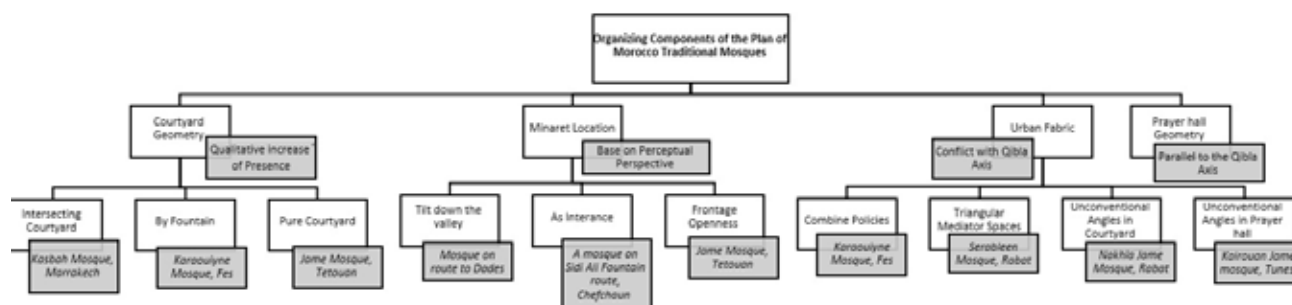


Table 1. The summary of the findings. Source : Author.



## Endnote

\* The article is based on a field trip entitled “The Tourism of Moroccan, native Landscape” which was held in September of 2016 and was funded by “NAZAR research center”.

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Fig.27.Stretched Prayer hall, Kasbah Mosque, Marrakech.  
Photo : Mohsen Akbarzadeh,2016.



Fig.26.Main Courtyard, Kasbah Mosque, Marrakech.  
Photo : Mohsen Akbarzadeh,2016.

## Conclusion

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The categories of the agents affecting the plan of Moroccan mosques can be displayed in the following matrix:



Fig.22.geometric center in Karaouiyne Mosque.  
Photo : Mohsen Akbarzadeh,2016.

typical example of such spaces can be seen in the mosque of Mollay Yazid in the city of Morocco. Two new arms of the Prayer hall are stretched halfway along the long sides of the courtyard towards its center. These arms create four sunken areas in the courtyard, which are later developed into four separate courtyards through a blind arcade. In other words, a mosque with five courtyards is developed in this process. One of the courtyards which is covered with bitter orange trees looks like a bitter orange garden, while the rest of the courtyards are only decorated with a fountain in the middle.

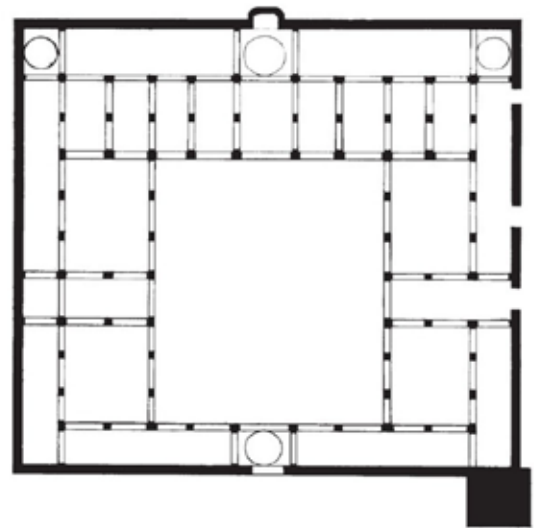


Fig.24.Kasbah Mosque, Marrakech.  
Photo : Mohsen Akbarzadeh,2016.



Fig.23.Karaouiyne Mosque Fountains, Fes.  
Photo : Mohsen Akbarzadeh,2016.



Fig.25.Secondary Courtyard, Kasbah Mosque, Marrakech.  
Photo : Mohsen Akbarzadeh,2016.



### Geometry and proportions of the courtyard

In the Islamic Shari'a (both Sunni and Shi'a) it is better to say prayers in open space. Therefore, the courtyard of mosques in Morocco -elaborated with coloured mosaics- can be much more than a simple meeting space or a passageway: a space for presence and being. Thus, the geometric status of the courtyards is consistent with the plan of Prayer halls. This can be proved by the fact that in all the mosque courtyards, an altar-like space lies on the side that connects the courtyard to the Prayer hall, towards the qibla direction in order to direct people praying in the courtyard. Marginalization of ablution place and fountains as well as the disturbing elements in mosques with such courtyards can also prove the above-mentioned point. In other words, the courtyard is designed as a prayer space rather than just an yard.

