

## The mixture of Ottoman, Dutch, and the architect's features in the design of the Mevlana mosque



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## Abstract

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*This thesis investigates the features of the Rotterdam based Mevlana mosque designed by the Dutch architect Bert Toorman. It aims to clarify to what extent Ottoman and Dutch features are visible in the mosque, including the architect's signature. Extensive literature research has been undertaken to determine the origins of Ottoman architecture, which serves as the foundation for determining Ottoman features for mosques, which are subsequently discussed in the Mevlana mosque. Several Ottoman mosque features are discussed compared to the Mevlana mosque. Due to the mosque's location in the Netherlands, it is examined further to evaluate how it gained ground in Dutch society at the time. Finally, information about the Mevlana mosque's whole design process was gathered through an interview with the architect. As a result, we can conclude that although the mentioned factors certainly influenced the structure, the mosque is less Ottoman than the architect believes.*

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## Introduction

The Ottoman Rotterdam Mevlana Mosque is a remarkable building compared to its surrounding context. This religious structure is situated in an open area next to the river *De Rotterdamse Schie* that was designed by a Schiedam-based architect Bert Toorman and commissioned by ISN, the *Islamitische Stichting Nederland*. ISN is a religious organisation with 148 affiliated mosques in The Hague, making them one of the country's most prominent Islamic social organisations. The development of the building started in 1997. After four years, the Mevlana mosque opened its doors for religious practices. It was the first newly-built mosque in Rotterdam to be established with a mosque-like appearance.

According to Karimnia et al. (2012), the word *Mevlana* or *Mawlana* means our master. It originates from Rumi, a 13th-century Persian man who was a poet and a *Maturidi* theologian. Besides, he was an Islamic jurist in the *Sunni* denomination and an Islamic scholar. *Maturidiyyaa* is one of the leading schools in *Sunni* Islamic theology. Briefly, Nasr (1987) mentions that he was an important man in history with an enormous influence before the rise of the Ottoman empire, which crossed many national borders such as Iran, Turkey, Greek, and Central Asia. For this reason, the name Mevlana is widely known. His most famous work, *Masnavi*, was composed in Konya, called the Quran in Persian. Today, his work is still renowned in Turkey. Currently, various buildings and brands use Mevlana to refer to Rumi, just like the Mevlana Mosque in Rotterdam.

Toorman was commissioned to design the Mevlana mosque in an Ottoman style. In addition, he was asked to create a structure that would be appreciated by both Muslims and non-Muslims. In the first place, Toorman met the Turkish Hilmi Sahin who introduced him to designing mosques leading to a collaboration on three previous mosque projects. Nevertheless, the architect travelled to Izmir throughout the design process to understand the mosques program and increase his knowledge of Ottoman and Islamic architecture. He learned that specific features needed to be considered while building this Ottoman mosque. For example, the Mevlana mosque compared to Istanbul's blue mosque, shows similar architectural elements, such as the central dome, minarets, and secondary domes. Notwithstanding, the proportions, the central dome's structure, and the number of minarets are different. These features may influence the shape or aesthetics. However, while creating these religious structures, some fundamental aspects of mosques, in general, must be addressed just as certain common qualities must be considered when constructing churches.

This thesis examines the characteristics of the Mevlana mosque in Rotterdam, which Dutch architect Bert Toorman designed. It aims to clarify to what extent Ottoman and Dutch

features are visible in the mosque, including the architect's signature. The first chapter discusses how Ottoman architecture's origins influenced the mosque's layout, resulting in the classic Ottoman mosque to which Toorman refers. The second chapter elaborates on the characteristics of those traditional Ottoman mosques and how they influenced the design of a newly-built mosque in Rotterdam. The final chapter discusses how Ottoman, Dutch, and his signature were incorporated into the design of the Mevlana mosque, primarily through an interview with the architect. Finally, the findings are evaluated in the discussion and conclusion sections, along with associated limitations and future research.

# I. The transformation of a mosque's layout during the Ottoman empire

## A. Islamic and non-Islamic influences on early mosques

The Ottoman Empire owes its name to the man Osman Gazi. The name was originally known in English as *Othman*. Along with his sons and other Sultans, his dynasty came to be called *The Ottomans*. Together they built one of the biggest, longest lasting, and most widespread empires in global history. According to Quataert (2005), the empire was founded near the modern city of Istanbul towards the end of the 13th century. In this period, significant Ottoman architecture arose visible in the empire through various building types. However, Ousterhout (2004) stated that it is difficult to trace the origins of early Ottoman architecture.

On the one hand, influences of earlier Muslim architecture developed in other parts of Anatolia were implemented. On the other hand, Byzantine practices were applied to wall construction and decorative detailing. At the same time, the layouts and vaulting shapes may be more closely related to Seljuk architecture. 'The resulting heterogeneous architecture may be emblematic of early Ottoman culture.' (Ousterhout, 2004, p. 168). In Saoud's (2004) article, the Seljuks were the primary source of inspiration for Ottoman architecture throughout the 14th and 15th centuries. From the 16th century, the Ottomans developed an independent style. However, Khan (2022) claimed, just as Ousterhout, that Ottoman architecture drew strongly on Persian, Byzantine, and Arabic influences. He also mentioned that these three influences combine to form a particular combination expressed in their designs for mosques. Often, sultans commissioned these as they were crucial to the Islamic faith. The article of Yetkin (1959) shows that early Ottoman mosques in the 14th century were primarily small, squared structures covered with hemispherical domes. In constructing these mosques, features such as columns, stringcourses, and reused brick from Byzantine and ancient buildings were frequently implemented.

However, before discussing these ottoman mosques, Matthews (2000) explains how early mosques before the Ottoman empire were constructed. He argues how the early Muslims, who had once a nomadic life in Arabia, had essentially no architectural traditions. However, the lands they and their converts conquered were replete with architecture. Islamic troops captured cities of Greco-Roman elegance, which inspired a new architecture that met their religious and social requirements. Consequently, various Christian and Roman architectural styles were adapted. For example, the apse-facing altar in the longitudinal basilica had proven to be the ideal place for Christian worship. This configuration was also used in Islamic mosques, where additional aisles were occasionally constructed to create a more extensive area. Large courtyards were frequently built to provide a peaceful transition from the streets' activity or the desert's desolate expanses. Arcades surrounding these courtyards were constructed to provide cover and shade. Although another Roman-style structure, the dome, did already exist, it took several centuries before domed mosques became common.

The earliest mosques were rectangular, with flat roofs supported by arcades and connected by a courtyard filled with ablution fountains. However, by the mid-fourteenth century, these early mosques were transforming. According to Saoud (2004), the construction began to rise vertically by extending the columns rather than being horizontally positioned. Additionally, instead of a flat roof, a domed roof was adopted, and frequently, the construction was topped with additional smaller domes as it rose toward the central dome.

Ottoman mosques were influenced for over 400 years by Byzantine architectural masterpieces like Hagia Sophia's cathedral. According to Freely & Baker (2011), the great church erected in 532-7 by emperor Justinian was converted to a mosque by Mehmet II. Ousterhout (1995) confirmed this and mentioned that Ottoman and Muslim features and symbols were introduced, such as minarets, minbars, and other mosque furnishings. It was the first step in converting Christian Constantinople to Muslim Istanbul. Saoud (2004) explains that the *Ulu Cami*

*Mosque of Bursa* and the *Eski Cami mosque* of Edirne were the first representatives of traditional Ottoman architecture.

Goodwin (1971) stated that, until recently, the typical Western approach to Ottoman architecture was to view it as derivative of non-Islamic sources such as Armenian, Byzantine, Christian, and Islamic Persia, near Eastern, and Egyptian architecture. In contrast to most Turkish academicians in the late nineteenth and early twentieth centuries, they assumed a strong pro-Islamic stance and frequently sought to define as uniquely Islamic a diverse range of architectural forms and features from non-Islamic origins.

