**Original Research Article**

# An Investigation of Developments and Changes in Mashhad Spatial Organization

**Mohammad Javad Nattagh***

*M.A. in Landscape Architecture, Faculty of Architecture, College of Fine Arts, University of Tehran, Iran.*

**Mahdi Hosseinzadeh**

*Ph.D. Candidate in Landscape Architecture, Faculty of Architecture, College of Fine Arts, University of Tehran, Iran.*

Abstract | As one of Iran's historical cities, Mashhad emerged in the 3rd century AH on the outskirts of the Toos and Tabaran villages. Throughout history, Mashhad's religious center has always influenced the development and expansion of the town (the holy shrine of Imam Reza). With a holistic view of the city from the perspective of spatial organization developments, this research deals with the historical-analytical investigation of the foundation of Mashhad city and its consequences on the destruction of the urban identity community in the elements of the spatial organization, including the center, structure, neighborhoods and urban territory. From a systemic perspective, the city is a coherent system of interconnected components, each of which plays a specific role in achieving a particular goal. According to the studies and the investigation of the analytical changes made in the research, it appears that changes in the spatial organization of the city of Mashhad from the Safavid era to the present day, particularly in the last half-century, have had destructive consequences for urban identity, including a loss of cohesiveness in the city center. An unbridled and boundless development and the change have affected all city organs, mainly due to government orders. As a result of the interventions in urban development plans and the expansion of the religious center, as a powerful element that provides services only to pilgrims, the community and fabric with which the primitive residents of Mashhad identify themselves have been destroyed.

Introduction| Because cities result from socializing processes, mere physical formations and developments cannot describe their characteristics. According to systematic analysis, the city comprises elements that make up its spatial organization[1]. From this point of view, cities are a collection of interconnected organs formed by an identity community, a cohesive and relative whole, each of which plays an essential role in achieving a unique goal. In Iran's traditional cities, for example, bazaars have formed a longitudinal structure along the direction of the town. On the other hand, religious centers such as mosques and shrines have created circular patterns in cities. During the gradual evolution of Mashhad's spatial organization, the Holy Shrine of Imam Reza(as) has been the most crucial influencing element for its development. Due to its attraction, urbanization has continued to expand around this sacred center. For this reason, the cohesive and homogeneous connection with the surrounding context has been one of the features of the shrine throughout history. The continuous, organic link between Mashhad's center and its urban spatial organization has been disrupted by governmental interventions and urban planning since the Safavid era. This research seeks to analyze the historical-analytical changes in the foundation of Mashhad city's spatial organization due to the interventions made to its structures, neighborhoods, and territories.

## Research Method

This historical-analytical research investigates the macro to

*Corresponding author: +989355011532 , mmuhammad natagh5011532@gmail.com

micro developments of the spatial organization of Mashhad based on a holistic (systemic) approach. Using written records, historical maps, and analysis of Mashhad's current spatial organization, the city's spatiality examines how its spatial organization has evolved as a result of changes in its four main pillars of spatial organization: center, structure, neighborhoods, and urban territory.

## Research Background

The background research related to this article can be divided into two categories: the first category is the books and sources that describe the city of Mashhad and its historical developments in different historical periods: books such as "Motalle-Al-Shams" (Etemad al-Saltanah, 1983), "In search of urban identity of Mashhad" (Rezvani, 2005), Tarikh-e Mashhad "Az aghaz ta Mashrooteh" (Seyedi, 1999), "Paytakh-ha-ye Iran" (Kiani, 1997) and "Mashhad dar aghaz-e gharn-e chehardahom be gozaresh Maktab Shahpure (Modarres Razavi, Fayyaz, Moayyedi, Molavi & Farrokh, 2009) as well as various travelogues such as "Rooizname-ye Safar-e Khorasan" (Hakim al-Mamalik, 1977), "Fraser's travelogue (Winter Journey)" (Fraser, 1986), "Travelogue of Nikolai Khanikov: Travel Report to the South of Central Asia" (Khanikov, 1996), from Khorasan to Bakhtiari (D'allemagne, 1999), the description of a trip to Khorasan province and northwestern Afghanistan (McGregor, 1987). The second category of research that has studied the structural and systematic aspects of the city: the book Spatial Organization of the Iranian City in the Islamic Period, Mansouri (2020) space and creating a framework for study in this field and the basis of the spatial organization of Iranian cities such as Qazvin, Tabriz, Bushehr, Gorgan, and Yazd were introduced and analyzed based on the four fundamental pillars of the center, small wholes, structure, and territory. The book on the spatial organization of the city of Qazvin studied the history of changes in the urban landscape of Qazvin and analyzed the changes of different historical periods in the four systems of the center, structure, neighborhoods, and territory (Mansouri & Dizani, 2016). In other research, Hemati and Mansouri evaluated the interpretations of Persian-speaking researchers in expressing the concept of the spatial organization of the city (Mansouri & Hemmati, 2021). The survey of the spatial organization of Tabriz city from the beginning of Islam to the Qajar period was done by Mansouri and Mohammadzadeh (2017) based on historical and visual sources, this research has tried to analyze the spatial organization of Tabriz from before the Ilkhanate Period to the Qajar period in the form of analytical diagrams. Bahrami and Atashinbar (2020) researched the changes in the urban landscape of Hamedan city center. Relying on travelogues, Abarghouei Fard and Mansouri (2021) have redrawn the components of the spatial organization of the Iranian city after Islam. They

