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Original Research Article

An Analysis of the Evolution and Sustainable Development Aligned with Functionality in Historical Complexes

(Case Study: Shah Ne'matollah Vali Complex, Mahan)

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ABSTRACT

Before international discussions on the principles of sustainable development began, Iranian architecture had inherently embraced sustainability features. From construction techniques to the respect shown for nature in the selection of urban locations and the development of buildings, these principles were embedded. The main objective of this paper is to uncover the approach to sustainable development embedded in the expansion of historical complexes in Iran. The Shah Nematollah Vali Historical Complex, located in the garden city of Mahan, is an example of the flourishing of Sufi mysticism in the Kerman region from the 14th to the 19th century CE. This research addresses some overlooked issues related to the gradual expansion of the structure by posing two key questions: 1) What stages did the expansion of the complex, in alignment with its function in each period, involve? 2) How have the sustainability features manifested in the development of this complex? The findings, derived from the study of historical sources, examination of inscriptions and decorations, as well as the perspectives of rulers in each period using a descriptive-analytical approach, indicate that the initial core of Shah Nematollah Vali's mausoleum was constructed shortly after his death as a solitary tower tomb adjacent to his dervish lodge. Due to various factors, both the structure and the person buried within it have attracted the attention of kings, neighboring countries, local rulers, and the public over different eras. One of the outcomes of this attention has been the sustainable development and expansion of the complex, with consideration for its garden city nature, respect for environmental issues, economic factors, and social fabric, along with continuous preservation and restoration efforts. These factors have contributed to the survival of this unique architectural complex to the present day. This study examines the expansion of the structure from the lifetime of Shah Nematollah Vali (14th and 15th centuries CE) until the late Qajar period, as well as the transformations it has undergone up to the present.

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Introduction

Iranian architecture has evolved in such a way that addressing material aspects, such as environmental issues, and immaterial aspects, such as cultural considerations, have been inseparably intertwined (Ghobadian, 2006, 105). Despite the recent emergence of sustainability discussions in contemporary architecture, all the principles of sustainability were already practiced by our ancestors. Architects of the past had no choice but to rely on natural resources and clean energy sources (Zarghami et al., 2016, 17 & 18). However, over time, the misuse of technological advancements led to the abandonment of those techniques and the excessive use of non-renewable fossil fuels. By studying Iran's past architecture, many of these ancient strategies can be revitalized for restoring historical structures and applied in a modern context for their development. The initial formation of historical complexes and their locations were often based on the residence of notable figures from that period. However, their gradual expansion over time required careful planning, and what has ensured their preservation today is adherence to sustainability principles. Exploring and learning from the hidden aspects of their development can not only aid in the restoration of these complexes but also contribute to future developments.

History and Concepts of Sustainable Development and Architecture

The focus on the concept of sustainability emerged in the 1970s, following the oil crisis. This attention can be attributed to new awareness regarding global environmental and development issues, as well as the publication of books like "The Limits to Growth" and the first United Nations Conference on the Environment and Development (Stockholm, 1972) (Pourahmad et al., 2017, 37). The literal meaning of the word "sustainability" is "that which can endure in the future" (Noroozi & Bahmanpour, 2013, 3), and Dehkhoda (1997, 48) defines it as "durable and lasting". The primary goal of sustainable development is to meet basic needs, improve and enhance the quality of life for all, better manage ecosystems, and create a safer and more prosperous future.

Regarding sustainable development, the term was first mentioned by Barbara Ward in a declaration titled Cocoyoc on the Environment. Subsequently, reports published by the Club of Rome and the Hammarskjöld Foundation influenced the trajectory of sustainable development in the 1980s (Kaveh, 2020). Since then, especially with the formation of international unions for environmental protection, the concept has received serious and significant attention from development scholars and thinkers (Zahedi & Najafi, 2005, 76).

