

## The Relationship Between Music, Architecture, and Climate in Iranian-Islamic Art

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**Abstract:** Since ancient times, various arts, especially in Iranian art and architecture, have had a close relationship with each other, and their mutual influences can be seen in aspects of form and content. Architecture and music are among the first arts that mankind has dealt with, and for this reason, there has been a deep connection between these two arts throughout history. In Iran, the roots of architecture and music go back to ancient times and even to the time of the Elamite civilization. This relationship between Iranian architecture and music represents Iranian history, culture, and identity, and has been widely reflected in the Iranian aesthetic mentality. This connection between architecture and music is manifested not only in form and structure, but also in mental and aesthetic aspects. These two arts, despite the differences in their means of execution, share a common mentality that clearly shows the cultural influences of Iran. In addition, climate and geographical conditions have had a great influence on both arts. Iranian architecture, especially in hot and dry regions, has been designed using natural elements such as windbreaks and central courtyards to be in line with the climatic conditions. At the same time, Iranian music has also found its own characteristics according to the climate of each region. This article examines the common roots of Iranian architecture and music and analyzes the effects of climate and natural environment on their formation and development.

**Keywords:** Music, Architecture, Climate, Space.

### INTRODUCTION

Throughout history, art has always been used as a tool to express human understanding of the world around us and nature. By transforming nature into works of art, humans have taken it beyond its material boundaries and transferred it to their spiritual and mental dimensions. In the meantime, the connection between the arts is undeniable and is commonly observed in many works of art. Music and architecture, as two distinct arts, are among the first arts that mankind has dealt with, and for this reason, there has been a deep connection between these two arts throughout history. In Iran, the roots of architecture and music go back to very ancient times, so that this connection can be traced back to ancient arts and even to the era of the Elamite civilization. This connection is particularly visible in Iranian art and architecture and has deeply originated from Iranian history, culture, and identity. This connection is explained not only from the perspective of structure and form, but also from the mental and aesthetic aspects. In fact, Iranian architecture and music, despite their differences in appearance and instruments, achieve similar results in creating space and expressing beauty through a common and mental connection. On the other hand, climate and geographical conditions have also been largely influential in the formation and evolution of these two arts. Iranian architecture, especially in dry and hot regions, has been designed using natural elements such as windbreaks, central courtyards, and optimal use of materials to align with climatic conditions. In Iranian music, these climatic changes have also manifested themselves in the formation of different rhythms and melodies; for example, music in the southern regions of Iran is more rhythmic and dynamic, while in the mountainous regions of northern Iran, music is more melodic and calm. Given that these two arts have been known as the two main pillars of Iranian art since ancient times, it is necessary to examine the relationship between architecture and music and the effects of climate on them. The main question of this research is how the climate and environmental conditions in Iran have affected architecture and music and how these two arts have evolved in harmony with each other and under the influence of these factors.

Research on the relationship between Iranian architecture and music, especially in the field of climatic influences, is particularly important because both arts have deep roots in Iranian culture and examining these

relationships can help to better understand the creative processes in these two arts and their interaction with the natural and climatic environments. Also, examining this relationship can help to recognize and introduce artistic patterns that have been formed as a result of the cooperation of these two arts and show how Iranian architecture and music have created a spiritual and aesthetic space in interaction with nature and climate. This research seeks to examine the common roots of Iranian architecture and music and in particular wants to examine the climatic and geographical influences on the developments and characteristics of both arts. Specifically, this research aims to identify the common links between these two arts from the perspective of structure, form, and aesthetics and to analyze how climate and geographical conditions have contributed to the formation and evolution of these two arts. The research questions include how climate and geographical conditions have influenced the formation of Iranian architecture and music? What similarities and differences exist in the theoretical principles and foundations of Iranian architecture and music? And how have Iranian architecture and music evolved in a harmonious and synergistic way in interaction with their natural and climatic environments? In recent years, attention has increased to the relationship between music and architecture in Iran. Some studies, such as the article “Interpreting the Elements of Music and Architecture in a Common Language” by Samipour and Seydian (2016) and “A Comparative Study of Spatial Structures in Traditional Iranian Architecture and Music” by Hojjati and Foroutan (2015), have examined this relationship. Also, in Western historical and philosophical works, especially in the writings of Pythagoras and Plato, a cosmic and harmonious relationship between music and architecture has been proposed (Antoniadis, 2007: 454). In Iran, more recent research has also been conducted in various fields of architecture and music and their effects on each other, especially in the form of articles on geometry and musical proportions.