The courtyard of the mosques in Morocco is always a rectangular area with the longer side perpendicular to qibla. Trying to increase worship space, the Prayer hall laid towards Qibla is extended. If this extension is towards the courtyard, or on the opposite wall -where the altar is located- the courtyard will retreat



Fig.20.A village mosque on route to Dades.  
Photo : Mohsen Akbarzadeh,2016.

from the general geometric center of the mosque towards the opposite side of the Qibla direction (Roser-Own, 2014: 174).

### Incompatibility of the mosque and courtyard

Although the shape of the courtyard is rectangular, in most cases, the roofed fountains or open-air altars in the above-mentioned side of the courtyard form creases in it, breaking it from a simple square shape.

In some cases, however, these creases go so far as to create sub-spaces in the courtyard. The most

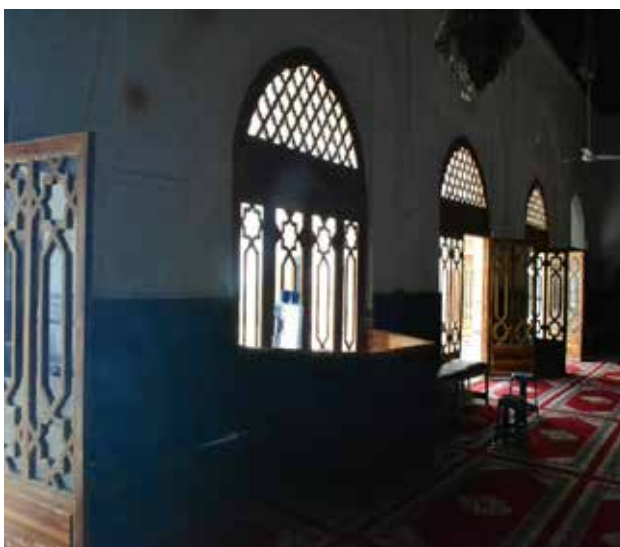


Fig.21.Mihrab Between Yard and Prayer hall, Tetouan.  
Photo : Mohsen Akbarzadeh,2016.



### Layout and perceptual arena of minarets

The minarets of mosques in Morocco are influenced by Andalusian minarets types, and even Western Europe minarets, which consist of a multi-story tower with a square plan. In the Andalusian region and in the churches of certain Christian denominations in Andalusia, the minarets were used as a space for monasticism. This has been an influence on Moroccan minarets, as it can be detected in the phrase Moroccans use for minarets. In Moroccan literature, minarets are called monasteries. Although in some of the smaller mosques, these monasteries only serve as a plight of stairs for the ascent of Mozzan and don't have their former function, they have maintained their dignity and it can be argued that Moroccan mosques without such minarets are not imaginable. The location of minarets in the mosque plans includes three distinct scenarios (Saoud, 2002: 5).

According to the above-mentioned points, in the first scenario, the triangle resulting from the angular difference between the Qibla direction and the urban fabric axis is added to the entrance space and a trapezoid is created in the alley's plan. Due to the density of urban fabric in Morocco, the trapezoid creates a great platform for minarets to flourish and exhibit themselves. Therefore, in order to be seen, the minarets are placed in the opening between the mosque and the urban fabric.

The second scenario is a derivative of the first scenario in which the minaret acts as an entrance or is attached to the entrance to represent the entry of mosque.

The third scenario, however, is applied in small villages and residential areas where the mosques are located on the slopes of the mountains and hills, and it is necessary to have a full manifestation because of their significantly important role as a regional symbol. In these mosques, minarets' placement is not determined by its plan, but by its section. The minaret is placed on the side that overlooks the valley. In this way, by not being covered by the mosque, the minaret will be more visible.



Fig.18.A pedestrian's view of a minaret, Jame Mosque, Tetouan. Photo : Mohsen Akbarzadeh,2016.



Fig.19.A mosque on Sidi Ali Fountain route, Chefchaun. Photo : Mohsen Akbarzadeh,2016.

