to display the beauty of their plastic structure. A group of abstracted strip-shaped forms runs through the painting from the right-hand side, leading the viewer towards the letters. Each creates a different amount of energy due to its size, length, curvature and direction; for example, the strips of the lower right-hand side appear to be quicker because they are thin whilst on the lower left-hand side they appear slow and heavy. The background resembles a seascape with shapes like waves and clouds which simulate windy weather conditions. The use of a recognizable, natural

view contributes to the 'activeness' of the composition, since it presents a situation with which the viewer is familiar.

The painting is executed in different tones of Moorish-red mixed with black, giving the letters a purer hue than other components. Yet at the same time the shapes, especially around the calligraphic section, are treated in such a way as to afford detailed and realistic light, shade and reflective effects. This process enhanced the distinction between the overlapping forms and created an active and dynamic three dimensional space in which the visual movement can be easily observed and understood. See the close-up in Figure (164).



Figure (164) Artwork (4), Close-up of lower left-hand corner showing the twisted movement of the strips, with light effects, creating a 3D sense

The outcome of the methods applied is a dynamic structure that consists of two integrated groups, each with a unified type of movement. The strip shapes represent various individual activities; however as a group they all unite to suggest a single and continuous direction towards the area in which they clash and interact with the lines of the calligraphic forms. The letters are shaped and interconnected to form a body of unified lines that interlace smoothly suggesting a movement that is diffuse in all directions. The appropriate and harmonious organization between the two groups of lines, together with the realistic effects in the natural background, produce a lively panoramic scene that presents an outstanding aesthetic experience. See Figure (165).

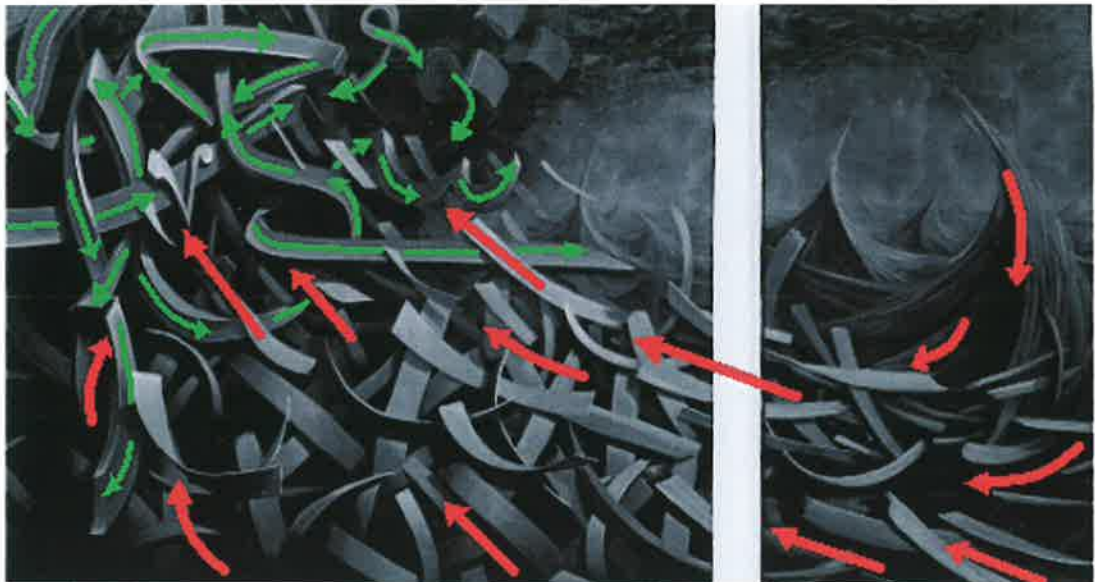


Figure (165) The visual movement of the two groups in Artwork (4)

7 Artwork (5), *Kufic Composition*

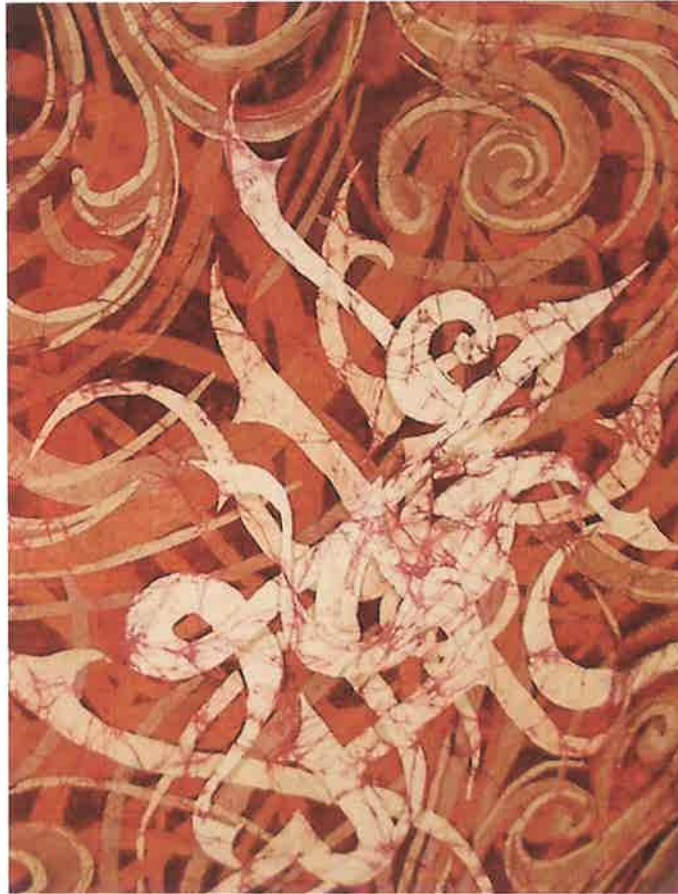


Figure (166) Artwork (5), *Kufic Composition*, 120 x 90 cm, batik on cotton fabric, 2006

The key theme of this work was inspired by the traditional methods of relating lines and shapes of dissimilar elements. These approaches, which are creatively used by Moroccan designers to realize the highest levels of harmony and unity in design structure, offer efficient and effective means of line organization. Although similarity, contrast, and proximity are the main factors when relating dissimilar elements, they may also be joined according to different formulae for linking shapes, direction, size and thickness.