## **THEORETICAL FOUNDATIONS**

### **Iranian Music**

Iranian music has a long and rich history that dates back to ancient times and even before the arrival of Islam in Iran. According to the evidence and artifacts discovered, such as the statues found in Susa, the history of Iranian music dates back to the Elamite Empire (2500-644 BC). Although accurate and complete information about the music of this period is not available, evidence shows that musical instruments such as the "barbet", which is known as one of the first Iranian instruments, had their roots in this era. This musical instrument dates back to around 800 BC. Music in ancient Iran was considered not only as an art but also as an important part of daily life and religious and national ceremonies. In ancient times, Iranians considered music a means of communicating with the higher world and strengthening the spirit of war and creating joy (Khaleghi, 2006: 27).

Before the Arab invasion, melodies in which songs from the "Avesta", the religious book of the Zoroastrians, were sung and instruments were played that were in harmony with the religious and spiritual atmosphere. With the acceptance of Islam as the official religion of Iran, the rulers decided to ban music. Nevertheless, although music was not played as widely and as in the pre-Islamic era in the post-Islamic era and until the Safavid era, it was always the focus of attention of Islamic thinkers and philosophers, and many important discussions about music were written during this period. One of the most important discussions in these works is the discussion of the systems and structures of Iranian music, which refers to a set of rules, maqams, devices and radifs of traditional Iranian music. These systems have evolved based on old maqams and under the influence of various regional and historical cultures, especially Arabic, Turkish and Indian cultures. In the history of Iranian music, two different systems are noteworthy. One of these is the periodic system, in which all songs and Iranian music in general were arranged in sets called eras. The other is the system of dastakh, in which Iranian music is divided into seven main dastakhs. This change from a periodic system to a dastakh system occurred in the 13th century AH, coinciding with the Qajar period. During this period, the founding of the seven-order dastakh of Iranian music is attributed to the Ali Akbar Farahani dynasty. The dastakh system of Iranian music is one of the most complex and richest systems in world music, based on a set of dastakhs and avaz. This system is composed of various elements such as dastakhs, avaz, gushes, radifs, and maqams. The dastakhs, which form the core of Iranian music, each have their own independent melodic system, which includes their own gushes and modes. The seven main Iranian musical instruments are: Shoor, Mahoor, Homayun, Sehghah, Chahargah, Rast Panjgah, and Nava. Awaz, which is a subset of the instruments, typically expresses specific emotions and feelings and includes such instruments as Abu Ata, Bayat Turk, Afshari, Dashti, and Bayat Isfahan. Ghosh are smaller parts of each instrument or instrument that form its melodic structure, and each Ghosh has its own characteristics that

require precise mastery and understanding to perform. The Iranian musical *radif*, which is a collection of *radifs*, is arranged in a systematic and organized manner in the form of a device or instrument. The *radifs* of Iranian music have been compiled and arranged by great masters such as Mirza Abdullah and Agha Hossein Gholi. *Maqams* and *pardes* are also other structural components of Iranian music on the basis of which music is performed. Each *maqam* and *pard* has its own specific intervals and unique states and are organized in the form of instruments and songs (Vaziri, 2014: 86-89).

In Iranian music, in addition to instruments and songs, other elements are also of particular importance. One of these elements is the writing and refinements of music masters in performing and playing the instrument, which play an important role in creating feelings and emotions in music. Also, the use of different rhythms and weights, such as left and right, heavy and light, in performing Iranian musical pieces is one of its prominent features. Although Iranian music is based more on melody, these refinements and the variety of weights give it a special spirit and depth and have a significant impact on playing the instrument and singing (Farhat, 2015: 87).