## **B. The impact of the greatest Ottoman's architect on the development of the Ottoman mosques.**

In the 15th and 16th centuries, Ottoman architecture in the empire peaked. An important person who made this possible is Mimar Koca Sinan (c. 1489-1588), the Great Architect Sinan. Al-Sulaiman (2018) stated that during the Ottoman Empire, among all architects, Sinan was the most celebrated of all. According to Ediz & Ostwald (2012), Sinan was responsible for designing, restoring, and constructing nearly 400 structures over his fifty-year career. Before becoming a chief royal architect, Sinan served in the army and fought in the Persian War. He travelled extensively with the troops around the Mediterranean Basin during this time, seeing several places and areas. Consequently, he accumulated many ideas, resources, solutions, and a wealth of architectural expertise.

In 1539 Sinan was named royal chief architect for the Ottoman court by Sultan Suleyman. He created a variety of buildings and constructions throughout this period, including aqueducts and fountains. According to Saoud (2004) and Saoud (2007), the exceptional mosques were the archetypal image of Ottoman architecture and, therefore, the most influential. The mosque played a vital role in Muslim society's cultural, religious, and political life. In the early 16th century, Sinan was tasked by the sultans and other family members with the responsibility of designing mosques, which occasionally needed to be transformed into *külliyes*. This type consisted of a building complex including a mosque, public kitchen, a hospital, a school and much more. According to Akgun and Turk (2008), Sinan's külliyes considered the area's geography. He attempted to build structures that fit into the city's existing pattern, serving as the city's foundation and important hubs for religious, cultural, educational, and economic activity.

The article of Saoud (2007) shows that Sinan builds 131 mosques. The designs of these religious buildings experiment with centralized dome-shaped spaces. Its domed spaces seemed weightless, and the interior surfaces provided plenty of light. As indicated earlier, these are compared with parallel developments in the Renaissance. Sinan has been compared to the Italian Michelangelo, who lived around the same period, according to Khan (2022) and Saoud (2007). They both were symbols, Michelangelo for the Renaissance and Sinan for the Ottoman dynasty. Moreover, there is much discussion about whether the Italian Renaissance architects and Sinan impacted one another since some of Sinan's particular characteristics could be seen in several Italian churches.

One of the masterpieces Sinan created was *the Selimiye Mosque* at Edirne, built between 1568 and 1575, which stands at the centre of a külliye, seen in figure x. An octagonal system of eight columns supports a vast dome. Furthermore, there are four smaller domes and four minarets positioned on the corners of the building. All four minarets have a long and slender appearance, each with three balconies on which the muezzin calls the prayer. In the külliye and the mosque, it is noticeable that many arcades were also used in the Byzantine period. The mosque's interior has spectacular Islamic decorative drawings, which need impressive craftsmanship. Whereas the mosque's exterior, with its majestic appearance, projected the power and wealth of the sultans, the inside, with its Islamic symbols, texts, and simple symmetrical structure, served as a reminder of a sacred place to interact with God where the sultans and royalty lacked power and wealth.

Another of Sinan's masterpieces is *the Süleymaniye Mosque* in Istanbul, seen in figure x. Like the Selimiye Mosque, it is part of a building complex with different facilities. A critical

difference in the mosque from Selimiye is that the Süleymaniye Mosque has much more domes. Instead of an octagonal system for the dome, a squared system of four columns is used to support the dome. An article by Ediz and Ostwald (2012) claims that Sinan used smaller domes, semi-domes, and buttresses to draw attention upward to the central dome while also overcoming a structural issue that allowed the mosque below to have a more open floor plan.

Consequently, Kuban (1987) argues that Dome architecture is a perfect example of how visual and structural properties work together to create a cohesive space of rational geometry. In further comparison, the four minarets of the Süleymaniye mosque are positioned at the corners of the forecourt instead of the dome's corners. Two smaller minarets with two balconies are presented at the forecourt's entrance. In comparison, two taller minarets with three balconies are situated where the forecourt's walls meet the mosque signalling the entrance to the interior space of worship.



Fig. 2. A masterpiece by Sinan, the Selimiye Mosque at Edirne, built between 1568 and 1575, situated in the center of a *külliye*. Source: <https://atiavipgroup.com/en/destinations/selimiye-mosque-masterpiece-of-ottoman-dynasty/>



Fig. 3. The Süleymaniye Mosque, built between 1551 and 1557, ordered by Süleyman the Magnificent is another example of Sinan's masterpieces which is part of a *külliye*. Source: <https://blog.radissonblu.com/visit-suleymaniye-mosque-istanbul/>

Sinan's two historical mosques are remarkable pieces of art. Notwithstanding this, he has created a wide variety of other significant structures. As a result, we can conclude that he was a significant figure in Ottoman architecture, influencing many other architects. According to Kahn (2022), the iconic Sultan Ahmed Mosque was completed in 1616 by a pupil of Sinan. However, Sinan's architecture belongs to Islamic architecture; Necipoglu et al. (2005) mention that it can also be studied as part of a broader Mediterranean culture. Therefore, this approach integrated Sinan's architecture into Mediterranean studies and a cross-cultural perspective. Because, after all, the Ottomans ruled the whole eastern Mediterranean basin.

## II. The balance between Ottoman and Dutch specific restrictions for building mosques

### A. The features of Ottoman mosques

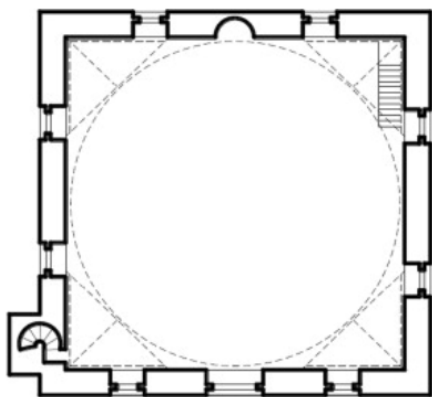
The Selimiye and Süleymaniye mosques are like any other mosques oriented to Mecca since this is the requirement of Islamic beliefs. Hawkins and King (1982) argued that Islamic law mandates Muslims pray facing Mecca and the Ka'aba, which has been the centre of Muslim prayer since the early seventh century. They mention further that, for centuries, Muslims have prayed towards the Ka'aba and built their mosques towards Mecca, as indicated by the mihrab or prayer niche in the mosque's *qiblah* wall. When transforming a structure into a mosque that was not oriented initially to the qiblah, the qiblah wall must be finally orientated to the direction of Mecca.

Domed bays of three or five are typical in most mosques, according to Freely and Baker (2011). At least one big courtyard, referred to as an *avlu*, is included in more prominent mosques. It is often surrounded on three sides by a dome arcade and features a grand doorway at the mosque's entry. It is traditional for the courtyard to feature an ablution fountain where Muslims can wash their hands and faces before entering the mosque to worship. A *şadirvan* is the name given to the fountain. The *son cemaat yeri*, or final assembly platform, is one of the courtyard's most remarkable features. The mosque's porch is a popular location for latecomers to pray on Fridays when the mosque is packed. Essentially, all mosques share a similar interior furnishing.

Freely & Baker (2011) argue that the mihrab is the most significant element in the interior of a mosque. The mihrab, a wall-mounted niche in the centre of the wall opposite the mosque's main entrance indicating the qiblah, serves as the focal point of the mosque's interior and the faithful's prayers. The mihrab in major mosques is often impressive, with a marble niche and a ceramic-tiled wall. The minbar is located right of the mihrab, where the imam stands on Fridays to deliver the weekly speeches. Majestic imperial mosque minbars are covered in marble and ceramic tiles, with a conical canopy resting on marble columns.