have stated that the descriptions of Iranian cities by tourists in the 8th to 13th centuries AH. This research indicates the organization and continuous operation of certain elements, similar to the spatial organization of the city, has enabled the formation of the whole city uniquely and has brought the realization of civility and urban society in the form of a living and dynamic organism. Some researchers have studied the city from the complexity theory point of view (Sefika Sule, E. & Nihan, 2019; Morani, 2015; Crawford, 2016), a theory in which the influence of different components in a system is examined. In this regard, research has studied the analysis of the spatial developments of the central part of Tehran based on the complexity theory (Hatami Nejad, Pourahmad, Zyari & Behboudimoghadam, 2021). Atef al-Shaari studied the pre-modern spatial organization of Medina as well as the effects of the Osmani government (Alshehri, 2018). Farida Nilufar discussed the changes in the spatial organization of Dhaka city in Bangladesh (Nilufar, 2010). Al-Salim has studied how the spatial organization of religious cities is formed based on the religious center. In this research, he has tried to explain how behavioral and residential activities are formed around the sacred urban center (Al-Salim, 2021). In her thesis at "Delft" University, Keimansesh discussed the effects of religion's power in forming the identity of the city of Mashhad (Keimanesh, 2011).. "David Darwent" has completed a thesis on urban growth related to economic, political development, and westernization in Mashhad city at "Durham" University. In this research, he has analyzed the changes in the social and house architectural conditions of Mashhad citizens by examining modernism's development and the formation of new neighborhoods (Darwent, 1965). Maroufi and Rozina have studied the influence of pilgrimage in forming religious cities such as Mashhad and Mecca. This research studied the foundations and examples of holy cities and analyzed the pivotal and central role of Razavi's Holy Shrine in Mashhad (Maroufi & Rosina, 2017). Abbas Azari and his colleagues have investigated research on the effects of the expansion and development of religious places in Islamic cities and have investigated cities such as Medina, Mecca, Najaf, and Karbala as similar cases to Mashhad. The presence of people on different fronts around the shrine is a problem that has been analyzed utilizing computer data in this research (Azari, Barati, Mirmoini & Mohammadi Ojan, 2016). Despite the specific case study, compared to others, the unique aspect of this study is that it takes a holistic approach to examine the impact of urban development plans on Mashhad's spatial organization based on the written record and historical sources. Analyzing the whole and the part of the whole enables the analysis of factors and components. As the center and core of the city, the Holy Shrine of Imam Reza(AS) is being studied along with other urban elements and organs. In a macro sense, the study

of urban interventions and developments is built upon the foundations of a city's spatial organization, including its center, structure, and small wholes of land and urban territories in different historical periods.

## Theoretical Framework

Various factors and aspects are involved in determining how cities are formed, based on a definition of social units, each with its own functions and based on the principle of primary centrality. The city's social and physical dimensions are dynamically interconnected (Mokhles, 2017, 15). The city is thus defined as a system in this definition. As a result, it should be possible to distinguish semi-independent components within the system so that the "order" between them is determined by the city's spatial organization (Mansouri & Dizani, 2016). Like other social systems, cities are complex systems because not only are they composed of many components, but they are mainly influenced by multiple actions and interactions between different urban elements (Moroni & Cozzolino, 2019, 42-13). Considering this study's theoretical definitions and framework, the city's spatial organization consists of four main elements: center, structure, small wholes, and territory (Mansouri, 2008, 2013, 2020).

### • Territory

A territory is a boundary that separates one geographical region from another. There can be specific attributes that can be received as sensory perception and the possibility of establishing a specific and separate function outside the territory's borders. To realize the overall perception of the city, a group of people living in the city must recognize and understand a range of spaces to which they consider themselves to belong. Thus, the edge acts as a boundary between the inside and outside and conveys special meaning. The physical crystallization of the territory of the Iranian city appeared as a rampart (Mansouri, 2020, 52). In Iranian cities, ramparts have always been used to define the city's territory and distinguish it from the surrounding area. The city's existential philosophy is an integral part of its organization. However, many researchers argue that it was initially intended to provide security. It remains the primary component to understanding how the city has evolved as a manifestation of the "inside" within an infinite space, as it continues to be the main element in understanding its meaning. As a result, it is considered "outside" (ibid., 49).

### • Center (core)

Traditional Iranian cities were places of spontaneous integration of semantic and functional identity, centered not necessarily on the geometrical center, but on the concept of centrality (ibid., 53). Besides being a discrete and subjective concept, the center is the most critical indicator element of spatial organization. Mansouri (2007, 51) defines the core as the consensus of the entire city and its events. Multiple levels of meaning and activity associated with the city center are derived from the society's memory, sense of belonging, identity, and symbols. "Center" emerges as the identifier of a city by its citizens as it reveals its nature and identity (Mokhles, 2017, 16). A center is where different strata of society live, representing a biological complex with specific political, social, and economic characteristics (Hiscock & Cohen, 2018, 181).

### • Structure

As the city's spatial organization is composed of smaller systems, each of its constituents or identifiers can be considered a more straightforward and minor system. A structure can be divided into three categories: main roads, secondary roads, and byways. Road networks are composed of a variety of components. Each plays a unique role as a subsystem of the road network or city structure (Atashinbar, Mansouri & Sheibani, 2011, 95). This structure serves as a physical-functional axis that links secondary roads and byways. Several components make up the road network. Road networks are composed of several subsystems, each playing a different role in the city (Mansouri, 2020, 56), and is usually affected by the essential regional roads. Its proximity to the city's centrality implies its morphology and concept regarding functionality, physicality, and meaning (ibid.).