In this work I explored the use of these combined methods to create a unified and cohesive composition consisting of calligraphic structure and a background of abstract strokes. First I created a structure of *Kufic* script, the lines of which were heavily overlapping and interlaced at the centre. I shaped the letters in such a way as to suggest outward movement by giving the edges an extended tip. As explained in Figure (167), the edges of each letter are drawn to suggest a direction and serve as a guideline for the construction of background shapes.

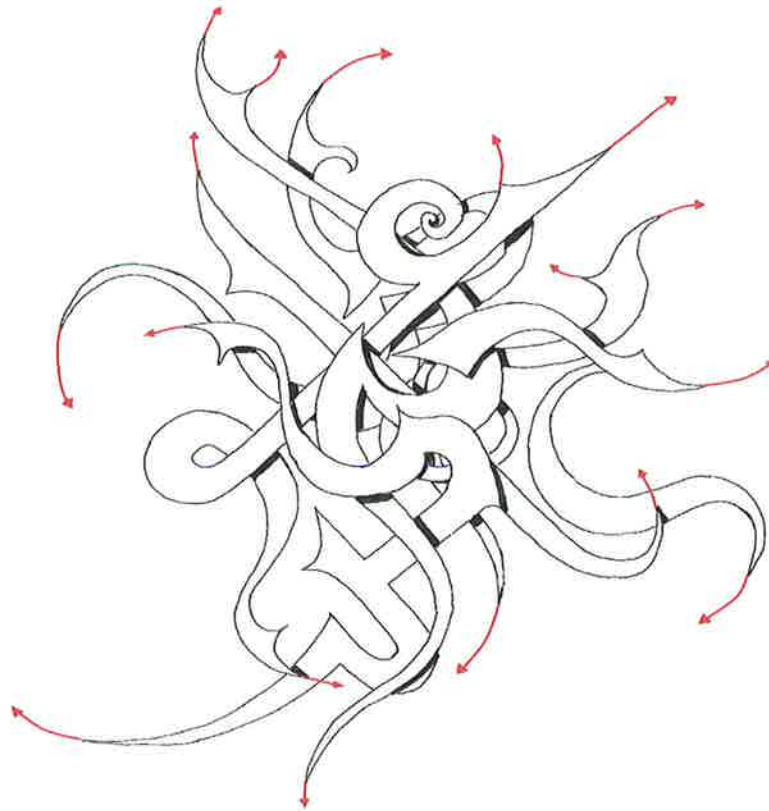


Figure (167) Manipulating letter edges to suggest a direction that guides the construction of background shapes

Next, I positioned the abstract strokes, shaping them so that they were similar to the letter forms, but differed in direction, size, colour, and thickness. As explained in Figure (168), the placement and characteristics of each stroke were visually judged and decided upon based upon their mission in the composition; some strokes were shaped to continue the movement suggested by the letters, others were placed in conflicting directions to achieve contrast and to highlight the lines in the foreground. Others had an in-between or twofold role; to comply with the direction of a letter on one side and clash with another on the other side. The colour tones of the strokes in the foreground are light, gradually becoming darker as they vanished into the depths.



Figure (168) The relationship between lines in Artwork (5); script lines in yellow, conflicting lines in green and compliant lines in red

8 Artwork (6), *The African King*



Figure (169) Artwork (6), *The African King*, 120 x 90, acrylic on canvas, 2005

This work is created from a collection of abstract strokes that have approximately equal sizes and thicknesses but vary in their direction, colour tones and their role in

the composition structure. Two complementary colours (orange and blue) are used in a variety of tones with orange-brown to manage the amount of contrast and dissimilarity between the different parts. Colours and line directions are organized to work together in directing the visual movement toward a central section; the relative activity of the lines was enhanced or reduced based on their function and situation in the composition.

The focus of the composition was on creating two bodies of interlaced lines; one in the foreground with pure, strong colour contrasts (Section A) and a similar structure in the deep background but with less active shapes executed in indistinct, pale colours (Section B). However, the space between the two bodies is lively and there is an active feel to the lines which move in every direction, some aiming towards the upper part of Section A. A number of criss-cross strokes in an 'x' shape are placed in the distance between Sections A and B to mark the gradual escape of colours and forms. These criss-crosses are, in essence, inspired by the method of displaying stem connections in vegetal ornamentation, and the use of two colours was to distinguish them from other shapes. See Figures (170) and (171).