Throughout the history of the Ottoman empire, we have seen how several influences from other cultures shaped Ottoman architecture. Therefore, defining traditional Ottoman mosques is difficult. Consequently, a diversity of Ottoman mosque layouts emerged during this period, which Mustafa and Hassan (2013) describe, including the single dome layout, earring layout, duplication dome layout, multiple dome layout, courtyard dome, and an Earring dome courtyard layout.

A single domed-square unit characterizes the prayer hall in a single unit. The domed square unit is repeated transversally, longitudinally, or both in the multi-unit mosque. The



pendentive dome mosque's earliest and most basic form is the single-dome layout, illustrated in figure 4, according to Mustafa and Hassan (2013). However, the Mevlana Mosque, designed by Bert Toorman, does not match these layouts. Therefore, we need to look at the article of Necipoğlu (2007) since she described other typological plans of a mosque layout, figure 5.



Fig 4. Single dome layout. Source: (Mustafa & Hasan, 2013)

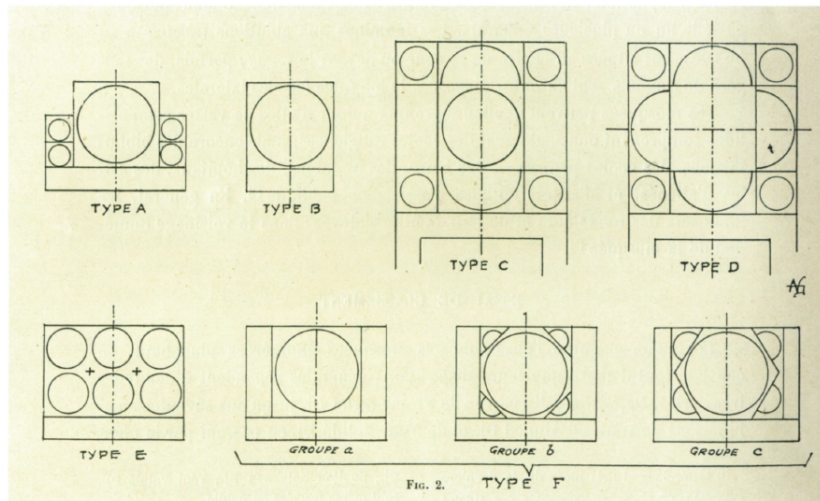


Fig 5. Typological chart of mosque plans. Source: (Necipoğlu, 2007)

The distinction in her typologies of Ottoman mosque layouts, four further variants as type D, type F.a, type F.b, and type F.c are identified. By comparing the floorplan and elevations of the Mevlana Mosque, illustrated in figures 10, 17 and 18, we may assume that the mosque is of type F.b. However, this applies to the dome's layout since the floorplan of the Mevlana mosque is rectangular. Type F.b consists just like the Mevlana's of one dome, an octagonal form of four smaller domes on each square corner.

During the era of the holy prophet, the first mosques had no minaret. However, this changed when the Muslim architects invented the tower. The muezzin ascends the minaret and walks to one of the balconies, using a staircase to pronounce the *adhan*, the call to prayer. At the time, the minarets became a significant part of Islamic architecture and did they represent one of the most prominent features of mosque architecture, according to Diab (2020). Furthermore, he argues that the minaret was introduced as a symbol of faith and an indicator of Islam's presence.

In the history of Ottoman mosques, minarets are situated around the mosque and vary from 1 to 6 minarets. According to Freely and Baker (2011), Smaller Ottoman mosques frequently have a single minaret on the right side of the entry. More significant and more prominent mosques, such as those from Sinan, are surrounded by additional minarets. Dere et al. (2014) explained that these tall and slender minarets differentiate themselves from other Islamic cultures and the pre-Anatolian period. The minarets' appearance is simple and not ornamented except for their balconies, according to Ediz and Ostwald (2012).

## B. Determination of a newly built mosque in Rotterdam

### Mosque policies

The article by Canatan et al. (2003) describes that in 2002, 13% of Rotterdam residents identified as Muslim, which can be classified into various Muslim groups, the largest of which being Moroccan and Turkish. Half of these 80,000 Muslims visit the mosque several times a month, 21% visit once a month, and 27% never come. Among these, older men are the most frequent visitors to the mosque. In 2002, most mosques were found in areas of Feyenoord, Chorlois, and Delfshaven. Furthermore, it is noteworthy that most Turkish Muslims live in the Delfshaven sub-municipality.

According to Hoving and Dibbits (2005), Rotterdam was the first city to adopt an integrated mosque policy in 1991, recognising Muslim groups as separate discussion partners. There was a vital link, and the Muslim communities expanded, but this began to disintegrate again in 2002, partially because of Pim Fortuyn's created party, *Leefbaar Rotterdam*. Since then, most decisions have been made to restrict Muslims' freedom of movement. As Toorman (2021) argues, the events of September 11 led to these consequences. Consequently, multiple debates over Islam took place, which brought stricter mosque policies. However, before this, building and housing new mosques were seen as a general problem in Rotterdam.

In the early 1970s, there were conflicts on the south bank of the Maas between established residents and migrants who were mainly Muslim. However, in the early 1980s, the municipality attempted to resolve the issue by instituting a systematic policy shift that incorporated the Muslim community's requirements by mainly involving the construction of mosques. Sunier (1996) asserts that this was noticeable in the 1980s when the number of places of worship rose. Canatan et al. (2003) affirm this, although they mention that these were frequently small, obsolete, deteriorated, or dangerous in terms of fire safety. Sunier and Canatan indicate that places of worship were primarily located in garages, converted houses, and other less representative housing during this period. A reason was a lack of money, as Muslim organisations were required to cover the costs. In comparison, France had already funded a mosque in the 1920s, Hoving and Debbit claim (2005). Many mosques obtain most of their income from monthly contributions, but they also receive substantial income through donations and gifts.

The government emphasised the segregation of functions in the 1991 Memorandum of Mosques in Rotterdam, according to Stadsarchief Rotterdam (1991). Mosques in the Netherlands were seen in Dutch society as migrant organisations. They had developed into hubs of local migrant activity, shops, a tea house, and other amenities forming a pattern of several relatively small mosques. As a result, the government decided to construct a few huge mosques to understand the mosque's activities better. The Mevlana mosque, designed by the Schiedam architect Bert Toorman, is an example. He took Dutch legislation into account when designing this large mosque but aimed to incorporate as many traditional characteristics as possible that are recognisable from an Ottoman mosque. According to the Turkish community in Rotterdam, they wanted to bring a small piece of Istanbul to the city, referring to the magnificent mosques from the Bosphorus influenced or created by the great architect Sinan.

Consequently, it has become a visible component of Rotterdam's cityscape, just like churches are in every western city. A sizable portion of the Turkish Muslim population resided in Delfshaven, which explains why a Turkish mosque was required at this site.

The mosque policy of 1991 ensured that mosques had been dominated by the search for housing in Rotterdam's history. Furthermore, it was more about the mosque's position in Dutch society than about the fact that there were several architectural regulations determining the number of minarets a mosque may have. For example, Toorman (2021) explains that no other specific building criteria for the Mevlana mosque were maintained compared to other public structures. However, this was also because there were no newly constructed mosques in Rotterdam at the time, and hence they were unaware of the repercussions. The major issues, stricter regulations, and aesthetic requirements emerged after the mosque was built in response to 9/11. The noise pollution caused by the call to prayer is an example that provoked a huge discussion. A more significant change was that mosques were no longer required to maintain their traditional appearance, according to Toorman (2021). It needed to have a more contemporary appearance. For instance, Hoving and Debbit (2005) describe how the representative of the leading Turkish Islamic organisations ensured that the *Westermoskee* in Amsterdam would be built in *de Amsterdamse Stijl*, blending seamlessly into the surrounding landscape.