The pioneers of the sustainable architecture movement include John Ruskin, William Morris, and Richard Lethaby. The goal of designing sustainable buildings is to minimize environmental harm in terms of energy use and the exploitation of natural resources. While in modern architecture, form follows function, in climate-responsive architecture, form follows the climate. Thus, since the 1990s, climate-responsive architecture has primarily been known as sustainable architecture (Ghobadian, 2013, 376). Sustainability is a perspective born from a shift in humanity's worldview. The issue of sustainable development came to the forefront in 1987 through the Brundtland Report titled Our Common Future, presented by the World Commission on Environment and Development (Pourali et al., 2019, 12). In the definition provided by the UN for sustainable design, it is described as an intervention in the environment that strives to offer solutions aligning with environmental, social, and economic goals from a holistic perspective, aiming to improve the quality of life for the present generation and leave an appropriate legacy for future generations (Zahedi & Najafi, 2005, 77).

Knowing The Subject

An examination of the desert cities of Iran, such as Yazd, Kerman, and Kashan, reveals that the spatial characteristics of their historical and traditional sections align significantly with contemporary scientific findings. It appears that this environmental harmony is the result of a long process of trial and error throughout history, occurring during the design and construction of buildings and urban fabrics. Given that traditional Iranian architecture in desert regions has a strong and rich foundation in various aspects of sustainability (Hosseini et al., 2008, 852), studying these characteristics could serve to enhance the planning, design, and popularization of contemporary living environments.

The Shah Nematollah Vali Complex reflects the architectural styles of various periods in Iran. The construction of this building significantly expanded the small village of Mahan and offered a glimpse into the intricacies, techniques, and aesthetic qualities of Iranian architecture, showcasing the creativity of Iranian architects and a unique process of historical fabric formation. All information was gathered

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through fieldwork and library sources, with the analysis of the building's formation and periodization based on the existing inscriptions, travelogues, and the examination of the building's decorations. According to field research and the remaining documents, the initial core of the complex appeared as a solitary tower tomb during the Timurid era. The body of Shah Nematollah Vali was buried near the single structure known as the Chilla-khaneh of this renowned mystic. In the subsequent Safavid period, this Chilla-khaneh was beautifully integrated and expanded with the Shah Vali tomb tower. The Qajar period[1] also saw the expansion of the complex due to religious and political reasons, with efforts made to preserve it. The expansion of the complex during the Safavid period occurred around the tomb, while in the Qajar period, it extended longitudinally. This expansion can be attributed to the Qajar architects' deep respect for previous architecture, adherence to the topography of the land, and the provision of necessary water resources.

A Brief Overview of the Life of Shah Nematollah Vali

"Seyyed Nouraddin Nematollah, son of Abdullah Kohi Benani Kermani, known as 'Vali,' was a renowned Sufi and poet, and the founder of the Nematullahi order in the 14th and 15th centuries CE. He established a new path in Sufism and influenced followers of other orders (Pazouki, 2004). His ancestors resided in the city of Aleppo (Shirazi, 1960, 3; Safa, 1985, 230). The life of this great mystic is detailed in most Sufi anthologies, including three ancient texts authored by Gohar Kermani (1982), Mostofi Bafghi (1963), and Va'izi (1982) (Tanhaei, 2008, 56).

• Understanding the location of the Shah Nematollah Vali complex

The city of Mahan, located 35 kilometers from Kerman, is one of the districts of Kerman County and is considered the southernmost city of the Kerman Plain. The city sits at an elevation of 1856 meters above sea level, and its semi-mountainous characteristics are due to the presence of two mountain ranges on either side, enclosing it. The historical neighborhood of Shah Nematollah Vali is undoubtedly one of the oldest areas of Mahan, and the mausoleum is among the oldest central structures of the city, influencing many urban constructions. In old texts, Mahan is described not as a city but as a way station and a pleasant lodging, and old aerial photographs rarely show a dense urban fabric indicative of a unified city (Oghabi, 1999, 52).