### • Small wholes (neighborhood)

As semi-independent units, small wholes are seen in the composition of the Iranian city and cover the entire city surface. These units are called "neighborhoods" and are the main elements of the city system. Neighborhoods act as a set of interconnected components and are independent in their entirety and existence. These elements, called small wholes, are related to each other and the centrality of the city through the structure (ibid., 60). In addition to neighborhoods, activity and service complexes as independent units and as a whole. There are many in the city. Small-scale urban arenas and squares are examples of urban complexes that, like the city and its center, are recognizable in their independence and connection between their components (ibid.).

## Analysis of the Spatial Organization of Mashhad City

Mashhad has constantly been developing and expanding due to its role as a pilgrimage center since it was founded, leading to significant changes in its urban structure. Space organization in Mashhad city can be analyzed at three different periods. First period: from its formation to the Timurid era; second period: from the Safavid era to the Qajar era; third period: from the Pahlavi era to the present.

**• The First Period: from the beginning of formation to the Timurid Period (from the 3rd century AH to the 9th AH)**

After Imam Reza (AS) was buried in Hamid bin Qahtaba's garden in the 3rd century AH, the initial seed of Mashhad was sealed, and gradually, with the settlement of Muslims and those close to the Imams over the following centuries, the city of Mashhad was established (Rezvani, 2005, 148). In the early Islamic period, Noghan, one of four cities in Tu's province, was more critical than Tabran in the vicinity of Mashhad after Tabaran. The Shiites and followers of Ali (AS) and neighbors gradually built houses around the holy shrine in the 3rd and 4th centuries. The fort and rampart around the grave of Imam Reza (AS) was the first physical element of the city, acting as the "city citadel" or last point of defense (ibid., 215). The first Rampart of Mashhad was built in the 510s to 515s (Modarres Razavi et al., 2009, 16). It is the Holy Shrine of Imam Reza (AS) that survived Mashhad's attacks by different tribes (Darwent, 1965, 76). During the second half of the 6th century, Senabad and Noghan were united and formed Mashhad. Although "Ghaz" clans attacked Mashhad like Neyshabur at this time (568 Hijri), the Holy Shrine suffered no damage (Ibn al-Athir, 1988, Vol. 20, 248). In the 2nd and 9th centuries AH, Mashhad had little significant development, but after the Timurid kings ruled, it gradually became the center of Khorasan. Mashhad's spatial organization before the Timurid Period is illustrated in Fig. 1. Hamid bin Qahtaba garden is the center, and Sanabad and Noghan, as small wholes and Qanat, play the city's structural role.

Due to the Timurid dynasty's attention to Mashhad's economic, cultural, and urban development, the city became the second government city after Herat (Rezvani, 2005, 152). This biological complex was also given a city identity with the construction of Chaharbagh Government House in the 9th century AH. Its main components, including the government center, religious center, and Bazaar, found a natural body (ibid., 222). In the Timurid Period, the government citadel (Chaharbagh) and the holy shrine of Imam Reza (AS) were the most important elements influencing the formation of urban organs; the two neighborhoods of Noghan and Sanabad played a role as small wholes and the Bazaar as a central element, shaped the structure of the city (Fig. 2).

**• Second period: Safavid, Afsharid, and Qajar (10th to 13th-century AH)**

The most crucial physical incident in Mashhad until the reign of Shah Abbas was the rebuilding of the city's defensive rampart by Shah Tahmasab, which was due to frequent Uzbek attacks in 925 AH. In addition, one of the crucial actions of Shah Abbas was the construction of the Bala and Paeen khiaban of three kilometers in 1016 AH A street with a northwest-southeast direction led to two gates on
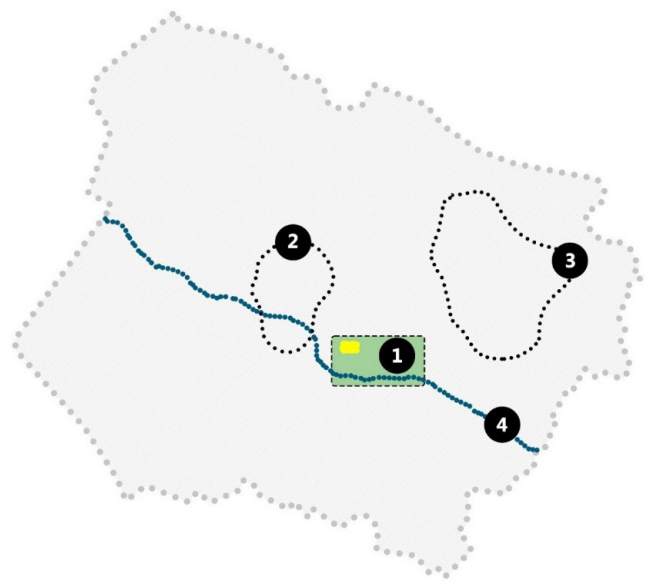