## **The Mevlana mosque**

Bert Toorman established Toorman Architecten in 2001 after forming a partnership with the company Heuvelhorst Architecten. Toorman collaborated on several projects, and one of these

projects in 1995 was the Mevlana mosque, constructed by a Dutch contractor, Boender and Maasdam. The construction began in 1997-1998, and it officially opened to the public in 2001. Before the Mevlana mosque, Toorman met Hilmi Sahin, a Turkish man who was particularly active in building mosques. He was involved in mosques throughout his studies in Turkey and maintained strong ties to Turkish mosque organisations. For this reason, he was commissioned in Schiedam to turn an old boiler house into a mosque. The municipality approved its construction and agreed on the necessity of these kinds of places of worship. However, shortly after it began, the mosque's construction was halted due to a deviation from the design plan.

Consequently, the municipality instructed him to hire an architecture firm to finish the work. Thus, he approached Toorman, who was then associated with the partnership Heuvelhorst Architecten, and they accomplished the mosque's design. Subsequently, he returned to Toorman shortly afterwards to collaborate in constructing a modest mosque in Terneuzen. However, the mosque was never built, as it eventually formed in an existing building. Nevertheless, the cooperation was pleasant, which ensured its continuation.

After completing Terneuzen's project, Sahin and Toorman collaborated on two other projects: a mosque in Tilburg and a mosque in Rotterdam. One of these mosques, the Mevlana mosque, was commissioned by a Turkish Muslim group, Verenigin ter Behartiging van de Belangen der Moslims in Nederland, part of the Islamitische Stichting Nederland. The tasks were divided, so Sahin outlined the essential characteristics of an Ottoman mosque, and Toorman focused on the design. As a result, Sahin played a crucial role in fulfilling the demands of a Turkish mosque that he was familiar with due to the Muslim community.

Since 1992, the municipality of Rotterdam has had a policy on mosque housing. Most mosques were not satisfied with the current building since mosques were frequently housed in small, unsuitable structures unfit for this crowd-drawing function, according to Canatan et al. (2003). Therefore, two mosques were planned on each bank of the Schie.

The Mevlana mosque had initially been on the Aelbrechtskade in an old garage that had been in use since 1982. However, the location had to be changed because, with every Friday prayer, the entire Aelbrechtskade was overcrowded. Moreover, the building was considered undersized. In an article by Akkus (2004), it is argued that this location was not suitable, according to the chairman of the mosque's association. Toorman (2021) mentioned that the municipality believed a religious facility should not be in an old garage. For these reasons, the local government and the municipality recognised the necessity to relocate the Mevlana mosque, which would entail extending the mosque. This stand-alone mosque was the first mosque in Rotterdam that was newly built and got the look of an Ottoman style.

Before Bert Toorman's involvement, the new location of the Mevlana mosque was already being explored in consultation with its original surrounding neighbourhood. On the one hand, these users desired a new location close to them. On the other hand, the building requires space and contributes to noise pollution. Nevertheless, the locations needed to be conveniently accessible through public transportation and have adequate parking (Correspondent, 1970). For this reason, it eventually resulted in the current location for the Mevlana mosque, which combines parking with soccer, baseball, and softball club. The mosque is located on the outskirts of a residential area, making it easily accessible to visitors. According to Toorman (2021), the parking facilities are well organised since Fridays are intended for the mosque, and Saturdays and Sundays are intended for sports clubs.

Toorman (2021) argued that he was impressed that the Netherlands is home to a sizable Muslim population, yet this is not visible in our society. Toorman has always emphasised that this becomes visible in a building. He was also fascinated by the balance of mosques architecture in the Netherlands since different cultures meet each other. On the one hand, a classic look needed to be maintained, but on the other hand, the architect's handwriting throughout the building had to be implemented. 'The domes and minarets adhere to tradition, but my identity can be recognised at the entrance.' (B. Toorman, 2021).

### **III. From dome to the ornately decorated prayer niche; the design process and various architectural elements of the Mevlana mosque Speelruimte met pooltafels**

#### **A. The mosque's features**

##### **Orientation and program**

As previously stated, the qibla is the direction in which one should face the *Ka'aba* while praying. In addition, mosques should be directed toward Mecca. Ediz and Ostwald (2012) confirm that a newly built and stand-alone mosque, such as the Süleymaniye Mosque, is orientated to the qibla (2012). Therefore, when determining the orientation of a mosque, the direction should be considered during the design process. According to Toorman (2021), orienting the Mevlana mosque was relatively simple since the longitudinal axis of the location was roughly identical to that of Mecca, as this was the direction in which the roadways and bicycle routes were positioned. Prior to the construction start, it was said that a minor deviation would not constitute a significant issue. However, Toorman (2021) argued that an organisation in Turkey communicated that the deviation needed to be corrected by determining the compass direction to Mecca. As a result, the building's plan was slightly changed. However, this did not cause any further problems in the design process.

According to Toorman (2021), the largest group that visited the mosque came from the neighbourhood *Het Nieuwe Westen*, southeast of the mosque. However, the main entrance was positioned on the northwest side of the building towards the railways facing Mecca since this is an Islamic requirement, as previously stated. Consequently, visitors were forced to walk around the building to enter the mosque, illustrated in figures 6, 7 and 8.

The conference room, community room, computer classroom for young people, barber, and amenity room are on the ground floor, while the prayer area is upstairs, figures 9 and 10. There was insufficient space to integrate the whole program on one level. Situating the prayer area on the first floor maximises efficiency since it requires the most space. Furthermore, the prayer hall required significant vertical space, and the dome is always above the prayer area, so it seemed appropriate to situate it on the first floor. As a result, the double-layered layout benefits since the building becomes higher and statelier. However, this is not common to the Ottoman style mosque. In the entrance area between the two minarets, people can move up two flights of stairs in the most compact way to ensure as much prayer space as possible.



Fig. 6, 7 and 8. Toorman's design choices for a passage to the entrance to reduce the distance Source: (Toorman Architecture Archive, 2021)