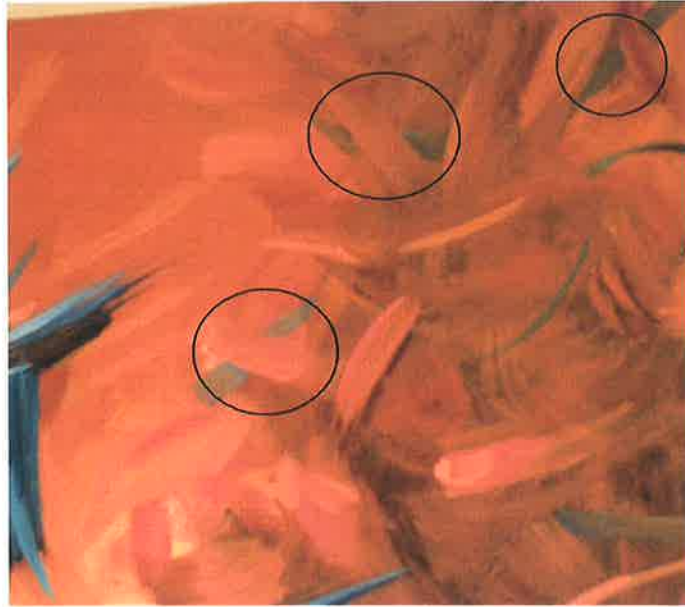


Figure (170) Examples of criss-cross strokes in Artwork (6)



Figure (171) Example of criss-cross stems in Moroccan design. Plasterwork from the Alhambra.
Image by the researcher.

The line construction and use of colour emphasize the foreground strokes in general and Section A in particular. Section A, selected as the first point to draw the viewer's attention, is an area of great contrast between the light-orange and dark blue, and is put together using layers of varied lines. The strokes in Section A are primarily based on letter structures which were developed during the painting process by decomposing and transforming their shapes into several lines. The colour tones and

placement of all surrounding strokes are managed in terms of their visual contribution to the movement towards Section A. See Figure (172).



Figure (172) The construction of lines in Artwork (6). Main line directions in red and primary letter structures in green

9 Artwork (7), *Between Life and Death*



Figure (173) Artwork (7), *Between Life and Death*, 120 x 70, two pieces, acrylic on canvas, 2005

The composition of this painting is inspired by multi-layered forms of scrolled vegetal ornamentation. These types of design, with their complex interlacing and creative

utilization of circles, create harmonized and energetic compositions of continuous curved lines that suggest an organized rhythm of movement. I have attempted to transform and develop the theme of scroll ornaments in previous artistic applications by reshaping them into different constructions. One of these can be seen in part of the mural *Confidential Talk of Letters* where I depicted the vegetal ornaments in a ribbon-shape that interacts with *Taliq* letters with a circulating movement, but also as a structure with three dimensional characteristics. See Figure (174).



Figure (174) Part of *Confidential Talk of Letters*, 27 x 2.3 metre oil on canvas painting placed in the Seef Palace, Kuwait, 1999

In Artwork (7) the activity and dynamism of rounded movement are reproduced in a three dimensional construction that acts in harmony with the different surrounding kinds of motion. All of the elements were composed to convey the sense of a windy atmosphere and each part participates in the creation of this effect. The main

element, which represents the shape of a human figure, consists of two groups of spiral ribbons. The outer group, in blue, depicts the external aspects of the figure, but does not cover the whole body because the second group, in red, moves inside the figure and reappears in several places. This combination symbolizes the dissimilarity between the visible and hidden aspects of human acts; however, the difference in colours within a single form achieves variation and contrast in the composition.

The human-like shape is supported by randomly placed strips that fill the background with complex and unordered interlacing in a wall-like structure. This method was inspired by the traditional concept of avoiding emptiness by entirely filling the decorated surface with motifs. Although the two parts (human-like and wall-like) contrast in their line construction and colour, they are linked to one another through the use of light and shade and the placement of some strips from the background in the foreground, with their lines manipulated to contribute to the movement system of the painting.

The light and shadows play an essential role in realizing the windy effect as both light and the simulated wind take a parallel course. Both enter the picture on the right-hand side with the same orientation, and hit the strips of the human figure forcing them to move forward in their stream. To emphasize the impact of the wind, the outer left-hand side strips of the figure have an undulating and fluttering appearance which complies with, and flows with the movement. See Figure (175).



Figure (175) The directions of movement in Artwork (7). The white arrow symbolizes the light and wind direction. The movement of the outer strips of the human figure is shown in red. Green arrows show the movement of the background strips to foreground locations.

10 Artwork (8), *Depth*



Figure (176) Artwork (8), *Depth*, 110 x 90, oil on canvas, 2006.

Complex decorative compositions are the hallmark of Moroccan design. Most of these complicated ornaments are created from simple elements and forms which are creatively combined and constructed. However, from the different types of patterns studied in this research, it is clear that the degree of complexity is arranged and controlled to place emphasis on specific areas and to make other parts less

significant. These secondary sections usually occupy unimportant locations in design structure and their low level of complexity makes them easy to observe and to understand. These simple patterns create their own type of uncomplicated beauty which responds in contrast to complex sections and raises the degree of their intricacy.

One exceptional example of a secondary-pattern is part of a piece of plasterwork above an arch at the *Telouet Kasbah*, Marrakech (Figure (177)). In this wonderful example a single leaf is repeated randomly without ever duplicating the same shape. The designer has freely placed the leaf in various positions without reference to any type of compositional method. The pattern is, however, amazingly beautiful due to its simplicity and qualities of randomness.