The Importance of Structure in Iranian Music Over the centuries, Iranian music has followed a specific path and reached a specific system that is the result of the thoughts and reflections of sages and artists over time. This approach has led to the formation of a set of theoretical foundations and practical approaches that have linked Iranian music to the history and culture of this land. This link has created a coherent structure and identity for Iranian music that can be used to understand, analyze, and perform this music. Key concepts such as *maqam*, *dastakh*, *radif*, etc. have developed over the centuries as the basic foundations for Iranian music and have given it specific characteristics, the most important of which is the preservation of the identity of Iranian music. Iranian music has preserved its identity and authenticity, especially in its teaching methods, which have mainly been in the form of master-discipleship and face-to-face. This method of teaching has allowed Iranian music to remain within its solid frameworks over time, while at the same time, creativity and innovation have flourished within these frameworks (Vaziri, 2014: 45).

Due to this slow and continuous process of evolution, Iranian music has become one of the most profound and influential musics in the world, closely related to various pillars of Iranian-Islamic culture and history. Among these pillars, we can mention Persian poetry and literature, as well as mysticism and philosophy, which are closely linked to Iranian music. Iranian music is closely linked to Persian poetry, and many great works of Iranian music are based on the poems of prominent Persian poets (Khaleghi, 1954: 27). In addition, Iranian philosophy and mysticism, especially in mystical schools such as Sufism, have had a great influence on Iranian music.

One of the interesting and less-considered relationships is the relationship between Iranian music and Iranian architecture. These two arts have always moved indirectly and in different directions but with the same goal in the context of Iranian history and culture. Iranian architecture, with its emphasis on geometric proportions and spiritual and cultural space-building, is closely related to Iranian music. These links are especially visible in the way geometric and rhythmic concepts are conveyed in architectural and musical structures. For example, in Iranian architecture, the concept of geometric and rhythmic proportions is similarly manifested in Iranian music in the form of *maqams* and *dastash* (Vaziri, 2014: 76). These harmonies, which originate from Iranian-Islamic culture, are evidence of the mutual influence and synergy of music and architecture throughout history. The main concepts of Iranian music, from *maqams* and *dastash* to *radifs*, have not only technical aspects but are also directly related to the philosophical and spiritual aspects of this music. These features have led to Iranian music being considered not only as an art but also as a common language for transmitting human, spiritual, and cultural concepts (Vaziri, 2014: 112). Given the complex and historical structure of Iranian music, this system has not only provided the possibility of preserving authenticity but also created the necessary space for innovation and internal developments.

### **COMMONALITIES BETWEEN ARCHITECTURE AND MUSIC**

The commonalities between Iranian-Islamic architecture and music can be examined in several main axes that link both arts in the cultural and historical context of Iran and Islam. These commonalities include aesthetic concepts, mathematical and geometric structures, and spiritual and mystical principles. The first case regarding Iranian-Islamic music and architecture, which is more evident than others, is the discussion of geometric proportions and order, and the issue of rhythm. In Iranian-Islamic architecture, the use of geometric shapes such

as squares, circles, and star shapes (such as knotted designs) is very common. These shapes are not only decorative, but also express the order and harmony of the universe (Bolkhari, 2011: 257). In Iranian music, rhythm and meter (prosodic meters) play a fundamental role. Like architecture, these rhythms are based on order and proportion and sometimes use geometric patterns such as rhythmic cycles (Vaziri, 2014: 86).

The next common theme is the topic of symmetry and balance, which introduces elements as indicators for Iranian-Islamic architecture and music. Symmetry and balance are very evident in Iranian-Islamic architecture, especially in mosques and religious buildings. This symmetry is seen not only in the exterior, but also in interior decorations such as tiling and stucco, and is considered an integral part of Iranian-Islamic architecture (Navaei and Haji Ghasemi, 2019: 68). In Iranian music, symmetry is also seen in the structure of musical pieces (such as the prelude, the four-tone, and the color) as well as in the use of symmetrical intervals in musical scales (such as instruments and songs) (Portrab, 2010: 153).

Rhythm, repetition, and continuity are other aspects of the relationship between Iranian-Islamic architecture and music. In Iranian-Islamic architecture, the repetition of patterns and motifs (such as tiling and stucco) helps create a sense of continuity and infinity. The repetition of patterns in Iranian architecture is one of the distinctive and aesthetic features of this architectural style, which has been used artistically and carefully throughout history. These repetitions not only help create harmony and order in space, but also express deep cultural, religious, and philosophical concepts (Navaei and Haji Ghasemi, 2011: 76). In Iranian music, the repetition of melodies and chords in the form of musical compositions and sentences helps create a sense of continuity and musical flow. In fact, repetition and rhythm can be considered the starting point of music, which has been used in the best possible way in Iranian music (Sadeghpour and Khalilzadeh, 2011: 36).