• Formation of the complex

According to many historians, including Abdul-Razzaq Kermani, Sanaullah Nematollahi, and Mohammad Mofid Mostofi Bafghi, Shah Nematollah Vali passed away in Kerman, and his body was transferred to Mahan (Gohar Kermani, 1982, 129 & 130). It is reported by biographers that Nematollah Vali was buried near the place dedicated to his worship and spiritual retreat (Estarabadi,2009). In Jame' Mofidi, it is written, "Then they took the illuminated coffin to Mahan and buried it in the sacred Khanqah, which is now the place of pilgrimage for the great of all horizons" (Mostofi Bafghi, 1963, 180). Today, only a room remains from the mentioned Khanqah, which is believed to have been dedicated to Nematollah Vali's seclusion and also serves as the tomb of his grandson. The command to build a high and magnificent dome and sanctuary over the tomb of Shah Vali was given by Sultan Ahmad Shah Bahmani, the ruler of the Deccan in India (Farzam, 1995, 186). Abdul-Razzaq Kermani wrote about the construction of the dome: "After the news of the blessed death of the saint reached him (Ahmad Shah), he sent a respected envoy with a considerable amount to build a grand dome over the grave surrounded by the mercy of that saint, creating a distinguished building and a renowned structure" (Gohar Kermani, 1982, 168). The exterior of the dome was decorated with intricate tile work, while the interior was plastered. Later, during the Safavid period, the addition of the Shah Abbas arcade and the reinforcement of the dome's base led to an increase in the thickness of the supporting walls, covering the original intricate tilework and exposing part of the Timurid wall (ibid.). According to the oldest inscription found on the building, which is inscribed in Thuluth script from the Timurid period above the dome's entrance, the completion of the structure occurred during the reign of Sultan Alauddin, the son of Ahmad Shah Bahmani (Mirjafari, 1982, 136).

• Reasons for the expansion of the complex

Following the rise of the Safavid dynasty, the government undertook a process of purging public thoughts and beliefs. This led to the removal of symbols and artifacts that were contrary to the principles of Shia mysticism, and a particular focus was placed on figures and ideas that aligned with the prevailing ideological line. Shah Naematollah Vali was one of the individuals who, due to his adherence to the Twelve Imams and his Sufi inclinations, was honored and given special attention by the Safavids. As a result, significant expansions were made to his

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mausoleum. The construction of the Hosseiniyeh and the Shah Abbas Courtyard are examples of expansions from this period. The Qajar kings also took great care in the expansion and repair of the Shah Naematollah Vali shrine. The Qajar government, feeling the stigma of Agha Mohammad Khan's atrocities in Kerman, endeavored to improve the perception of its regime among the people of Kerman by undertaking numerous construction projects in key areas of the city. Most of the Qajar-era construction in this complex occurred during the reigns of Nasser al-Din Shah Qajar and Mohammad Shah Qajar (Mardomi & Dehghani Tafti, 2013).

Discussion: Analysis of the Evolution of Architectural Elements in Complexes

• Design and execution of the dome house

The archway created in the portico of the mausoleum and the corridor formed between the new and old layers around the dome house indicate the presence of decorative elements and niches, confirming that the structure was originally designed and executed as a solitary tomb tower (Fig. 1). The base of the dome is surrounded by a series of muqarnas and ogee arches, adorned with seven-colored tiles. The dome's surface features a star-crossed pattern made of white and black tiles set against a light blue glazed background. These tiles are arranged radially within each star, and probably, these glazed elements were created during the Safavid period (Kiani, 1998,174).

Across from the large hall leading to the dome house, there is a very small room with a short arch, situated on a series of arches in the Timurid style. This room is believed to have been the Sheikh's chilla (forty days of seclusion), which may be a remnant of an earlier structure from the early 15th century CE, now incorporated into the portico. The chilla house was likely constructed before the Safavid era, and its portico was preserved during later construction (Tanhaei, 2008, 57). This building, like the dome, is among the oldest structures in the complex. Shah Vali is known to have spent at least one chilla (forty days) in it, engaged in worship and prayer during this time (ibid.). Additionally, the current dome is likely not from the Timurid period but from a later era.

• The dome chamber

The transition phase in the dome chamber is executed in the form of a squinch (Figs. 2 & 3), with the outer shell inscribed with the phrase "Ya Muqallib al-Qulub wa al-Absar" ("O Turner of Hearts and Sights"). The names of the artisans who participated in the construction of this work are listed as follows: "The work of the devoted servant Shah Vali, Abdul Salam Hassan ibn Ali Harawi, devoted to the family of Al-Safdar, Qulam ibn Naqdi Shah Haidar, and the devoted servant Shah Vali, Nazar Ali Abu Ala." The construction of the mausoleum building began under the orders of Sultan Shihab al-Din Ahmad Dakhini (deceased in 1434 CE) and was completed during the reign of his son, Sultan Ala al-Din, in 1442 CE (Jafarian, 2014; Hosseini, 2009).