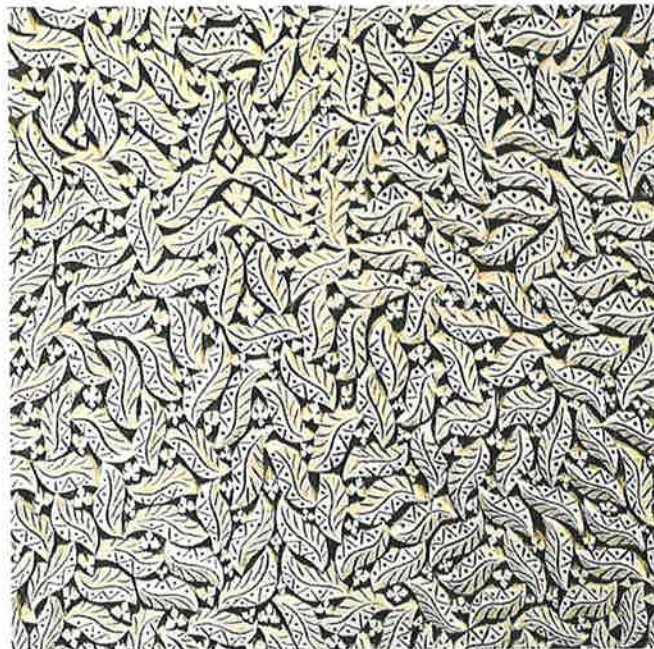


Figure (177) Carved stucco tympanum above an arch at the *Telouet Kasbah*. Image by Castera (1999: 44).

In Artwork (8) I attempt to explore the aesthetic experience which emanates from simplicity in shaping and constructing elements. The painting is organized to suggest an easy to understand visual experience in which the viewer's eye moves and interacts in harmony with the composition to discover the simple theme behind the structure.

The composition is created from a single abstract shape which is repeated in different ways throughout the painting. Repetition is achieved by making every shape reflect an amount of inner energy that suggests an unpredictable direction. However all shapes are placed and overlapped to contribute to the energetic formation of lines and to lead the viewer's eye toward the inner depths. In the execution process I adapted the methods of line management to visually arrange the repetition, variation and relationship between the shapes, and to manage their interlacing and direction.

The final result of this arrangement is a unified and cohesive composition in which harmonious shapes produce varied individual movements but act together to produce a combined motion. This efficiently engages the viewer in observation and comparison and, at a later stage, in the discovery of the devices involved in creating a rich structure from a single shape, depending only on good line management.

Chapter 9 - Research outcomes

1 Conclusions on first research question

In this research I have analyzed the relationship between form, method and perception in Moroccan design to achieve a comprehensive and convincing understanding of the role of PMMD in the creation of varied types of decorative composition. The aim was to shed light on different aspects of this visual language and to explore the possibilities of transforming its artistic vocabulary for my personal artistic applications.

The research has shown that PMMD has a fundamental role throughout the design process as a guiding concept which influences all compositional procedures. Studying this role in the basics of creating each separate element of design - calligraphic, vegetal, and geometric - reveals that the movement and flow of lines are essential qualities in the structure of every sub-division of form or style. The organization of lines to illustrate correlation, consistency and harmony seems to be more important than the regularization of elements; in many cases element shapes are changed and manipulated from their standard form to comply with the harmony within the design structure. The adaptation and reformation of calligraphic characters to accord with their surroundings is possibly the most obvious evidence.

By scrutinizing various examples of multi-element designs, it can be verified that the PMMD has been transformed to a group of common methods that are adopted by creative designers to achieve the highest level of harmony and organization between design components. Due to the nature of Moroccan design elements, which are made up of abstracted lines that accept change and manipulation, these methods can be applied to all forms of element by managing the size, thickness, direction and placement of lines. These methods are justified as follows:

1- Line continuity: all lines and shapes in a design structure may be considered as alternating links, and their formation is subject to this concept.

Line continuity can be achieved by relating and connecting lines to one another, arranging shapes so that the line or edge of one shape leads into another, or creating visual relationships between the lines so that they are seen as one continuous group.

2- Line interlacing: this is achieved by overlapping lines so that they appear above and below each other in the form of knots, bonds and braids. They might be visually clear and constructed in alternate order, such as in geometric and *Kufic* decoration, or applied in complicated and unsystematic order, such as in multi-layered vegetal ornamentation and complex calligraphic panels.

3- Line connectivity: in this method the lines of various design components are extended and connected with one another in order to interlink the composition using

lines that move from one element to take a place in the shape of another dissimilar one. This method can be divided into two main processes: 1) connecting the lines of multi-unit patterns; and 2) connecting interior lines of a single unit.

4- Line relations and interactions: in this method lines and shapes of different elements are arranged to interact in specific relation to one another through the management of texture, thickness, direction or rhythm. Three forms of line relation can be observed in Moroccan designs; contrast, similarity and proximity.

In addition to these compositional techniques, the PMMD plays an aesthetical role in enhancing the main principles and qualities of design (unity, balance, harmony, emphasis, proportion, variation, repetition and rhythm). Good management of lines is the key to accurately realizing all these principles and raising the level of the composition. Procedures such as controlling the visual balance and proportion between different parts of the design, varying the presented elements and avoiding monotony, relating dissimilar components in harmony, organizing the points of emphasis, and other actions that aim to perfect the design structure are undertaken through the management and manipulation of lines.

Taking all together, the PMMD is a highly developed compositional concept which has been transformed into an advanced system of effective methods concerning the organization of lines and shapes within the design structure. Through centuries of continuous development, generations of talented designers have contributed to the

richness of their ornamental culture and added to the wealth of techniques and multiplicity of design elements by presenting wonderful examples of adapting and applying this sophisticated system. This has resulted in the attractive and interesting forms of visual movement that distinguish Moroccan art from other styles.