Fig. 1. Map of Mashhad at time of formation and development in the 3-6 century AH. 1- Hamid Ibn Qahtaba garden (place of Imam Reza shrine) 2- Sanabad village 3- Noghan village 4- Sanabad Qanat. Source: Authors.
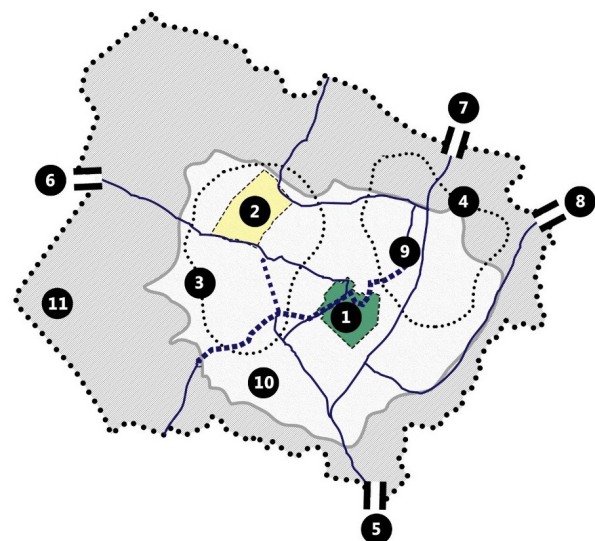


Fig. 2. Spatial organization of Mashhad city in the Timurid Period. 1- Holy Shrine and Goharshad Mosque 2- Government Citadel (Chahar Bagh) 3- Senabad Neighborhood 4- Noghan Neighborhood 5- Eidgah Gate 6- Sarab Gate 7- Noghan Gate 8- Mir Ali Amo Gate 9- Bazaar 10- City Building Area 11- Area Gardens and lands Source: Authors (redrawing of the map drawn by Keimanesh, 2012).

both sides (Razvani, 2004, 227). During the reign of Nader Shah-e Afshar, Mashhad became the capital of the country During this period, Charbagh flourished, and many gardens and palaces were built. After the Afsharid dynasty and the beginning of the Qajar rule, a new government citadel was built southwest of the city, near the rampart. Mashhad and Chaharbagh were severely damaged in the battle between Agha Mohammad Khan and Fath Ali Shah Qajar during the attack of Agha Mohammad Khan and Fath Ali Shah Qajar (Kiani, 1997, 932). In his Travoluge, Billy Fraser, who entered

Mashhad in 1250 AH and stayed in this city for fifteen days, describes a woman walking through Chaharbagh one day and writing: "Chaharbagh had become a ruin, and there was just one man in it." He shovels to plant vegetables for himself" (Fraser, 1986, 321). Although Chaharbagh was destroyed during the Qajar period, the neighborhood near this place was still known as Chaharbagh (Hosseini, 2011, 84). The Golestan Palace Archives map shows Mashhad's central area centered around Imam Reza's shrine and its surrounding neighborhoods. Along with other neighborhoods, Bala and Paeen khiaban have been identified (Fig. 3). It was the first significant structural change in Mashhad during the Safavid period when Bala and Paeen khiaban emerged as a political and governmental axis. This street was built by tearing down the dense and homogenous fabric around the shrine (the street that ran through the middle of the government citadel to emphasize the shrine visually). During the Qajar period, this axis was recognized as an identity axis and an essential structural organ connecting the city to the shrine. After moving the government citadel (military fortress) to the southwest during the Qajar era, a new territory was defined for the urban area. In a comprehensive map of Mashhad prepared by Colonel Julis during the Qajar era and in 1286 AH, the Bala and Paieen khiaban are the index axes in the map which have entirely divided the town into two separate sections and influenced the spatial organization elements (Fig. 4). Relying on Jules's[2] map and review sources, the elements and organs of the spatial organization of Mashhad city during the Safavid and Qajar period are depicted in Fig. 5.

• **The Third Period: the first Pahlavi until today**

During the reign of Reza Shah, Mashhad gradually expanded out of the rampart in the west and southwest directions. As the essential urban constituent, the city rampart is gradually fading and facing destruction. One of the most critical physical-structural changes in the city of Mashhad during this period is the construction of Falake Hazrat by the circular street around the shrine (Rezvani, 2005, 252). The creation of this square was made possible by destroying the residential fabric around the shrine. "Tehran Street" in the southwest direction (the current Imam Reza Street) was also connected to this street in 1930 and 1932. Also, the construction of Tabarsi Street in the northeast divided the Noghan neighborhood into two parts. With the construction of these two streets, the access routes leading to the Holy Shrine became four main axes. The axis of Arg Street (current Imam Khomeini) was built in 1927-1929 in such a way that it starts from Arg Shahr, and after the intersection, with Bala Khiyaban (current Shirazi Street), it reaches Khaja Rabie (current Ebadi Street) and at the intersection of Bala Khiyaban lays the groundwork for the construction of a square. It was called Maidan Shah, which later tried to balance the entrance to the fabric around the shrine as the city's center. With the formation of Shah Square (current Shohada Square)
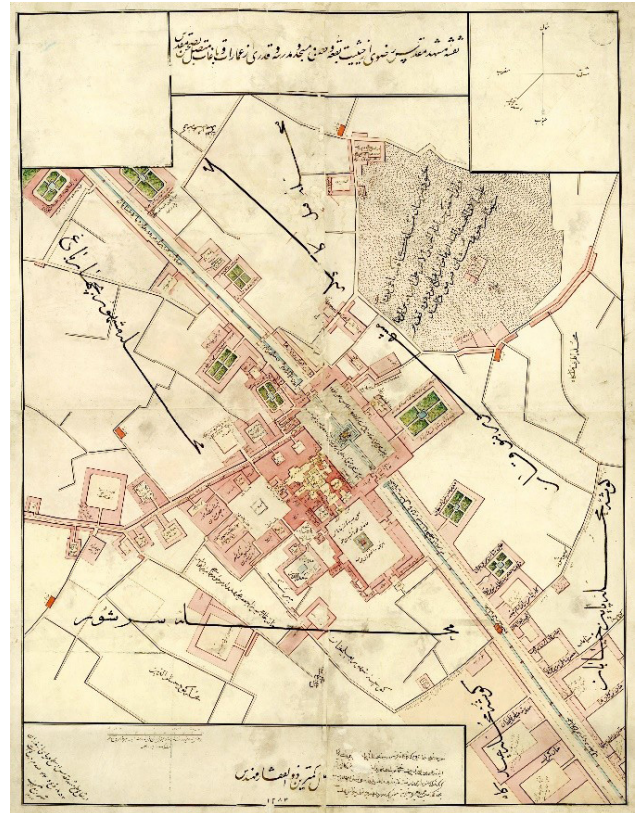