• The Shah Abbas arcade and the Dar al-Hifz Mir Damadi

The Shah Abbas Arcade and the Dar al-Hifz were constructed in 1577 CE during the reign of Shah Abbas the Great and the governorship of Big Tash Khan (Oghabi, 1999, 53). The author of Tara'iq al-Haqayiq summarizes the inscription on the Dar al-Hifz portal as follows: "In the era of Shah Abbas Safavi and the governance of Beg Tash Khan, successor to Vali Khan Afshar, the Dar al-Hifz was completed in the year 1589 CE (Farzam, 1995, 111). Golchin also read the date on the inscription as Shawwal 1589 CE. For these constructions, Safavid architects increased the height and thickness of the walls to prepare the necessary conditions for roofing the space surrounding the dome chamber (Fig. 4).

In the initial phase of construction, the Husseiniya was established, and it is also possible that after completing the Husseiniya and roofing it, the other parts of the building were constructed. The Mir Damadi Husseiniya features not only a tile-inscribed inscription on the iwan but also a precious inscription

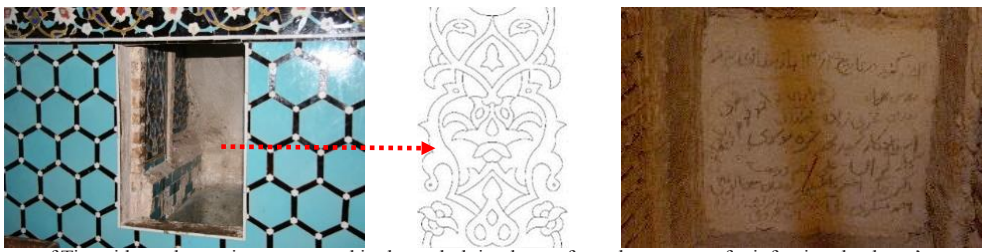

Fig. 1. Remnants of Timurid-era decorations preserved in the underlying layers from the process of reinforcing the dome's supports during the Safavid period. Source: Authors.

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in stucco with Thuluth script, which includes a verse from Surah Al-Fath. Additional modifications made to the dome building during the Safavid era include the creation of entrance doors on three other sides of the building. These changes removed the building from its isolated state and connected it with the newly added spaces.

• Shah Abbas courtyard

The entrance of the Shah Abbas Arcade was later demolished and subsequently restored by the Qajar period. Due to significant alterations made during the reign of Nasir al-Din Shah, the precise Safavid quality of this section is no longer clearly identifiable. The expansion at this stage was carried out with meticulous care. The lush garden that existed on the edge of the building has remained with minimal interference adjacent to the structure. Revenue from the sale of garden products was used for the restoration and maintenance of the building.

• Mohammad Shah courtyard

There is a disagreement about the construction date of this courtyard, with some attributing the shrine buildings to the Safavid period. The Mohammad Shah Courtyard was the first extension added during the Qajar era. Mohammad Ismail Khan Nouri, known as Vali al-Mulk (Governor of Kerman during Nasir al-Din Shah's reign), added the entrance with two tall minarets and also undertook the restoration of the previous courtyard (Farzam,1995, 42). Repairs to this section continued later, as evidenced by the tilework surrounding the courtyard, which reads: "In the name of Allah, the Most Gracious, the Most Merciful, during the reign of His Excellency, the Great and Mighty Shah of Islam, Nasir al-Din Shah Qajar, the shadow of God, and the government, the most exalted and honored Mr. Nasser al-Dawla Sultan Hamid Mirza, the commanding ruler, may his shadow endure, through the efforts of Mr. Seyyed Mohammad Saleh, the trustee, and Deputy of Kerman, and under the supervision of Mr. Mirza Seyyed Noor Ali, this holy courtyard was built and repaired. Work executed by Master Reza Kermani in the year 1963 CE.

The history of "History of Kerman" (Vaziri Kermani, 1991), "Mohammad Shah Qajar dedicated three parts of the Fermen estate of Mahan, which is very fruitful, to the shrine of Seyyed, and annually, any surplus expenses for the servants is used for the repair of that place" (Rezvani, 1995, 255). Attention to the protection of the natural environment of the building and economic issues reflects the sustainability of development in this complex.