2 Conclusions on the second research question

Following in the footsteps of Maurits Escher, Wajih Nahla, Nja Mahdaoui and other creative artists, who invented their individual styles by utilizing the aesthetic qualities of Islamic art, my personal approach to the transformation of PMMD has been to use its compositional concepts and methods as primary sources of inspiration. I have concentrated on exploring the relationships between varied design compositions and their impact on viewer response and interaction. The processes I have used have resulted in a variety of outcomes which, in general, offer examples of the wide range of possibilities open to those employing PMMD concepts and methods in contemporary art and design practice.

I have freely dealt with traditional forms and cast them with my personal visualizations and previous artistic experiences. My treatment has covered most PMMD aspects, including: concepts of composing and organizing design components to create a form of visual movement within the structure; technical methods of line management; and Moroccan design elements - in particular the use of its distinctive forms of calligraphy. However, in each of my works, each of these

aspects has been manipulated, transformed, developed and combined with others to a different degree.

First and foremost, the practice has shown that the compositional concepts of PMMD can be adopted and adapted in several ways when they are released from the demonstrative roles of geometric proportion which usually result in a predictable and systematic movement. The adaptation of methods - such as organizing emphasis points into successive parts, management of balance and visual weights, and relating dissimilar components by manipulating shape, texture, and direction of lines - was undertaken based on the necessities of artwork structure and the requirements of the intended objective in each composition. This has resulted in creation of an unsystematic and distinct type of visual movement in every executed artwork. Looking at the different assortments of motion illustrated in Figures (142), (147), (149), (153), (156) and (160), each artwork demonstrates a unique path of visual movement; some of these suggest a single track for the eye to follow whilst others offer multiple paths or a grouped form of movement.

Liberating the use of traditional design elements from the regular rules of proportion and re-composing them in abstracted structures based on the beauty and flexibility of their shapes has demonstrated the unlimited adaptability of Moroccan ornamental elements. The plastic nature of these elements accepts their change, manipulation and reconstruction in different arrangements, allowing them to be put together in accordance with new organizational relationships. This can be observed in the

calligraphic structures produced in this research (Artworks 1- 5), where the shapes of letters were abstracted, moulded and developed, then included in new formations using only traditional procedures of line management. In some works, new ways of relating the structural components were joined together with overlapping and interlacing aspects of multi-layered calligraphy. This resulted in new compositions which exposed intense complexity and dynamism.

Another quality of PMMD tackled in my practice was the relationship between form and the potential energy it encapsulates. The studied examples of Moroccan design show that a calligraphic or vegetal element can be shaped in several ways, each of which suggests a distinctive type of embodied energy and creates a visual effect which has its origins in the specific structure. I have used this wealth of varied relations in the formulation and organization of the abstracted shapes I have created. Traditional methods served as supportive references that provided me with effective and sufficient solutions to accurately manage the level of activity and dynamism within the artwork structure. These methods have enhanced my visual judgment in the process of managing the way each shape is formed to act with and activate its surroundings or to work within a unified group to produce a combined motion. This employment of PMMD methods gives clear evidence of the infinite possibilities of using such a sophisticated system to create new fabricated forms, or indeed any abstracted shapes the artist may like to invent.

Taking all together, the studio practice demonstrates a new vision of dealing with the achievements of Islamic art which is based on a comprehensive understanding of PMMD aesthetic qualities and design techniques. The produced artworks prove that the compositional concepts and methods of PMMD are adaptable and can be transformed, developed and applied in several ways in contemporary artistic applications.

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Appendix

1 Definition of terms

Al-Harakkah: movement.

Alghat: the art of calligraphy. The term in Arabic also refers to line.

Alhur: a modern type of poetry, after '*Alhuria*', or 'liberty' in Arabic. The Iraqi poetess Nazik Al-Malaika (1922-2007) was the first to use this form of free verse which liberated the word from the traditional metre.

Alhurofiyya: the term comes from '*hurof*', or 'letters' in Arabic, and is usually used to define contemporary artworks comprised of Arabic script or vocabulary to distinguish them from classical calligraphy.

Arabesque: a French term which means 'the Arabic style'. Arabesque is used to refer to Islamic art in general and more often to floral and vegetal patterns.

Dar Alhekma: the term translates as 'the house of wisdom' and refers to a library.

Deewani: a cursive style of Arabic calligraphy, so named because it was used in the Ottoman *deewan* (royal bureau).

Ghattat: calligrapher.

Kufi* or *Kufic: the hard form of Arabic calligraphy. *Kufic* is the oldest calligraphic form, named after Kufa (a city in Iraq). However, it was known years before the foundation of the city.

Maallem: master-craftsman or the leader of a working team of a special craftsmanship.

Madrasa: school.

Maghribi: a Moroccan script which originated from the joining of *Naskh* and *Kufic* scripts. The term is derived from *Maghrib* (the Arabic name for Morocco) which means 'western', due to the country's location in relation to the rest of the Islamic world.

Mihrab: a niche in the wall of a Mosque that indicates the direction of Mecca, which Muslims should face when praying.

Minaret: the term in English refers to a part of the Mosque structure which is the tall spire tower with a projecting balcony from which the call for prayer proceeds.

Minaret or *manara* in Arabic means a lighthouse. The term *ma'thana* is more usually used to define such architectural forms.