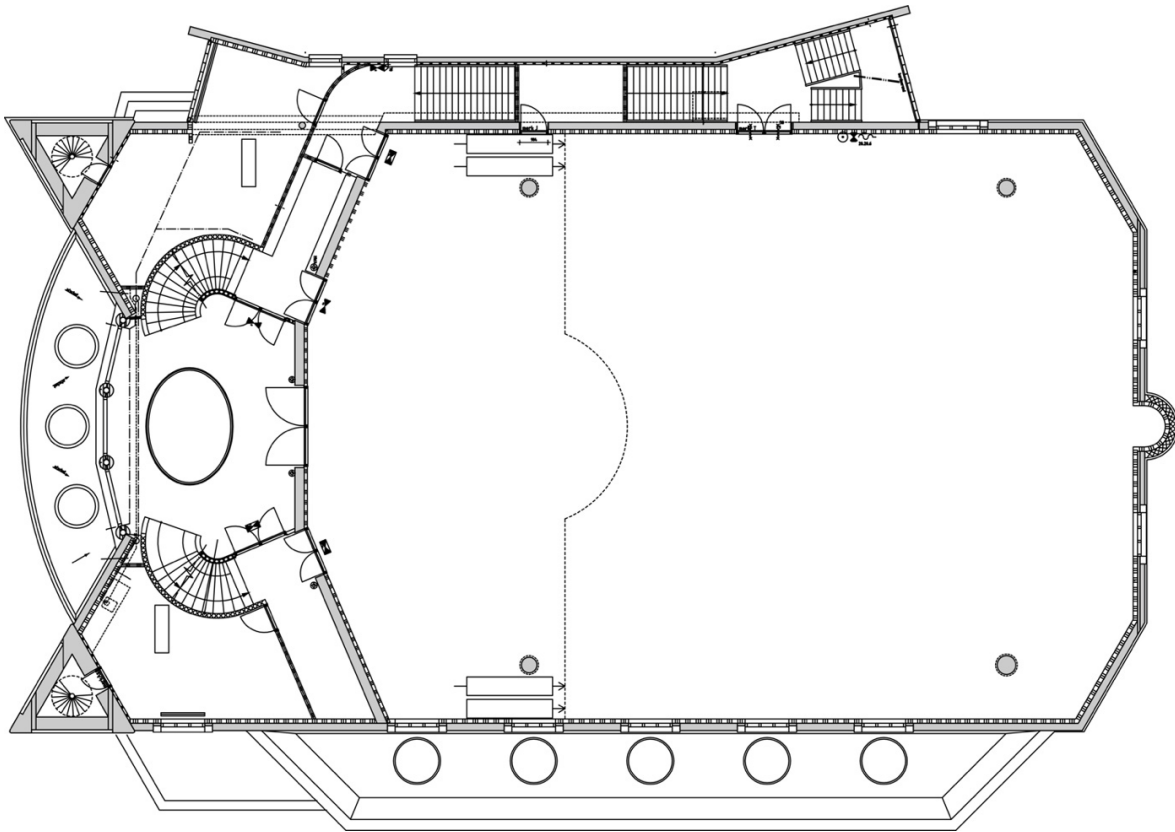


Fig. 9. Floorplan of the first floor of the Mevlana mosque Source: (Toorman Architecture Archive, 2021)

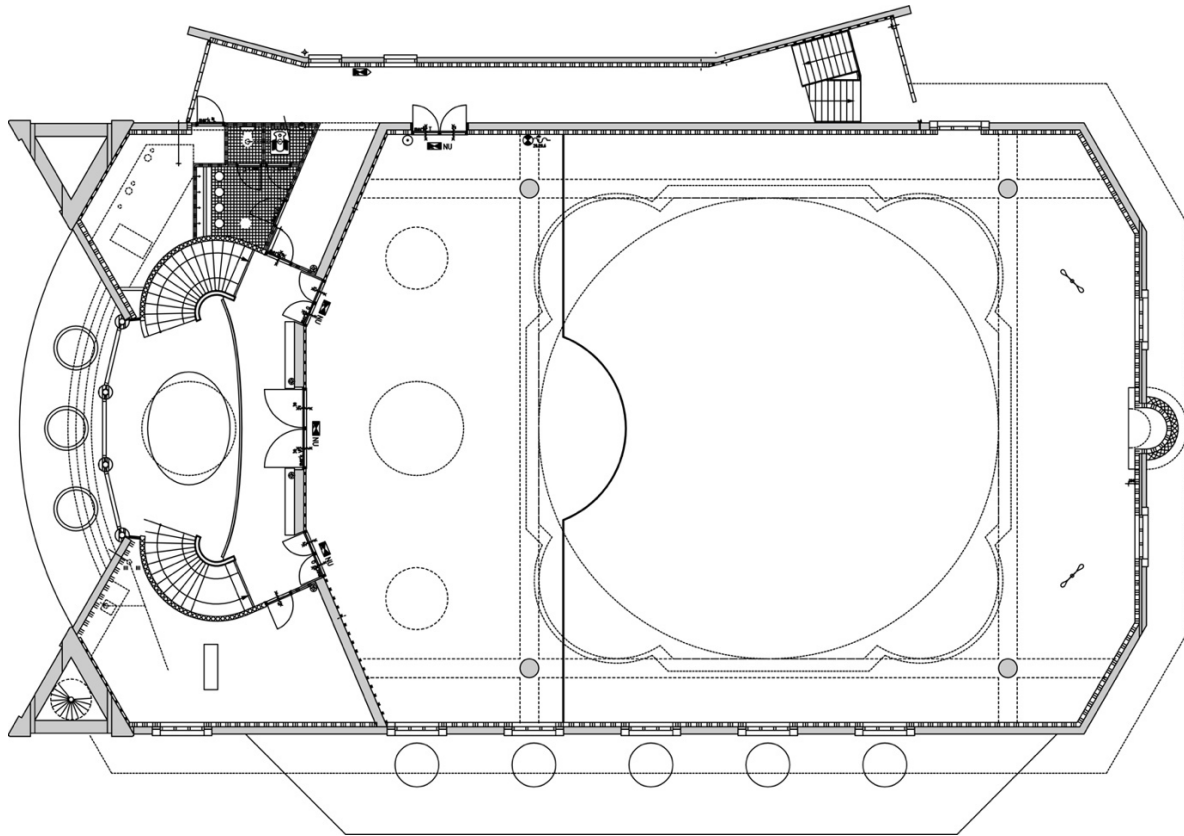


Fig. 10. Floorplan of the second floor of the Mevlana mosque Source: (Toorman Architecture Archive, 2021)

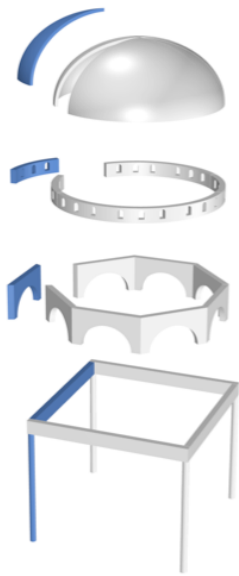
An Islamic requirement in mosques is that men and women are separated, visible according to Al-Asad (1999) and MacKrell (2016), in a prayer hall where the women's area is situated behind a screen or upstairs on a second-floor balcony. Men are situated downstairs in front of the prayer hall. MacKrell explains that this is a common defence used to prevent men from seeing a woman's body while praying. Furthermore, men and women are also separated in routing. Therefore, a woman cannot utilize the same entrance as a man.

For this reason, in the Mevlana mosque, it is intended that men use the main entrance, and women use the entrance in the southwest facade. The women's entry leads on the ground floor to the northeast facade, which contains the second stairwell. This stairwell then leads to the prayer room's balcony. However, the stairwell has another purpose since the Netherlands have strict regulations about fire safety, evacuation, and escape routes. For this reason, the stair was required on the building's northeast facade to serve as an escape route, illustrated in figure 10.

As previously stated, men and women need to be separated. However, it is notable that the younger generation places less value on these demands. Even for the chairman personally, it was irrelevant. According to Toorman (2021), he would have no objection to sharing the prayer room's entrance with the opposite sex. However, just like his parents, a generation above him did pray in the mosque. This generation was not used to this, so they found it uncomfortable and difficult to continue the same routing.

Nevertheless, the issue was whether these rules were appropriate to our Dutch society. However, no one had any problem with this, both Toorman and the aesthetics committee. Apart from the strict Dutch building regulations, there were hardly any restrictions on this mosque at the time. It was an uncommon category since there were barely any other similar kinds of mosques. 'The intention was to construct a Turkish mosque in the Netherlands, and it should truly be an Ottoman mosque.' (Toorman, 2021).