• Vali al-Mulk courtyard

This courtyard, along with the eastern and northern porticos of the shrine of Shah Nematollah Vali, was

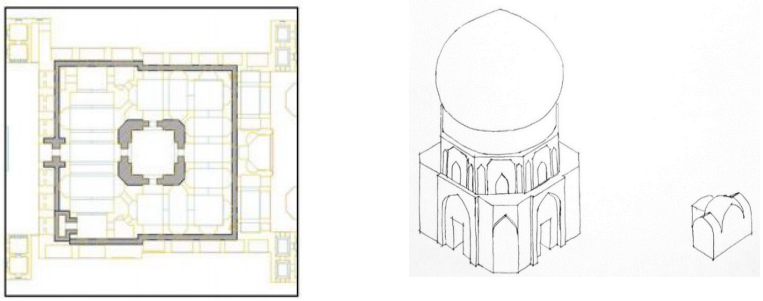

Fig. 2. The transition from the Chilla Gah to the Dome Chamber of Shah Nematollah Vali. Source: Authors.

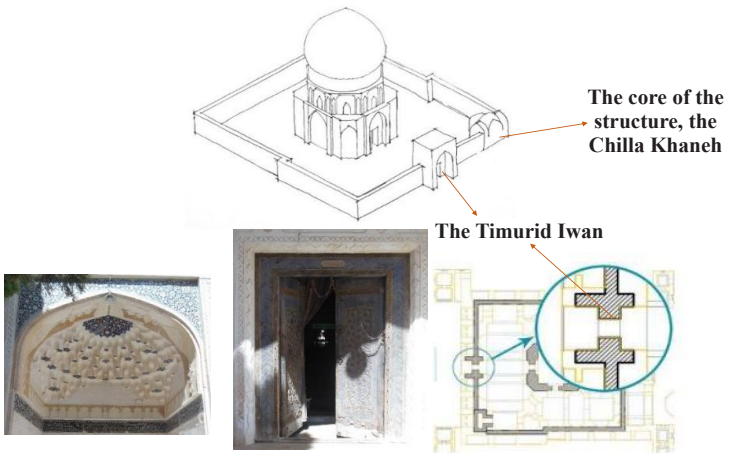

Fig. 3. Plan of the Dome Chamber and the location of the Timurid Iwan. Source: Authors.

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constructed during the reign of Nasir al-Din Shah and the governance of Mohammad Ismail Khan Vali al-Mulk and his son, Morteza Qoli Khan Vali al-Mulk, in the year 1870 CE. The courtyard features a cruciform pool, which provides a water supply and helps regulate the air, and two minarets embellish the entrance to the Safavid complex.

• Atabaki courtyard

This courtyard, like the Vali al-Mulk Courtyard, was constructed by Vali al-Mulk I and II and also houses the water reservoir of the complex, which is a significant example of traditional Iranian architecture for water conservation and management. Additionally, the Mahaan Caravanserai is located on its southern side. During the time of Mirza Ali Asghar Khan Atabek (who was killed in 1946 CE), an entrance was created on the eastern side of the courtyard at the order of Atabek, which is now the sole entrance to the complex. There are discrepancies regarding the exact date of this courtyard's construction. Since this courtyard was financed by Atabek Azam and considering his active years during Nasir al-Din Shah's reign (1896 CE), it is inferred that this courtyard was built around the same time as the Vali al-Mulk Courtyard (Khajeh Hassani, 2006). On the other hand, in the account of Firoz Mirza, it is noted that "this courtyard did not exist in the year 1878 CE" and was constructed by Ali Asghar Khan and overseen by Agha Sayyid Heydat, the treasurer (Mirza Farmanfarma, 2001, 55). Although the tiling on the eastern side of the courtyard directly mentions the completion of the building by Vali al-Mulk, this courtyard is now known as the Atabaki Courtyard. The caravanserai was built by Vali al-Mulk (Mohammad Ismail Khan Nuri), the governor of Kerman, between the years 1869-1878 CE. The caravanserai, an addition to the complex during the Qajar period, is located next to the western side of the complex (Khajeh Hassani, 2006, 7). The southern side of the Atabaki Courtyard and the caravanserai are skillfully integrated with the southern body of the courtyard. Mohammad Ismail Khan constructed two caravanserais in Kerman, with the Vali al-Mulk caravanserai being one of them. It features a four-porch plan, with its original entrance at the front of the Vali al-Mulk Courtyard, and its current access is via Imam Khomeini Street in Mahaan (ibid., 8). Over time, as the number of visitors increased, the need for accommodation in this location became apparent. The construction of the caravanserai, emphasizing economic considerations, provided a place for communities with shared interests to stay (Fig. 5). Table 1 provides a summary of the information on the evolution of the architecture of the Shah Nematollah Vali Complex in Mahan.