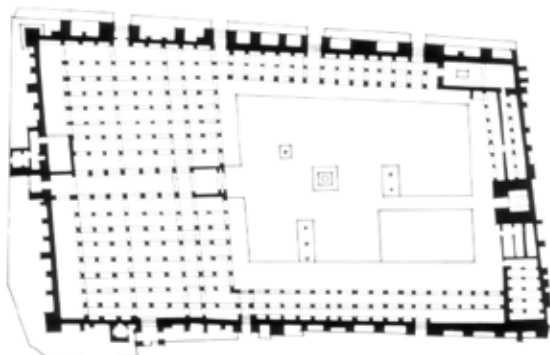


Fig.10. Kairouan Jame mosque, Tunes.  
Source : Endowment Organization of Morrocco,2007

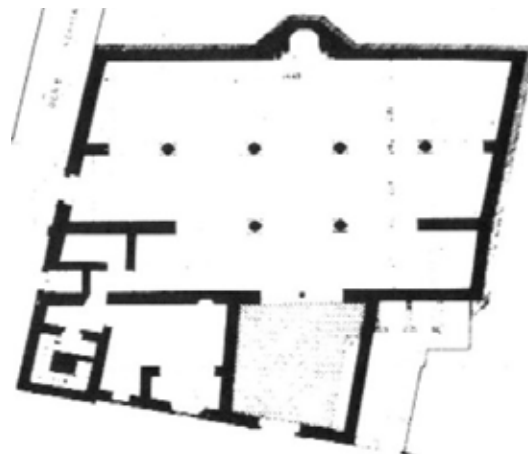


Fig.11.Nakhla Jame mosque, Rabat.  
Source : Endowment Organization of Morrocco,2007

or other buildings, designers may adopt a variety of approaches in order to solve this problem, and this variety may lead to development of a wide

variety of subspaces around the mosque, that can be mostly used as an angle for privacy or as a service space (Fig. 16).

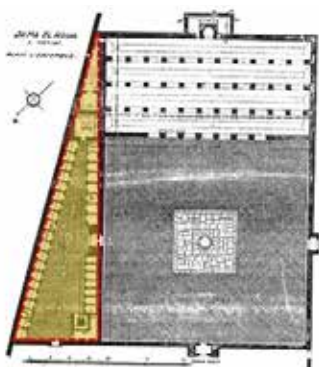


fig.14. Al-Ravi jame mosque, Meknes



fig.13. Ground jame mosque, Fes.

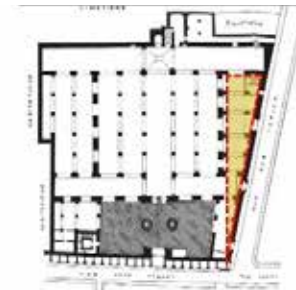


fig. 12. Ground jame mosque, rabat.



fig.17. Mollay Salman jame mosque. rabat.



fig.16. Karaouiyne mosque, fes.



fig.15. Sherableen mosque, Fes.