Minbar: the pulpit of the Mosque where the Imam (leader of prayer) stands to recite Friday sermons.

Mukhalaffa: the term means 'opposite'. It is widely use by Moroccan designers to refer to contrast between design components.

Muqarnas: an Islamic architectural element in the shape of stalactite vaults, usually in plaster or wood.

Naskh: a cursive style of Arabic calligraphy. The term means 'copying' as this script was popular for copying the Holy Quran.

Rabt: to band or to relate. The term used by Moroccan designers to refer to the relationship of lines and design components.

Riqa: the most recent cursive style which was popular for daily handwriting.

Sharia: the Islamic Divine law which was used in Islamic civilization as a social law.

Sunna: the way of life of the Prophet Muhammad, and also his traditional sayings, which regulate not only culture and common law but also the fundamental and recurring facts of everyday life.

Taliq: or *Nasta'liq* a cursive style, also known as Farsi due to its origin and use in Persia.

Tashjir: a term referring to vegetal ornamentation formed in the shape of a tree. The term derives from '*shjara*', or 'a tree' in Arabic.

Tashkil: vocalization or placing of diacritical marks in calligraphy.

Tassteer: geometric designs. The name comes from '*satter*', a 'line', and '*messttra*', for 'ruler' in Arabic.

Tawriq: a term used by Moroccan craftsmen to define the vegetal ornaments that were made from leaves alone. It comes from the word '*waraqqa*', or 'leaf' in Arabic.

Thuluth: a cursive style of Arabic calligraphy. The term means 'a third' in Arabic due to the size of the *Thuluth* pen compared with the *Tumar* pen.

Zillij: the art of Moroccan ceramics.

Ziwaq: the Moroccan art of wood painting.

2 Research interviews

2-1 Summary of exploratory interviews

In order to put my studio practice into a philosophical framework, and to determine an appropriate structure for the research, an exploratory approach was adopted at the beginning of the study. This involved conducting informal interviews with practitioners who had undertaken advanced research in both academic and artistic practice. The interviews were with:

1 Professor Jassem Abdulgader, 18th April 2004

Professor Abdulgader (born in Kuwait 1950) is the Deputy Dean of the PAADT College, Kuwait, and a former head of the department of Art education. He is a sculptor, painter, lecturer and author and has written a number of books which include *The Aesthetic Experience* (1986), *Expression in Children's Drawings* (1989), and *The Education of Aesthetic Evaluation* (2005). As an artist, he has used elements of Islamic art in the works he has produced since 1971. Professor Abdulgader exhibited in Kuwait and neighbouring counties, and then in 1981 in the US where he gained his master's degree in Art Education at the University of Northern Colorado. During his PhD studies (1982-1986) in Art Education at Helwaan University, he took part in several collective exhibitions in Cairo. His recent articles have been concerned with the development of new educational strategies towards better teaching of traditional arts and crafts.

2 Dr. Mohammed Al-Mahdi, 12th February 2004

Dr. Al-Mahdi (born in Egypt in 1940) is a painter, lecturer and author and works as the Art Consultant at The National Museum of Kuwait, '*Dar Al-Athar al-Islamiyah*', the Al-Sabah collection of Islamic art. After finishing his licentiate degree in Art history at the University of Cairo in 1961, he moved to Brussels, Belgium, where he started his career as a reporter in the Middle East news agency MENA and studied at the same time at Brussels University for a master's degree in Art History, which he obtained in 1967. From 1967 to 1977 he occupied a number of editorial roles, including Managing Editor of *Egyptian Tourism* magazine (Egypt, 1975), and head of the cultural department of *Al-Annba* newspaper (Kuwait, 1979). In 1980 Al-Mahdi obtained his PhD in Art History and Criticism from the University of Sofia, Bulgaria, and since that time has been engaged in a vast range of activities including conferences, research, award committees, editing, art and academic arbitration, and PhD examinations. He has written a large amount of literature on various cultural subjects. His publications include: *Visiting Eyes - in the words of one who has visited Egypt* (1987); *Egyptian Impacts on contemporary Western Arts* (2006); various publications of the Ministry of Cultural Affairs (Egypt); and most recently, *About the contemporary Arabic Fine Art Movement* (2008), publications of Souad Al-Sabah institute.

3 Dr. Mahmoud Said, 3rd June 2004

Dr. Said (born in Egypt in 1954) is a sculptor and lecturer and has worked since 1995 in the PAADT, Department of Art Education, Kuwait. He obtained his BA in Art Education, from Helwaan University, Cairo, in 1979. In 1977, he was awarded the Silver Medal at the first Cairo sculpture festival, which was, in his words, "*a great moral support that encouraged me to attempt further dealings with Islamic art*". This was reflected in his first solo exhibition at Zamalic Cultural Hall, Cairo, in 1979, where he adopted elements of Islamic Art in a wide ranging treatment of 3D forms. After finishing his master's degree in 1986, and his PhD in 1993, both in Art Education and from Helwaan University, he focussed on exploring the transformation of the traditional techniques of *Muqarnas* to his artistic practice. His two exhibitions, in the Cultural Council Gallery, Kuwait (1999), and the Cairo Studio, Cairo (2001), were given the same title as his PhD thesis '*Muqarnas; New and Contemporary Vision*'. In addition, Dr. Said has taken part in many collective artistic activities in the Middle East and has published a number of papers in his academic field.