Conclusion

Based on the research findings and the evolution of the Shah Ne'matollah Vali mausoleum complex, it can be inferred that the initial core of this complex was a single-tower mausoleum constructed during the Timurid period. Subsequently, the Safavids, due to religious inclinations and political reasons, expanded the mausoleum extensively, transforming an isolated space into a significant architectural core and adding a more complex and functional dimension to the building. The Safavid architects, through their extensive expansion, turned the isolated mausoleum into a central architectural element, incorporating a more intricate and functional concept.

In later periods, however, expansions occurred only along the longitudinal axes. This is likely due to the subsequent architects' reluctance to alter the Safavid structure and the need to facilitate an easier water supply for the building. The courtyards were also extended alternately in the longitudinal or transverse directions. The longitudinal extension of both courtyards in front of the minarets visually enhanced the grandeur of the building and provided a beautiful view of the minarets to the observers in the courtyard. Without these proportions, this visual effect would not have been possible, and the courtyard space would have seemed small, with the minarets appearing disproportionate.

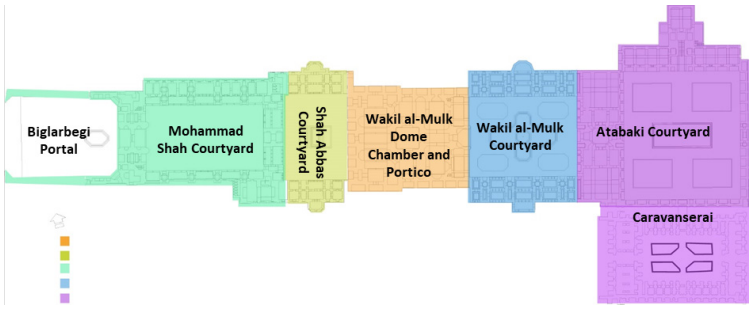

Fig. 5. Plan of the Development Phases of the Complex. Source: Authors.

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Table 1. Summary of the Evolution of the Architectural Development of the Shah Nematollah Vali Complex in Mahan. Source: Authors.

Architecture/ Construction Period	Dimensions of Sustainable Development		
	Social	Environment	Economy
-Dome Chamber and Chilla Khana -1436 -Timurid Period	-From a social perspective, the Chilla Khana, due to the visits of disciples and mystics, required expansion. -From a design standpoint, social dimensions can also be examined, such as the design of stairs and courtyards for gathering and interaction.	-Without disrupting the surrounding fabric and while preserving the surrounding greenery. -The use of water reservoirs, wind catchers, garden landscaping, and planting flowers and plants is emphasized. This includes maintaining ecological balance, establishing specific vineyards, and so on.	Using locally available materials minimizes transportation costs and allows for maintenance and repair of the structure at a lower cost.
-Shah Abbas Portico -1590 -Safavid Period	-The performance of prayers, which is considered a social gathering, reflects the alignment of the building's form and function with its cultural and religious background.	-Utilization of various spatial qualities (open, semi-open, closed).	Standardization in construction through the use of appropriate modules and dimensions.
-Shah Abbas Courtyard (also known as the Wakil al-Mulk Courtyard)	-Governance by rulers. -The multifunctional nature of the spaces, which were used both for worship and for conducting classes.	-Utilization of passive cooling and heating patterns as much as possible. -Reduction of dust and undesirable wind speeds through the planting of trees and vegetation. -Retention and transfer of moisture via a large pond.	Standardization in construction through the use of appropriate modular systems and dimensions .
-Mohammad Shah Courtyard -19-20 century -Qajar Period	-The Qajar government, feeling the stigma of Agha Mohammad Khan's crimes in Kerman, sought to improve the perception of the ruling regime among the people of Kerman by undertaking extensive construction projects in key areas of the city. -This included maintaining privacy and comfort, ensuring psychological security, and providing climatic comfort.	-Appropriate connection with the courtyard or surrounding green space through porticos -Use of forms suited to the climate.	Coordination between the dimensions and scale of spaces with their function and the number of users.
-Wakil al-Mulk Courtyard -1870 -Qajar Period -Architect: Kazem Najjar	-Utilization of various spatial qualities (open, semi-open, closed). -Creating tranquility through interaction with natural elements such as lush plants, water, natural breezes, and sunlight.	-Reduction of dust and undesirable wind speeds through the planting of trees and vegetation. -Enhancing spatial quality by constructing large ponds -Appropriate connection with the courtyard or surrounding green space through porticos.	Alignment of the dimensions and scale of spaces with their function and the number of users
-Atabaki Courtyard -19-20 century -Qajar Period	-Attention to human scale in spatial dimensions, considering respect for the user and their needs.	-Utilization of passive heating and cooling patterns as much as possible through the design of architectural elements such as wind catchers.	Standardization in construction through the use of appropriate modules and dimensions
-Caravanserai -19-20 century -Qajar Period	-Responding to functionality and considering flexible or adaptable spaces.	-Use of climate-appropriate forms and maintaining indoor temperature through the use of local materials. -Optimal building orientation to benefit from sunlight and favorable winds.	Design and construction with a long useful lifespan