Source : Endowment Organization of Morrocco,2007



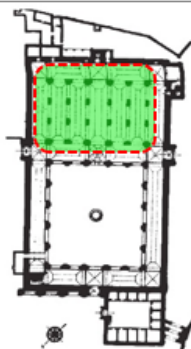


Fig. 3. bab-al-Daka jame mosque, Marrakech

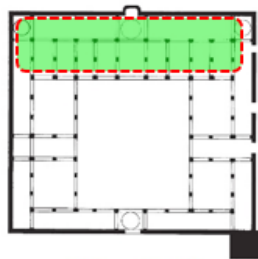


Fig. 2. Qasbah mosque, marrakech

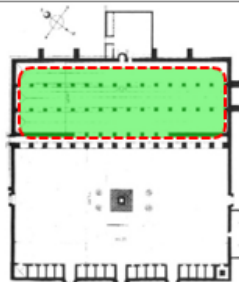


Fig. 1. melina jame mosque-rabat

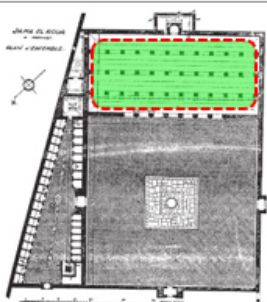


Fig. 6. al-ravi jame mosque, meknes

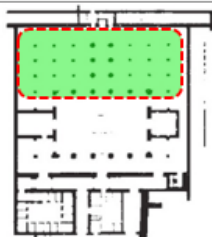


Fig. 5. al-aoude mosque, meknes

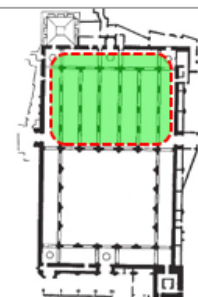


Fig. 4. mouassine jame mosque, marrakech



Fig. 9. mollay salman jame mosque, rabat



Fig. 8. Kairaouine Mosque, fes

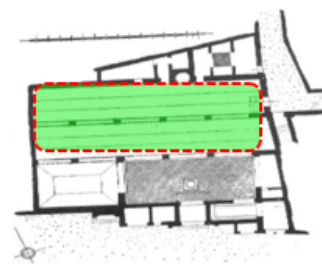


Fig. 7. Sherableen mosque, fes

Source : Endowment Organization of Morocco, 2007

that stand in the vicinity of entrances (Fig. 11). The third approach is the most common approach used in large cities and in small towns of Morocco for mosques of varying scale and significance. In this case, the courtyard of the mosque maintains its geometric setting, and the Prayer hall has a pure space at the same time, therefore, the triangle resulting from the angular differences is added, as an additional space, to the mediating entrance to create a trapezoidal

plan. Sometimes, this triangle is formed in the vicinity of another building and creates a small service yard, storage, or a small passage leading to an informal entrance. The latter case is completely manifested in the third approach and is developed into a joint space and the entrance is responsible for the rotation (Bonine, 1990: 59). In many cases where we deal with large mosques that act as the focal point of urban fabric and as an urban area surrounded by numerous passages

al-Saff, verse 4:

“Indeed, Allah loves those who Fight in His cause in a row as though they are a [single] structure joined firmly”

In this verse, continuity is described as the main feature of rows. It is clear that any disconnection in the row will not only eliminate the religious bond among people, but will spoil the nature and meaning of an integrated and unified building. Verses 165 and 166 of Surah al-Saffat, the term “line up” has been used with the term “exalt”.

“And indeed, we are those who line up [for prayer]. And indeed, we are those who exalt Allah”

Our prophet, has many sayings about the lines of prayer:

“If people knew about the virtue of reciting Adan and standing in the first line of prayer, they would draw lots for it”

“Harmonize the lines of prayer, since harmonization of the prayer lines is accomplishment of prayer” (Majlesi, 2009: 200)

The Prophet (pbuh) took the shoulders of the prayers in the prayer rows and said: “stand orderly and in harmony, or your hearts would disunite (Boroujerdi, 2011: 470)

The main points that can be derived from the hadiths are as follows: First, the virtue of standing in the first line of prayer, second, the union of the rows, and third, emphasis of Prophet (pbuh) on the width of prayer lines and the harmony of shoulders. The virtue of standing in the first line of prayer justifies the square forms of mosques, such that the side in front of the Qibla direction provides the greatest possible space for first line of prayer (Ali Abadi, 2001: 556 & Qeraati, 1999: 427 & Tarasoli, 1999: 172). The two possible policies for organizing the rows of the prayer are: 1- the reduction of rows length and increase in the number of prayer rows 2- the reduction of prayer lines by extending their length. Drawing on the Qibla principles and pure geometry of mosques, the Messenger of Allah chose to extend the width of rows (relative to the Qibla direction) and make the first prayer row longer than others.

This approach that has been adopted in the

mosques of Morocco differentiates them from the mosques in other Islamic countries, including Iran. Although, tracking the Qibla direction in the southern and western strip of the Mediterranean coast is a difficulty, the insistence of Moroccan architects on maintaining this rule is quite fascinating (Rius-Pinie’s, 2015: 157). Thus, a review of the mosques’ plans in Morocco shows that the Prayer hall standing towards the Qibla is the main roofed space in the mosques and the width of this Prayer hall is usually towards the Qibla direction with length perpendicular to it so that a longer first row can be formed. The other parts of Prayer hall were usually used as a prayer space for ladies, solitary worship and recitation of Quran.

Hillenbrand also asserts that unlike the Persian and Ottoman mosques, Moroccan mosques (as a typical example of Arabic mosques) are mainly formed of a long Prayer hall laid out perpendicular to the qibla direction (Hillenbrand, 2008: 70).