Fig. 3. Map of Mashhad city center (Imam Reza shrine and connected neighborhoods in the central context). Source: Golestan Palace Archives.
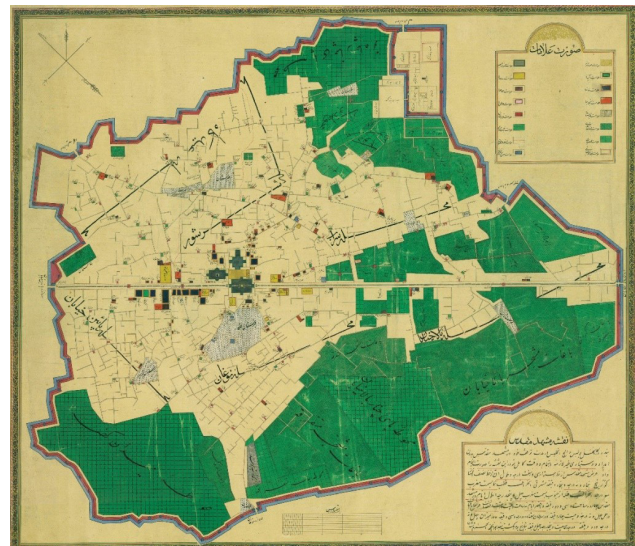


Fig. 4. Map of Mashhad in the late Qajar era. Creator: Colonel Jules Dalmes. Source: Astan Quds Razavi Document Center.

and the construction of Fouzia Street (current Daneshgah) and its extension, one of the most important symbolic and trafficky squares of the city was formed (ibid., 255). The mega destruction in Mashhad's central zone forced citizens to relocate to the city's peripheral areas. Thus, many farms and gardens inside the Baru, which occupied half of the area until the end of the Qajar period, became new neighborhoods as the city expanded from the center to the rampart. It expanded
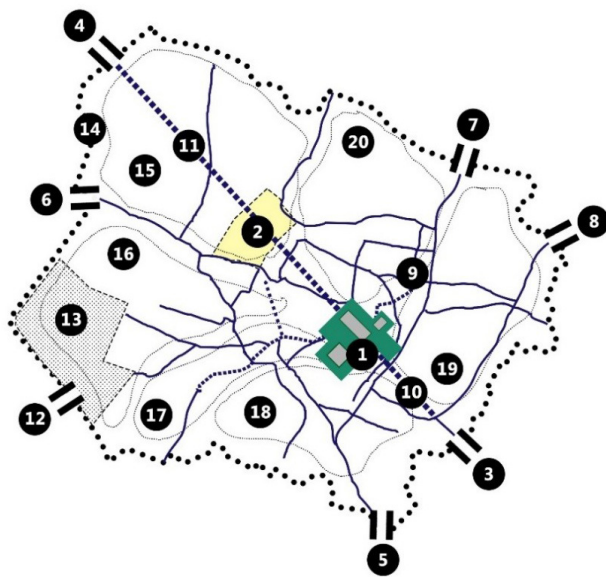
Fig. 5. Constituent organs of the spatial organization of the city of Mashhad in the Qajar period. 1- Center (Holy Shrine, Goharshad Mosque, Sahn-e Atiq) 2- Timurid to Afsharid Government Citadel 3- Paeen khiaban Gate 4- Bala khiaban gate Gate 5- Eidgah Gate 6- Sarab Gate 7- Noghan Gate 8- Mir Ali Amo Gate 9- Bazaar 10- Paeen khiaban 11- Bala khiaban 12- Citadel Gate 13- Qajar governmental Citadel. Source: Authors.