Conflict of Interest

The authors declare that there was no conflict for them in conducting this research.

Endnotes

1. This refers to the period of the Qajar dynasty in Iran, which lasted from 1789 to 1925.

References List

• Dehkhoda, A. K. (1997). *Dehkhoda Dictionary.* University of Tehran.

• Estarabadi, M. Q. H. (2009). *Tarikh-e Fereshte, Fourth Vol.: az salatin Gujarat ta Malibard , zekr-e mashayekh-e Hind* [Tārīkh-i Fereshta: From the Sultans of Gujarat to Malibard and the Lives of Indian Saints]. Society for the National Heritage of Iran.

• Farzam, H. (1995). *A study on the life and wocks of Shah Ni'matullah Walli.* Soroush.

• Ghobadian, V. (2006). *Architecture of Tehran during Naseredin Shah period.* Pashootan.

• Ghobadian, V. (2013). *Theories and styles in contemporary Iranian architecture.* Elm-e Memar-e Royal.

[DOI: 10.22034/2.3.18]

• Gohar Kermani, A. R. (1982). *Tazhkirah dar manabegh-e Shah Nematollah Vali* [Tazhkirah on the Virtues of Shah Nematollah Vali] (M. Mostofi Yazdi & J. Bouan, Eds.). Tahouri.
• Hosseini, S. B., Mofidi Shemirani, S. M., & Medi, H. (2008). Education of sustainable architecture in Iran, barries and trends. *Journal of Education (Journal of Technology and Education), 2*(3), 213-221. https://www.sid.ir/paper/155405/fa
• Hosseini, S. H. (2009). A survey in the process of construction of tomb complexes in the Islamic architecture of Iran according Abusaeed Abilkheir ideas. *Journal of Fine Arts: Architecture & Urban Planning, 1*(38), 15-23. https://jfaup.ut.ac.ir/article_22246.html?lang=fa
• Jafarian, R. (2014). *History of Shiism in Iran (From the Beginning to the establishmentof the Safavid rule).* Elm.
• Kaveh, N. (2020). Naghsh-e fanavari-ye etela'at va ertebatat dar tose-ye paydar [The Role of Information and Communication Technology in Sustainable Development]. *The 16th National Day of the Engineer,* Isfahan. https://civilica.com/doc/1241666/
• Khajeh Hassani, F. (2006). *Conservation, Restoration, and Revitalization of the Shah Nematollah Vali Historical and Cultural Complex in Mahan* [Unpublished Master's Thesis]. University of Tehran.
• Kiani, M. Y. (1998). *Iranian Architecture of the Islamic Period.* Samt.
• Mardomi, K., & Dehghani Tafti, M. (2013). Baztab-e seyr-e movajeh ba tasavof Ni'matullāhī dar me'mari-ye majmoe'e-ye khanqahi-ziyarati-ye Shah Vali Taft [Reflection on the Interaction with Ni'matullāhī Sufism in the Architecture of the Khanqah-Shrine Complex of Shah Vali Taft]. *Journal of Researches in Islamic Architecture, 1*(1), 137-157. http://jria.iust.ac.ir/article-1-141-fa.html
• Mirjafari, H. (1982). Monaze'at-e ne'mati va heidari dar Iran [Conflicts between Ni'mati and Heidari in Iran]. *Journal of Faculty of Literature and Humanities, University of Isfahan*, (1), 118-155. https://www.sid.ir/paper/439636/fa