### **Exposure to urban fabric**

The contradiction between the orientation of mosques towards the Qibla and the orientation of urban fabrics (that are affected by stronger agents) is understandable. The main problem in addressing this contradiction is attenuation of the angular deviation between the Qibla axis and other urban axes (Bonine, 1990: 50). Four relevant approaches used to address this problem.

### **The approaches are discussed below**

The simplest possible approach is to transfer the angular deviation to the courtyard, while maintaining the spatial orientation of the Prayer hall axis, and eliminate the deviation by giving a trapezoidal format to the courtyard. This can be clearly seen in larger mosques in the Andalusian region or in Morocco itself (see Fig. 10). In the second approach, the geometric setting of the mosque courtyard is maintained, and pressure is mainly put on the Roofed Prayer hall spaces, and finally attempts are made to compensate for this angular deviation by creating trapezoidal or triangular spaces in those areas of Prayer hall



## Introduction

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In Islamic architecture, no building can distance itself from territorial influences as much as mosques do. It is through the similarities of different architectural styles that we can better understand the commonplace features of Islamic traditions. On the other hand, the efforts of the governments and the people to build magnificent mosques have made them a perfect manifestation of the architecture in particular traditions (Uddin khan, 1990: 119), and this will, in turn, contribute to consolidation of the special position of mosques. Thus, in an attempt to understand Moroccan architecture, understanding Moroccan mosques can help formulate numerous findings about this Islamic architecture tradition (Ewert, 1984: 148). Moroccan architecture is famed because of its decorations and rich forms, which can emerge in spheres other than architecture. But, when architecture is understood as the organization of space, recognising spatial

patterns and structures is considered a priority. Therefore, investigating the mosques' plans to get a clear understanding of Moroccan design potentials in terms of space organization, can provide the ground for subjective comparisons between Moroccan architecture and other Islamic architecture traditions. In this study, the geometric structure of the mosques plans and the factors contribute to formation of this plan are studied to explain the position and logic of other elements that contribute to recognition and analysis of the design of the Moroccan mosques. Examining the whole structure, and different elements such as the courtyard, Prayer hall and minaret, as well as the relationships between these elements, reflects the consistency of the overall structure within the components and the development of this consistency in designs. Objectives, questions and hypotheses.

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### The main objective

To identify the factors that influence the Moroccan Traditional Mosques' plans

### Main research question

How do the identified factors influence the plan of traditional mosques in Morocco?

### Hypotheses

- It seems that the common organization type in traditional Moroccan mosques is that the length of the prayer hall is perpendicular to the Qibla direction.
- It seems that the angular difference between the urban fabric and the mosque positioning has influenced the plans of Moroccan mosques in different ways.
- It seems that the location of minarets in the mosques, has multiplied traditional Moroccan mosque organization types.
- It seems that the divine nature of courtyards affects the proportions and geometry of the traditional mosques in Morocco.

### Research Methodology

This qualitative research, based on the definition of Arab mosques proposed by Hillenbrand, identifies some features of Moroccan mosques, which with fieldworks have been confirmed. Four agents shaping these features were determined and their relationship with the Moroccan mosque style is discussed. Each of the agents was then divided into sub-categories and sub-components. The present study is an attempt to describe these components.

### Geometric structure of the plan

In the first verse of Al-Saffat surah God says: "By those [angels] lined up in rows"

The interpretation of this verse shows the importance of the queue and its quality. The adverb (derived from the verb) that follows the Saffat" (line up), in addition to its visual term" appeal in the text, indicates the significant importance of the line quality. The importance of lining up has also been emphasized in Surah

# Categorizing the Organizing Components of Traditional Moroccan Mosques\*

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## Abstract

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A review of the designs and constructs of mosques in Islamic countries indicates that even in common elements like courtyards, fundamental differences can be found. A survey of images of these mosques can maybe reveal similarities and differentiation in ornaments, but it is the underlying order of them makes them distinguishable architectural types. For the Iranian audience, Moroccan mosques are remarkable because without Iwans, minarets, domes, and only with a Shabistan next to a cubical minaret, they could create a viable and accepted Islamic worshiping space.

## Keywords

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Mosque, Plan, Morocco, Qibla, Minaret.