The interviews took the form of open discussions and dealt with different subjects related to the study focus. I benefited from the experience. The specializations of the informants and the issues which emerged during the discussions increased my understanding of the following areas: 1) ways of constructing a piece of practice-based research in art and design alongside the development and transformation of traditional methods and concepts for contemporary applications; 2) the great lack of

empirical studies which shed light on the sophisticated nature of Islamic design aesthetics and/or compositional concepts; and 3) the dearth of information on dealing with ornamental heritage in different contemporary fields of art and design.

The discussions examined the concept of reviving Islamic art and of reusing its elements in varied contemporary art and design products and at the same time looked at the ways different artists and designers have adopted and dealt with the traditional forms. The limited use of Islamic art elements in calligraphy was highlighted by all informants as well as the notable absence of other principles and qualities of design construction. The informants highlighted the need to engage in: the technical evaluation of previous collective trends; varied individual attempts to use Islamic art elements in general; and particularly and in more detail, the principle of movement.

In addition, the interviews point to the importance of combining the creative production of art with deep and comprehensive understanding of the traditional design system and its varied compositional concepts and technical methods. The informants agree on the necessity of collecting the data from the actual field and directly from Moroccan designers and craftsmen.

Knowledge of PMMD should be presented in an informative critical analytical structure which clearly interprets its role in the construction of different elements and patterns, and its relationship with other aesthetic values.

The procedures involved in transforming, changing and developing traditional forms, and other methods of relating the explored techniques and concepts to my studio engagement, should be explained giving sufficient details of the practice.

2-2 Personal interview with Kammal Bellamin

What follows are summaries of a series of interviews and workshop visits. The first of these was a meeting with Kammal Bellamin on 12th October 2004 and later between 28th April and 5th May 2006.

Kammal Bellamin is one of the most famous Moroccan woodwork master-craftsmen of modern times. I chose him for this investigation based on his long experience which has extended over about 40 years, working in the field of Moroccan design. Through these years he has executed a large number of outstanding projects in Morocco and abroad. His fine works can be seen in various places in Morocco, such as the King Hassan Mosque in Casablanca, the Royal Court in Rabat, the Golf Palace Hotel Marrakech and many other locations in the country, including mosques, hotels, governmental buildings and private properties. Kammal has also had international success as he has executed some wonderful works in different parts of the world; to name some, the State Mosque of Kuwait in Kuwait city, The Great Mosque of Tripoli in Libya, The main hall of Abu Dhabi Cultural Centre, UAE, and many private houses and palaces in New York, Moscow, Japan and the Arabian Gulf countries.

Kammal is the fourth generation of the Bellamin family *Maallems* (leaders of a working team). He is the chief of a group of classified specialists each of whom is proficient in a specific part of the work, such as decoration designers, calligraphers and executers, sawyers, carpenters, carvers and decorators. However, each of these workers might be skilled in more than one profession.

Unlike other traditional works executed in modern times, Kammal's creations are distinct in their design structure and reflect a talented and skilful use of the rich ornamental culture. While most artefacts and decorative works presented nowadays can be described as reproductions or duplicated from previous traditional designs, Kammal has introduced new ways of composing and combining design elements. In almost every work he adopts a new idea or a new way of dealing with cultural elements and presents compositions that display an amount of change and development. For example, the decorations of the two domes at King Hassan Mosque are exceptional in their structure and ornamentation. Kammal comments *"It was crucial for me to originate new and amazing shapes that have never been seen in earlier monuments. For this reason, the planning stage cost me about two years of continuous work while the execution didn't take more than 6 months. As these forms were new achievements, I decided to name one of the domes Alciteenia (60 in Arabic) because it consists of, for the first time in Moroccan architecture, a large 60 point star-pattern, and I named the other Alhassaina, after King Hassan, to relate the appearances of this shape to the majesty of his era"* (see Figure (126)).

The discussion was centred on exploring the role of PMMD as a concept and its function in the design process, examining the compositional methods and procedures used. The first meeting focussed on examining common techniques and the terminology used to define specific forms or methods. The second meeting was a more in-depth investigation as Kammal had prepared some visual references on the subject matter which were an effective form of help in my analyses and conclusions.

First and foremost, Kammal defined the PMMD as a creative design activity. He explained that Moroccan design, like any other decorative art-form, includes works that can be considered as common or customary and works that are regarded as creative and original. Creativity, from his perspective, should comprise three basic components: an inclusive knowledge of the field and vast skilful experience in its methods and techniques, a great desire and motivation toward development and change, and more importantly, the ability to imagine, criticize, and evaluate new ideas. He explains, *"To develop a new form is not an easy task because we use the same basic elements; therefore creativity lies in finding new and interesting ways of combining and relating these elements; only he who has long experience and cultivated skills in design can carefully adapt traditional elements without changing their distinctive identity."*

Kammal adds, *"[I] learned the basics of the craft from my father from an early age and I have engaged in all types of works related to it for some time. When I started*

to operate the planning process in our workshop, I followed my father's instructions in the beginning but later I took my own way in design. When designing, my previous practice and knowledge in customary standards allow me to imagine and critically think of the ways to achieve new qualities. Creativity is not the emotionless and mechanical manipulation of materials it is a matter of personal taste, choice and decision."

"Movement has magical effects on the viewer's perception and enhances his visual interaction with the decorated form. It is an aesthetic quality that is achieved through good manipulation of lines and shapes to suggest a system of motion that organizes the viewer's consciousness and communication with all parts of the ornamented space. As a design practice it is a sophisticated talent that requires an artistic personality beside the awareness of methods and techniques used."