## The dome and minarets



Toorman (2021) stated that numerous constellations that adhere to Islamic principles must be considered apart from the mosque's Ottoman architectural components. The dome is, for example, not a hemisphere; the vertical radius is shorter than the horizontal radius. Furthermore, the dome represents the universe and serves to protect the place of prayer beneath it. 'The perfect centralization of the space under the main dome affirmed its unity and confirmed of one god, a fundamental concept in the religion of Islam, conceptualized by *Al-Tawhid*, which forms the essence of the Muslim faith.' (2004) Toorman (2021) mentioned that a feature of an Ottoman mosque is seen in the dome's structure. Figures 11, 12 and 13 illustrate how the dome is composed of prefab concrete elements. The dome is supported by four circular columns that support four connected beams to form a square shape. Subsequently, an octagon is built on top, consisting of eight prefabricated parts. Semi-domes are fixed to four of the components in the corner of the square underneath it. Then, the ring above is similarly made up of eight prefabricated parts, each of which has three tiny windows. Finally, the dome is affixed to the top of the ring.

Fig. 11. A 3d model of the configuration of the dome's structure. Source: (Own creation, 2021)



Fig. 12 and 13. The construction of the dome's structure made of prefab concrete elements. Source: (Toorman Architecture Archive, 2021)



Fig. 14. A birds view of the dome made of several concrete parts. Source: (Toorman Architecture Archive, 2021)



Fig. 15 and 16. The construction of the dome consist of prefab concrete. The concrete dome is topped with a wooden structure to connect the patinated copper. Source: (Toorman Architecture Archive, 2021)

As previously mentioned, numerous characteristics or constellations of a mosque must be considered. However, they may differ according to culture. For instance, Doğangün et al. (2006) argued that the minarets of an Ottoman mosque have a slenderest and more tapered appearance. In contrast, a Moroccan mosque has a more robust squared appearance, richly decorated with a small pavilion at the top.

The prefab concrete Mevlana mosque's minarets, in figure 16, are composed of several architectural elements: end ornament, spire, body, balcony, second body, second balcony, third body, transition segment, a triangular pulpit, just as the Ottoman classical minaret Dere et al.



mentioned in their article. Freely & Baker (2011) stated that a şerefe is an Islamic architectural element that refers to a minaret's wraparound balcony where the muezzin gives the call to prayer. The distance between the balcony and the bodies should not be extended to avoid an inelegant amount of space. Toorman (2021) argued that most minarets in mosques have one balcony. However, minarets may have up to three balconies in more significant mosques, just like the Süleymaniye and Selimiye Mosques. Compared to those mosques, the pulpits of the Mevlana mosque are triangular, which will never be seen in Ottoman mosques.

According to Toorman (2021), the more minarets a mosque has, the more critical the mosque is. One minaret is needed since one muezzin is required for the call to prayer. However, it is mentioned earlier that significant mosques like the ones Sinan made, for example, were commissioned by wealthy and mighty Sultans, which needed to be expressed in mosques that had to be enormous and magnificent, with several long minarets and multiple balconies. Doğangün et al. (2006) argue that minarets might be seen as the power of the empires and as a symbol of Islamic culture throughout the world.

Just as the dome, the minaret, is an essential component of an Ottoman mosque that should not be modified excessively. Toorman was nevertheless able to incorporate his handwriting into the design despite this. For instance, within one of the minarets is a spiral stairway that leads to the ring or a balcony, where the muezzin may give the call to prayer. Before entering this place, the muezzin must enter a door that faces Mecca. This entry is lower than usual. The person who wants to pass through this entrance should always lower his head. Toorman (2021) mentioned this is a beautiful gesture to the Islamic religion.

In the Mevlana mosque, the minarets are on either side of the longitudinal axis. In the initial phase, Toorman once made a set-up where the two minarets are located on the southwest facade. However, this proposal then returned to Turkey, where it was stated explicitly that the main entrance should face Mecca and that the minarets should be situated on each side of the axis. The mosque's symmetry is critical, and the minarets should always be on each side of the Mecca axis unless it is decided for a single minaret, which occasionally occurs.

Although the Mevlana mosque only has two minarets, the opening invitation card had two additional minarets added via Photoshop because the ISN believed the mosque deserved a higher status. Furthermore, it is more appealing when a card is received with the idea that this is an important mosque.

Even though these minarets are an essential architectural element to the Mevlana Mosque and others, the original function is no longer used in the Netherlands since there was much discussion about calling to prayer that causes noise pollution, according to de Koning (2005). Additionally, he claims that, in contrast to Muslim countries, where prayer is called five times daily, the Netherlands does not have this practice. However, during the Friday prayer, the *adhan* is recited and heard in some mosques. Moreover, the practice of the muezzin ascending to the minaret to perform the *adhan* has been discontinued for some time, as loudspeakers are now used. Nonetheless, minarets still need to be an integral feature of the mosque, as Muslims consider them as a traditional symbol, identity, visual quality, and a guidance to the mosque's location Diab (2020) described.

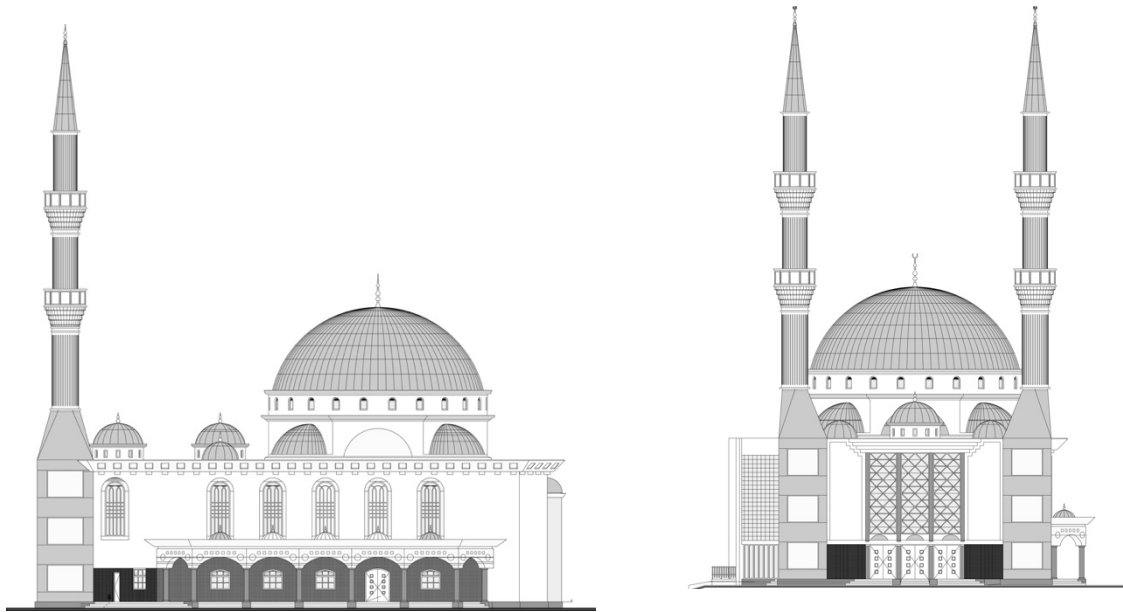


Fig. 17 and 18. Elevations of the south-west and north-east façade of the Mevlana mosque. Source: (Toorman Architecture Archive, 2021)

### Interior decorations

Toorman was less engaged in the mosque's interior design. For this reason, the mosque convened a separate group since it needed Islamic texts or symbols presented on walls, columns, domes, or ceilings like in many other mosques. However, it is generally restricted to texts and symbols because the Islamic religion forbids displaying images of the god, prophets, or other religious figures Toorman (2021) mentioned. Erzen (2011) explains that Mosques' interiors are devoid of furnishings except for carpeted floors and the minbar, a raised platform or stairway from which the imam speaks to the people. Either way, texts, inscriptions, and symbols are hand-painted, just as in the Mevlana mosque, where the organisation responsible for the painting crafts its patterns. That organisation travel all over the world for this. Figure 19 demonstrates how these drawings are applied to the mosque's interior. First, the decorations are sketched with a pencil on transparent paper. Then, glued to a piece of wall. Subsequently, these patterns are pierced with a needle, creating small holes in the wall. Finally, lines are drawn, and everything is painted. This interior craftsmanship requires time, and a large team has been assembled to accelerate the process. According to Toorman (2021), this team painted the mosques inside for more than a month. Besides the beautiful inscriptions and symbols, countless decorative mosaic tiles are incorporated for interior cladding and the mihrab, typical for traditional Ottoman mosques.