to the southwestern and western pastures, with better air and plentiful water (ibid., 256). Mashhad's center was destroyed in an unprecedented manner by this extensive destruction. Over time, the expansion of the city of Mashhad in the years 1920 to 1980 (the occurrence of the Islamic Revolution) led to the construction of modern residential structures in the villages surrounding the city (Rezvani 2005, 271). As Mashhad developed and expanded in the first Pahlavi period, the border between the city and village vanished. Mashhad's city center shifted west and south during the second Pahlavi period (Fig. 6), so the urban territory lost its original character. In the first Pahlavi period, Tabarsi Street divided neighborhoods like Noghan into two halves. In Second Pahlavi, A 21-hectare square around the shrine was destroyed, and many neighborhoods with radial destruction were destroyed; in the structure analysis, Mashhad's streets interconnected urban networks with modernism. Consequently, the city's development expanded beyond the Qajar territory and rampart (Fig. 6). As the city expanded and the neighborhood system changed, new centers and neighborhoods were defined in the city due to the increase in population (Fig. 7). Figure 8 shows the spatial organization of Mashhad city after creating a big circle in the center, the fundamental changes in the urban structure and neighborhoods, and the city's development outside the Qajar territory. As the Holy Shrine has expanded and pilgrims have been accommodated and have eased access to it, the historical context around the shrine has been destroyed, and hotels, inns, and automobile routes have taken their place. The development of the infrastructure of the shrine, including the construction

of various courtyards, including the Jame-ye Razavi courtyard, and the implementation of urban development plans in the Saman area, including the Tash consultants' plan from 1998 onwards, are among the large-scale measures in the central area of Mashhad, which have been accompanied by extensive destruction. Based on the city's spatial organization during this period, the city's center cannot be defined at one point, especially in the north and west, because of the expansion and development in different directions: Table 1 shows changes in Mashhad's space organization over time due to various developments, destructions, and occurrences.

## Conclusion

Analyzing the elements of Mashhad's spatial organization can be divided into two distinct periods: the Timurid Period and the Safavid to Qajar Period. Changes in these two periods make it



Fig. 6. The map of Mashhad in 1951 was prepared by the American expert's team. Source: Archives of Astan Quds Razavi Document Center.
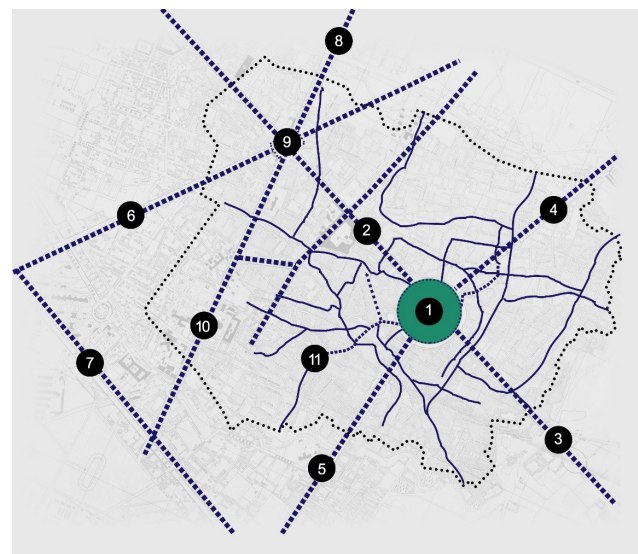