Kammal explained the different technical methods and procedures undertaken in the design process to organize the visual relationships between different components. Each specific type of compositional technique was discussed, examining its varied applications and forms. The information about the role of PMMD in creating basic elements of design and methods of organizing visual materials in composition was discussed from different angles. The investigation with Kammal and other craftsmen I have met showed that there are common compositional basics of line management that are applied by most workers, however, each has adopted and adapted these concepts and methods differently in an individual formula. The information gained in

this interview was revised, classified and combined with other collected data to develop the in-detail review presented in chapters 4-6.

Bellamin commented on the standard proportional models for leaf structures suggested by Paccard (1979) (see Figures (81) to (83)). He felt that this system might work for some common forms, because the majority of these shapes are extendable and flexible and can be manipulated into any structure. The forms of vegetal ornaments are usually determined by other design components, and by the size and scale of the decorated surface.

Kammal described the relationship between the PMMD and other design principles as a "*mutually dynamic association*" in which all aesthetic qualities work on creating a unified and correlated visual effect. He explained the role of PMMD as underlining the concept of the design process and explained how it contributes to the enhancement of other visual values such as harmony, emphasis, rhythm, variation and unity. He stated that good line management means that all qualities have been applied perfectly and supported his judgments with many photographic examples of different applications. Examining the correlation of PMMD with other principles has helped to justify its critical role in Moroccan design which is comprehensively reviewed in chapter 7.

2-3 Personal interview with Ibrahim Haneen

This is a summary of two interviews which took place on 2nd and 6th May 2006.

Born in 1947, Ibrahim Haneen is a well known Moroccan calligrapher and painter who has actively exhibited in several collective and solo exhibitions since 1979. His works are held in museums, hotels, collections and galleries throughout the country. He has also exhibited in international shows in Paris, China, Egypt, and several times in the UAE. Besides his practice as an artist-painter he has participated, as master of calligraphy and vegetal ornamentation, in designing the decoration of many architectural sites. In 2003, Haneen was selected to design the calligraphic works at Sheikh Zaid Ben Sultan Mosque in Abu Dhabi, UAE. Participating in such a monumental structure has gained him an international reputation which in the last two years has allowed him to work on a group of similar projects.

As a traditional designer he worked in many forms of Moroccan calligraphy, including classical *Kufi*, *Maghribi*, and *Thuluth*, and designed patterns consisting of geometric and vegetal ornaments, and for some time he taught these art forms in educational institutions in Casablanca. This traditional background has influenced his painting and printmaking works as he combines ornamental elements as signs and symbols in his paintings.

The interview with Ibrahim Haneen was undertaken to explore the relationship between PMMD and different Moroccan scripts, a subject that modern literature has

not sufficiently examined. The focus was on discovering the role of movement as an aesthetic criterion in the process of forming, manipulating and relating lines of calligraphic structure, and on discovering the varied techniques for such tasks in each style.

Primarily, the discussion tackled the *Maghribi* script and its characteristics. Haneen explained its uniqueness as a style. He declared: *"It has been creatively originated through joining together letters from Kufi and Nasgh scripts to realize a distinctive script which amalgamates characteristics of both styles. Yet, it is the only type of calligraphy that has no firm rules of measurement and proportion; words and lines might be shaped and unified according to individual criteria and based on the calligrapher's artistic taste"*.

Hanneen explained the important role of the tipped pen, used in writing *Maghribi* style, in giving the writer a greater ability to twist and curve the lines in a flowing and free-movement. He illustrated this by inscribing some examples of different ways of manipulating and shaping the same word. He clarified how the use of a brush-like pen allowed calligraphers to expose their personal creativity and talent and how it reflected in the wide range of *Maghribi* forms. Individualism in shaping lines was compared with other cursive types. He declared, *"Unlike Eastern styles, which due to the firm rules of proportion are usually in a standard form, in Maghribi you can recognize a calligrapher's artistic identity and individual characteristics."*

The appearance of classical *Thuluth* in Moroccan art and the development of its ornamental form were at the centre of another part of the discussion. Haneen elucidated how calligraphers mixed the *Thuluth* with their existing calligraphic culture which was represented in *Maghribi* script. The flexibility of ornamental *Thuluth*, the freedom of shaping and manipulating its lines, and the influences of *Kufic* and *Maghribi* methods on its different forms were discussed together with examples of each case.

The development of *Thuluth* as a decorative element and its contribution to movement in design structure were discussed, observing examples of relating script lines to other motives. Haneen declared: "*Ornamental Thuluth may be the most plastic form of Arabic script ever used in Islamic art; it is extremely adaptable and accepts manipulation in various ways to fit harmoniously with design requirements*". He also explained the variety of ornamental *Thuluth*: "*All design elements share the same importance and they are all subject to change and modification. The flexibility of ornamental Thuluth allows the designer to adapt and shape characters based on his individual principles of composition as no strict rule or method was officially proposed [...] therefore the variation between different artistic attempts is the result of individuality which is clearly observed and felt in this unique style.*"

The role of PMMD in composing different *Kufic* scripts was another subject discussed with Haneen. He explained how these styles took their own developmental trends in Moroccan art, away from Eastern influences. A group of

creative applications of different styles were examined, considering the creative methods of line construction. Haneen stated that creativity lies in the use of compositional methods to produce lines in new and uncommon structures. *"The calligrapher might construct the script in an interesting geometric composition, set up lines in an invented relation or organization, or present new forms of knotting, interlacing or decorative motifs; as seen in many cases, more than one method might be used."*