• Mirza Farmanfarma, F. (2001). *Safar nameh-ye Kerman va Baluchestan* (Mansoureh Ettehadieh (Nezam Fani) & S. Pira, Eds.). Tarikh-e Iran.
• Mostofi Bafghi, M. M. (1963). *Jāmī Mofidī* (History of Yazd) (I. Afshar, Ed.) (Vol. 3). Asadi.
• Noroozi, R., & Bahmanpour, H. (2013). Sustainable Neighborhoods Design Criteria Based on Environmental Norms. *Journal of Sustainable Architecture and Urban Design, 1*(2), 65-80. https://jsaud.sru.ac.ir/article_177.html
• Oghabi, M. M. (1999). *Dayeratoll ma'aref-e banaha-ye tarikhi-ye Iran dar dore-ye Islami: Banaha-ye aramangahi* [Encyclopedia of Historical Buildings of the Islamic Period (Tomb Buildings)]. Institute for Culture and Art Research.
• Pazouki, Sh. (2004). *Majmoe'e-e maghalat-e Shah Nematollah Vali* [Collection of Articles on Shah Nematollah Vali]. Haqiqat.
• Pourahmad, A., Madari, M., Hatami Nejad, H., & Azamzadeh Irani, A. (2017). An analysis of the conflict between "Passive Defense Requirements" and "Principles of Sustainable Urban Development" in the improvement of urban historical fabrics Case study: Urban historical fabric of Tehran's District 12. *Scientific- Research Quarterly of Geographical Data (SEPEHR), 26* (102), 36-52. https://doi.org/10.22131/sepehr.2017.27455
• Pourali, A., Fallahi, M. A., & Naji Meydani, A. A. (2019). The Study of Human Development Dimensions (Education, Health, and Welfare) Effects on Environmental Performance Index. *Environmental Education and Sustainable Development, 8*(1), 9-22. https://doi.org/10.30473/ee.2019.6322
• Rezvani, M. E. (1984). *Tarikh-e montazem-e Naseri* [History of the Naserid Period]. Donyaye Ketab.
• Safa, Z. A. (1985). *Tarikh-e adabiyat dar Iran* [History of Literature in Iran] (Vol. 4). Ferdowsi.
• Shirazi, M. M. (1960). *Tara'iq al-Haqqā'iq* (M. J. Mahjoob, Ed.) (Vol. 3). Sanai.
• Tanhaei, A. (2008). Decorative Inscription of the Tomb of Shah Nematollah Vali in Mahan Inscribed decorations of Shah-Nemat-Allah Vali Mausoleum. *Islamic Art Studies Quarterly, 5*(8), 50-63. https://www.sid.ir/paper/136718/fa
• Va'izi, A. B. (1982). *Resale-ye dar seyr-e Hazrat-r Nematollah Vali* [Treatise on the Life of Shah Nematollah Vali] (J. Aubin, Ed.). Tahouri.
• Vaziri Kermani, A. A. (1991). *Tarikh-e Kerman* [History of Kerman] (M. E. Bastani Parizi, Ed.). Elmi.
• Zahedi, S. S., & Najafi, G. (2005). Sustainable Development, a new conceptual framework. *Human Sciences School, 10*(4), 43-76. https://www.sid.ir/paper/6827/fa
• Zarghami, I., Khaki, A., & Sadaat, A. (2016). Comparative Study of Sustainable Architecture and Its Compatibility with Traditional Residential Architecture in Iranian and Islamic Cities. *Sustainable Architecture and Urban Planning, 3*(1), 17-29. https://jsaud.sru.ac.ir/article_697.html?lang=fa

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