Fig. 7. The spatial organization of Mashhad in the First and Second Pahlavi eras. 1 - The center (Holy Shrine) 2- Bala khiaban 3- Paeen khiaban 4- Tabarsi street 5- Tehran street 6- Fouzieh street (current Daneshgah) 7- Sepeh street (currently Bahar street) 8- Khajah Rabi street (currently Abedi) ) 9- Mojasame square ( current Shohada) 10- Pahlavi or Arg street ( Imam Khomeini) 11- Bazaar. Source: Authors.
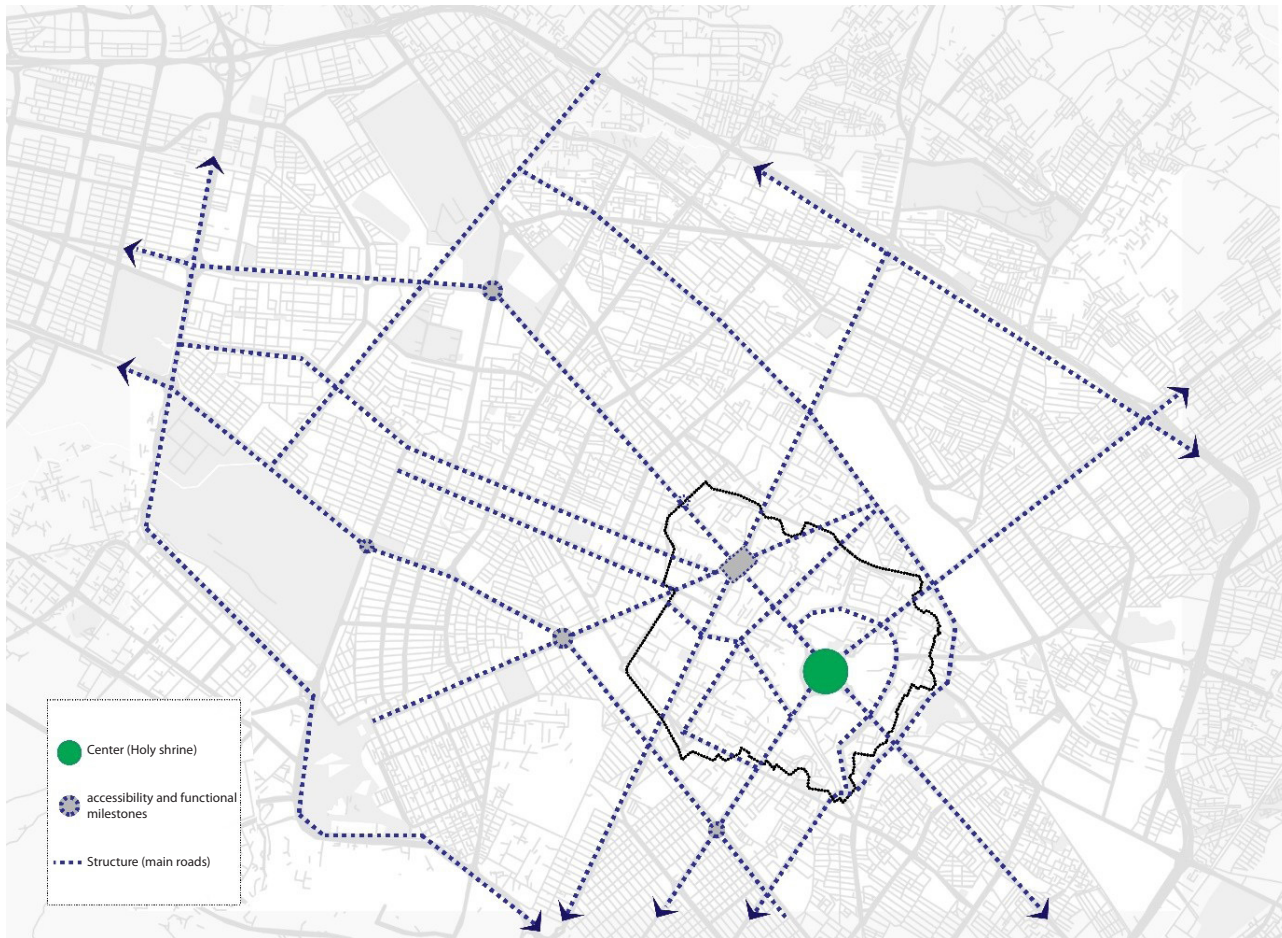
Fig. 8. The spatial organization of Mashhad during the Islamic Republic period ( last 50 years of development). Source: Authors.
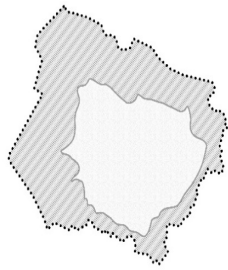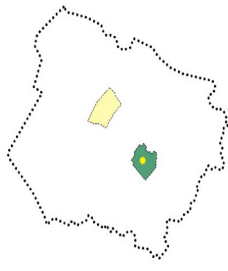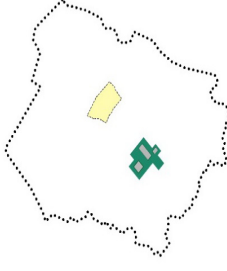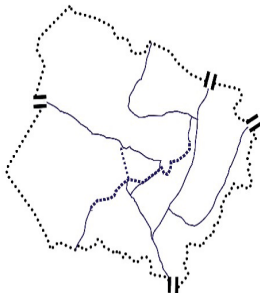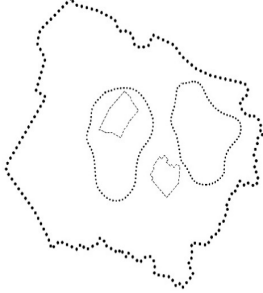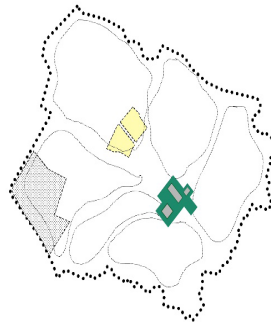
possible to determine boundary lines and differences in spatial organization elements. Table 2 shows the changes in these two periods. After the Pahlavi period, the shrine functioned only as a religious center, and other new centers had been defined in the city due to its expansion toward the north and west. Modernization and expansion of the city have resulted in the isolation of many urban neighborhoods and the gradual loss of Qajar territory (Fig. 8). Significant morphological changes in the city of Mashhad have often been under the command of a governmental-mandatory and not organic base, which has changed the spatial organization system of the city. These changes destroy the identity and integrated structure in the elements of the spatial organization. Due to interventions, the pillars and organs that have defined the city as identity components become unrelated and disconnected, losing their credibility and overall coherence. The center is considered the most crucial element in every city's spatial organization, so its strengthening or weakening will affect the entire city. Social and civic centrality is a criterion for being a city's center. A center where a good variety of social species can be found and people consider themselves partners in it. As a result of various dynasties' dominance and interventions, the shrine and city were separated. Razavi's Holy Shrine and its surrounding context, which have served as the

center, the meeting place of all classes and social tastes, have been a victim of top-down government decisions and measures, such as the indiscriminate expansion of the borders and the expansion of the shrine to represent the city politically and economically. As a consequence of regaining power from the social forces in favor of the ruling forces, the city lost much of its prestige and dignity as the center of its life. Due to this, the homogenous structure of the city, based on the Bazaar and the organic axes connecting it to the shrine, has been broken, and the center of the city has been physically developed to serve pilgrims, pushing the neighbors out. Interventions in spatial organization have also affected connections between neighborhoods and urban territories. Bazaars and neighborhoods connected to the center have been destroyed under the development umbrella and turned into ruins. So, in a way, the definition and scope of old neighborhoods have been destroyed, and the neighborhood and residence system has been transformed. Effects on a micro-scale have separated small wholes and their connections, and on a macro scale, With excessive development in urban limits, the boundary between inside and outside has been destroyed, and effects on a micro-scale have separated small wholes and their connections to the extent There can be no defined border between inside and outside the city.