Fig. 19. Process of how the decorations are made on the dome, walls and columns (Toorman Architecture Archive, 2021)

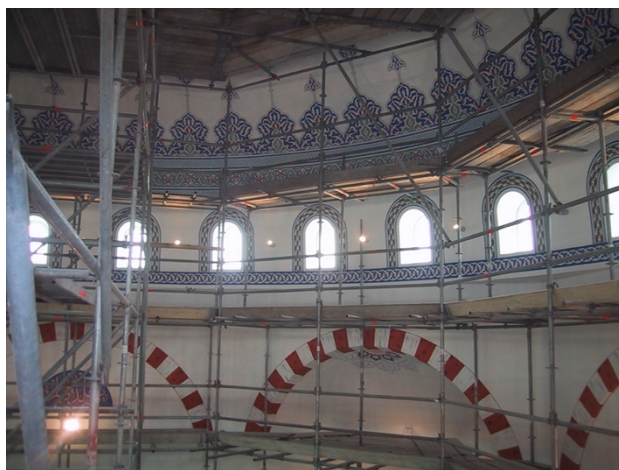


Fig. 20. Interior view of the dome's decorations (Toorman Architecture Archive, 2021)

## The washroom

The washroom is an essential function in the mosque. These are built to help Muslims perform wudu. One must perform a minor ritual ablution before praying if he is ritually unclean. In this ritual, hands, mouth, nostrils, arms, head, and feet are washed. It is not only a symbolic meaning and thereby a kind of repentance to God but also distracts from his worldly affairs. In figure 21, the Mevlana mosque provides these washrooms. However, there is insufficient capacity to wash. For this reason, it is expected that this will be done mostly at home.



Fig. 21. Plastic window frames used for façade openings due to financial reasons. Source: (Toorman Architecture Archive, 2021)

## B. Specific design choices

Figures 4, 5 and 6 illustrate the following design choices. The triangular design of the minaret's pulpit was aesthetically appealing. It provided for the creation of a tiny passage between the structure and the minaret, which reduced the need to travel the entire length around the minaret to reach the main entrance. The passage formed an excellent connection with the corridor shown in figure 4.

The colours selected for the Mevlana mosque correspond to the mosques in Turkey, according to Toorman (2021). However, in contrast to the mosques in Turkey, he mentioned that those mosques have a somewhat darker and gloomy appearance. For this reason, Toorman has chosen a softer colour palette for the outside of the building. In further comparison, Toorman uses only a similar colour palette, illustrated in figure 26, since concrete and decorative plasterwork are mainly used as material, according to his construction pictures and architectural drawings. Some materials, such as cladding and the structure of the spire, consist of other materials. Material wise, the Mevlana mosque has almost no resemblance to the traditional mosques mentioned by Toorman. However, as previously stated, the layout of the dome refers to type F.b of typological chart of Ottoman mosque plans from Necipoğlu (2007), with an octagonal form, four smaller domes on each corner of the square and four columns.

The Mevlana mosque's floors are primarily made of hollow-core slabs, a component that cannot be seen in traditional Ottoman mosques. Since hollow-core slabs emerged after the reinforced concrete slabs in the early twentieth century, as mentioned in the article of Gasparini (2002).



Fig. 22. Concrete used for the structure of the mosque. Source: (Toorman Architecture Archive, 2021)



Fig. 23. Wooden structure used for the spire with a patinated copper cladding Source: (Toorman Architecture Archive, 2021)



Fig. 24. Prefab concrete structure for the balconies of the minaret. Source: (Toorman Architecture Archive, 2021)



Fig. 25. Wooden structure used for substructure for the patinated copper domes. Source: (Toorman Architecture Archive, 2021)



Fig. 26. The colour palette Toorman uses in the Mevlana mosque. Source: (Toorman Architecture Archive, 2021)



Fig. 27. Bert Toorman on the roof of the Mevlana mosque next to the patinated copper domes. Source: (Toorman Architecture Archive, 2021)

'In Turkey, green copper is a typical building element seen in mosques.' (Toorman, 2021). This green colour is represented in the patinated copper domes of the Mevlana mosque and the green copper tones of the eaves in figures 26 and 27. However, the Sülimiye Mosque, Sülimaniye Mosque and other previous literature on traditional Ottoman mosques do not have this typical green element Toorman mentioned. The blue mosaic on the wall of the outside hallway, illustrated in 28 and 29, is not often seen in Turkey. It references the Delfts Blauw. Furthermore, the red-brown colour refers to the buildings in the mosques' environment. These are other examples of Toorman's handwriting that may be recognized.



Fig. 28 and 29. Elevations of the south-west and north-east façade of the Mevlana mosque. Source: (Toorman Architecture Archive, 2021)

Plastic window frames have been used throughout the building due to financial considerations. Wooden frames require more maintenance and must be repainted after some time. Moreover, the chairman desired a narrow frame division which is more difficult with wood and doubled window glazing, which would generally result in thick frames. Additionally, to reduce the costs, it has been decided to glue the smaller inner frames to the windows, as seen in figures 30 and 31.



Fig. 30 and 31. Plastic window frames used for façade openings due to financial reasons. Source: (Toorman Architecture Archive, 2021)

### C. Reflection of the design process

Toorman (2021) mentioned that, in general, architects are often called designers in the Netherlands, while contractors are builders. In Turkey, the two are frequently merged into a single practice. Several construction firms have been permitted to design and build mosques, which they then do in their unique style. According to Freely & Baker (2011), the first Ottoman mosques had an oblong space covered by a tiled pitched roof or an inner wooden dome, though most domes were destroyed in fires. Soon after, mosques were built in the shape of a square room with a masonry dome resting directly on the walls, the domed square being the archetype of Ottoman architecture. However, this method did not work in the design of the Mevlana mosque. According to Toorman (2021), the traditional way is not practicable under Dutch laws, particularly with a dome of these dimensions.

Due to the typical masonry of a dome, the constructor of the Mevlana mosque could not produce calculations that complied with Dutch safety rules, which seemed unusual for Toorman, given that mosques in Turkey with their characteristic domes continue to remain to this day. Safety rules appear to be considerably stricter in the Netherlands. It should be emphasized that the dome, as stated previously, was a critical component of an Ottoman mosque. However, this could not be accomplished due to the Dutch regulations. As a result, with the agreement of the mosque association, Toorman chose a modern construction method, prefab concrete, for the building construction. These prefabricated pieces were manufactured at a Dutch concrete factory. As a result, the dome is not built traditionally.

Another minor setback occurred during the reinforcement of the minarets. The minarets also made of prefab elements are placed on top of each other. They are reinforced with concrete and linked in the following manner. One part has a recess, and the other element has a piece of reinforcement, which is subsequently poured into each other. However, something had gone wrong somewhere with other anchors inside as well. It was discovered at a time when there was

much wind. Therefore, the construction was delayed, several roadways were closed, and traffic was halted for a week which caused severe consequences. Toorman (2021) stated that you are insured against professional liability as an architect, as are the contractor and constructor, since claims reached over a million. Despite the high claims, the design and construction phases were successful.