# An investigation of developments and changes in Mashhad Spatial Organization

Table 1. The changes in the elements of the spatial organization of Mashhad in various historical periods. Source: Authors.

| Historical periods | Changes in the pillars of Mashhad's spatial organization | | | |
| --- | --- | --- | --- | --- |
| | Center | Structure | Small whole (Neighborhoods) | territory |
| Early Islam before the Mongol invasion (2nd century to 7th-century AH) | The Holy Shrine of Imam Reza (AS) is the focal and ritual center of the city | The continuous dense structure of alleys and neighborhoods connected to the shrine of Imam Reza (AS) | The neighborhoods organically developed in proportion to the population around the shrine. During this time, there were two prominent neighborhoods, Noghan and Senabad | Construction of the first fence and Rampart of Mashhad in 515 AH had a defensive function. |
| Ilkhanate to Timur (8th to 9th-century AH) | The construction of the government citadel of Chahar Bagh near the shrine, the construction of the Goharshad mosque, and several schools around the shrine | Establishing government centers, religious centers, and Bazaar | The development of neighborhoods and the formation of two other neighborhoods in Mashhad named Sarab and Sarshoor | Transferring water from the Cheshme Gilas to the shrine to strengthen the center |
| Safavid (10th to 12th-century AH) | Establishing the Shia religion as the main religion led to the prosperity of Imam Reza's shrine. Construction of the sahn-e atiq, Bazar, schools, and mosques around the religious center | The construction of the Bala and Paein khiaban was the first significant structural change in Mashhad, which in a way caused Mashhad to be divided into two halves and the Bala khiaban became more critical. | The first action means the separation of the neighborhoods from each other and the superiority of one neighborhood over the other because of the direction of entering the shrine (Bala khiaban was called the higher value and noble neighborhood, and Paeen khiaban was the poor people's neighborhood) | Construction of the rampart around Mashhad by Shah Tahmasb in 915 AH |
| Afsharid and Qajar (13th to 14th-century AH) | The formation of the Bala and Paeen khiaban. The development and prosperity of Charbagh Citadel | Getting the identity of the axis Bala khiaban and Paeen khiaban by planting trees on two sides of the street and constructing canals in the center for running water | The addition of two more neighborhoods to Mashhad with the names Arg and Sarab and the transformation of Mashhad into six prominent neighborhoods | Construction of government citadel and expansion of lands and development of the city to the southwest Create six entrance gates: Eidgah, Mir Ali Amo, Noghan, Bala khiaban, Paeen khiaban and Sarab |
| First Pahlavi | Destruction of the fabric around the shrine in the form of a square with a radius of 320 meters | The construction of Tehran and Tabarsi streets, the beginning of the development of urban networks with the presence of Reza Khan in Mashhad during Ferdowsi's millennium celebration | The division of the Noghan neighborhood into two halves as the oldest neighborhood of Mashhad after the construction of Tabarsi Street by order of Reza Khan | The development of the city of Mashhad was towards the southwest. The change of the urban territory from the center of the shrine to the west and southwest due to the direction of the city's expansion in that direction |
| Second Pahlavi | Boor Boor Consulting Engineers plan to create a residential and commercial circle around the shrine | The four main roads of the city lead to the circular square around the shrine | The formation of modern neighborhoods. the creation of new neighborhoods such as Taghiabad, Kohsangi, and Al-andasht, and the change of original neighborhoods from original neighborhoods to modern neighborhoods. | The removal of the city fence and the mixing of inside and outside the city and the fading of the border of the territory, and the feeling of belonging to the city |
| last 50 years | The de-identification of the center and its transformation into a powerful religious center of the city, not a center where all the shared memories of the people take place. | Uncertainty in the structure and profit-seeking decisions destroyed the historical context. Changing the structure of the urban center and the inevitable development of the city due to the increase in population | Destruction of old neighborhoods with identity in Mashhad. Transforming the neighborhood and residential system into a capital system and providing facilities for pilgrims | The disappearance of the city border and the disappearance of the subjective and objective realm, the removal of the border between the inside and outside of the city |

Table 2. The changes in the pillars of the spatial organization of Mashhad in the Timurid and Safavid periods until Qajar. Source: Authors.

| | Historical period | |
|---|---|---|
| Elements(organs) | Timurid | Safavid and Qajar |
| Territory |  |  |
| Center |  |  |
| Structure |  |  |
| Small wholes (neighborhood) |  |  |

## Endnote

1.The theory of the spatial organization of the Iranian city, and the analytical method of the spatial organization of Iranian cities based on this theory is an innovative method that Dr. Seyed Amir Mansouri proposed. In the Spatial Organization of Iranian Cities book in the Islamic period; he analyzed 6 Iranian cities using this framework. In this article, the analytical method of the spatial organization of the city of Mashhad has been adopted from the fourth chapter of the mentioned book and is based on the four pillars of the center, small wholes, structure, and territory.

2.According to the explanation given in the footnote of the map, English colonel Julius Dalmage recorded a detailed map of Mashhad in Muharram of 1286 AH during his eight-month stay in Mashhad without the help of the authorities at the time.

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