Furthermore, the building was halted for a period since the ornament on the dome did not comply with Dutch regulations. The architect (2021) stated that they underestimated that. The ornament's size must be considered when determining if it can withstand the wind load in the Netherlands. It will need a large base plate and a strong steel rod to attach the spheres to accomplish this.

Although the opening went smoothly, the period following was exhilarating and risky because the Mevlana mosque opened in November, only about two months after the 9/11 attacks. However, the then-mayor resumed the development of the mosque, and its opening could still take place. The New York tragedy created a tense atmosphere. Due to the uncertainty and risk that existed at the time, stringent security measures were implemented during the opening. According to Toorman (2021), there were six vans with MMA in the Neptune Stadium. Nevertheless, the entire process proceeded smoothly.

Hilmi Sahin's collaboration with Toorman ended when he had to return to Turkey for specific reasons. Although the partnership between Sahin and Toorman was successful, Sahin returning to Turkey prevented the planning of more buildings. Consequently, the mosques in Tilburg and Rotterdam were the last mosques designed by Toorman. Toorman stated (2021) that despite the appealing exterior of the mosques, the expenses were extremely high. On the one hand, Sahin said that such explicit mosques receive little funding.

On the other hand, the perspective of the overall Dutch society regarding Muslims and mosques changed after 9/11. Therefore, the Dutch society wanted to make it more neutral and reserved. Additionally, future mosques should be focused more on gathering functions than specifically religious ones. Consequently, mosques with a contemporary design are being constructed today. In 2006, when the Rotterdam city council had just introduced stricter rules for new mosques and had prohibited newly built mosque construction, the Mevlana mosque was proclaimed Rotterdam's most beautiful structure. However, Toorman (2021) stated that the Islamic community was behind this and prompted Muslims to vote for this structure.



## IV. Discussion

This research aimed to determine how Bert Toorman came up with the design for the Mevlana mosque. Multiple factors contribute to the result. Freely & Baker (2011) lay a foundation for the first chapter. Their book provides an excellent overview of the Ottoman Empire's history and, consequently, the origins of Ottoman architecture. Furthermore, they discuss how this architecture can be recognized in mosques. A limitation was that not all pages relevant to this paper were accessible. The same goes for the books of Necipoğlu (2005) and Goodwin (1971). Necipoğlu's literature gives a good overview of how Sinan influenced Ottoman architecture. Her work, in conjunction with that of Ediz and Ostwald (2012), Diab (2020), and Freely & Baker (2011), is a crucial source for the Ottoman characteristics of mosques. Most of the literature on Ottoman characteristics of the mosques often deals with only a few aspects of those elements. For instance, Doangün et al. (2006) and Dere et al. (2014) focus exclusively on minarets. The literature of Necipolu (2007) best describes the appearance and characteristics of a classical Ottoman mosque. In the first part of the thesis, it can be noted that Ottoman and Islamic characteristics overlap, sometimes forgetting those specific characteristics are not necessarily Ottoman but still needed.

It was more difficult to find primary sources for the chapter 'Determination of a newly constructed mosque in Rotterdam' due to Dutch literature's primary need. It concerns a newly constructed mosque in the Netherlands. The mosque policy to which reference is made is primarily a housing policy for mosques. Furthermore, much literature discusses how Islam and its mosque gained a foothold in Rotterdam society, which had various consequences. However, little or no literature has been discovered regarding specific special requirements or other building requirements relevant to the construction of a mosque. Regarding the Mevlana mosque, it only made things more difficult because numerous documents containing necessary information were protected by the municipality of Rotterdam and thus unavailable.

Nonetheless, Canatan (2003), Hoving and Dibbits (2005), and an interview with Bert Toorman served as the primary sources for Chapter 2B and Chapter 3, supported significantly. The final chapter derives most of its information from a personal interview with Bert Toorman, in which he details the process from commission to completion. The interview's key focus is the design features that lead to an Ottoman mosque. However, the story is told from his point of view and is thus interpreted similarly. An attempt is made to convey as much information as possible about how the architect considered challenges and thus made particular choices. In my view, the building is less Ottoman than he describes.

## V. Conclusion

In this thesis, an attempt was made to find out how the Dutch architect Bert Toorman managed to build the Mevlana mosque, which he had to meet with various factors. The main goal was to design it as an Ottoman mosque reminiscent of the magnificent mosques built along the Bosphorus during the Ottoman Empire.

The first chapter discusses the origins of Ottoman architecture and how it influenced the mosque's layout. According to various sources, Ottoman architecture has a variety of origins, both Islamic and non-Islamic. Due to the influence of multiple Romanesque historic buildings, the earlier mosques were transformed into new and much larger structures, where a dome was suddenly used over the earlier courtyard. The Great architect Sinan is a significant figure in Ottoman architecture because he elevated it to the highest level. The royal chief architect designed numerous structures, primarily mosques and külliyes, on the orders of powerful sultans. He converted the previously Christian Hagia Sofia into a mosque and created several masterpieces, including the Selimiye and Süleymaniye mosques. Perhaps the most notable features of his mosques are his use of domes, the large spans created by the domes, the number of domes used, the mosque's structure, and the long, slender minarets with decorative balconies.

The first section of the second chapter focused on researching an Ottoman mosque's features, some of which were already mentioned in the previous chapter. Apart from the Ottoman features explained, such as the various classical layouts of a mosque and the origins of the long, slender minarets, there are frequently numerous requirements within Islam that must be observed. For instance, one should always pray toward the qiblah, and the mosque should be oriented similarly, which should not be confused with an Ottoman characteristic. Nonetheless, such elements occasionally play a crucial role in developing an Ottoman mosque.

The second section of this chapter examines the determination of a newly-built mosque in Rotterdam, preceded by some background information. It was needed to practice Islamic beliefs since the arrival of migrants and the spread of Islam in the 1970s. At the time, it was only used on a small scale. Muslim associations and mosques were housed in small old spaces, compelling the government to pursue mosque housing through a mosque policy. As a result, the newly constructed Mevlana mosque, designed by Bert Toorman, was built. He was introduced to this project by Hilmi Sahin, with whom he had previously worked on mosque projects. Sahin was responsible for outlining the essential characteristics of an Ottoman mosque, while Toorman focused on design.

The final chapter features an interview with Toorman. He discusses how he incorporated Ottoman features into the design of the Mevlana mosque, which includes an examination of the orientation, the program, the dome, the minarets, and the interior decorations and washroom. Finally, through reflection, we examine the entire design process and specific incidents.

In summary, Toorman tried to design a mosque in an Ottoman style. However, the structure is less Ottoman than he assumes. While some principles, the dome layout, and interior decorations are all Ottoman, there are considerable differences, such as the building's construction, which comprises prefabricated elements and hollow-core slabs. They bear no resemblance to a traditional Ottoman mosque. Although some actions were taken to comply with Dutch legislation, they were primarily concerned with the strict building requirements for construction. However, several features clearly show Toorman's handwriting, such as the mosaic passageway running the length of the building and the use of specific colours. In general, this mosque considers eight factors: Islamic, Ottoman, and Dutch legal systems are all applicable. In addition, the design must incorporate the needs of the users, residents and their integration into Dutch society and the architect's signature.

In this research, several characteristic Ottoman elements are discussed, reflected in the Mevlana mosque. However, there are still other aspects missing that need to be addressed. For example, it is possible to focus more on the incidence of light and features of the facade of the Mevlana mosque. Further research could also examine how users and the neighbourhood have

received the building, which could be accomplished through interviews and journals and newspapers, where people's expressiveness and emotions are more visible. Besides, one can examine the mosque's and other mosques' impact on the aftermath of 9/11.

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