Apart from the importance of repetition in the form of architecture and music, the basis of teaching both arts is repetition and continuity. As mentioned, in traditional architecture and music, the method of teaching has been master-student, in which the most important principle for learning in this method is repetition and continuity. This method in both arts has led to the preservation and transmission of originality while at the same time dynamism and innovation in the performance of both arts.

Another common aspect in Iranian-Islamic architecture and music is the discussion of introversion. Introversion, as one of the main characteristics of Iranian culture and art, has been manifested in the music and architecture of this land in various ways. In architecture, this feature is seen in the design of private and spiritual spaces such as houses, mosques and gardens (Navaei and Haji Ghasemi, 2010: 21). In music, introversion is also conveyed to the listener through instruments, performance techniques, and performance space. Iranian instruments are quiet and personal, and unlike Western instruments, they are performed in solitude and not in the midst of an orchestra or crowd (Sadeghpour and Khalilzadeh, 2011: 87). These characteristics indicate the deep attention Iranian artists pay to personal privacy and inner space. Another common point between Iranian music and architecture is their relationship with nature. Due to Iran's unique geographical and climatic conditions, Iranian architecture is in some way in harmony with nature. This relationship includes the use of natural elements, adaptation to the environment, and the creation of spaces in harmony with nature. Iranian architecture has always used elements such as water, wind, shadow, and light in the best way and has put these elements to its service so that it can communicate with nature in addition to adapting to the environment (Kiani, 2010: 245). This close connection to nature and compatibility with it has caused Iranian-Islamic architecture to move towards peace and contemplation. In music, the connection with nature has also been of great importance. Iranian music, due to the unique geographical and climatic conditions of Iran, is in some way in harmony with nature. This connection includes the use of natural elements, inspiration from natural sounds, and adaptation to the environment. Also, in the design of instruments, the nature of each region has influenced the type of instrument of that region (Majedi and Shamloo, 2008: 185). This connection between music and nature has in some way helped humans to better communicate with their world and the nature around them and to achieve reflection and peace. These connections indicate the importance of cultural and artistic elements in Iranian society, both of which have somehow moved beyond material limits and towards spirituality and contemplation. Spirituality has been another important aspect in Iranian music and architecture. The connection of Iranian architecture with spirituality is one of the prominent features of this type of architecture that has emerged due to the cultural, religious, and belief conditions of Iran. This connection includes the design of spaces and structures based on spiritual and moral concepts, symbolism, and the effort to create inspiring environments. Seyyed

Hossein Nasr, an Iranian philosopher, discusses the close relationship between architecture and spirituality in Iranian-Islamic civilization in his various works. He believes that traditional Iranian architecture is not only a reflection of artistic aesthetics, but also a manifestation of deep spiritual and mystical concepts. Nasr believes that elements such as the dome, minaret, and geometric decorations in Iranian architecture are symbols of the Islamic and mystical worldview that seeks to create harmony between earth and sky, matter and meaning; Nasr points out that “Iranian architecture, especially in the Islamic period, is not only a functional art, but also an expression of transcendent and spiritual truth. Domes and minarets point to the sky, and the interior spaces of mosques and religious buildings invite man to silence and contemplation of the divine essence” (Nasr, 2013: 123). Iranian architecture, by utilizing concepts and meanings, forms its own theoretical foundations that are rooted in the Iranian-Islamic perspective and, based on these foundations, moves towards shaping form in architecture. This architecture “uses sacred geometry and harmonious proportions to reflect the cosmic order in the form of material structures. This architecture is a manifestation of unity in plurality and a symbol of man’s spiritual journey towards God” (Nasr, 2009: 95).

Music in Iranian culture has long been closely related to spirituality. Remains of the Elamite civilization show religious ceremonies in which a group of musicians are present, and during the Achaemenid and Sasanian periods, music was an inseparable part of religious ceremonies (Rezaeini, 2002: 109-112). After Islam, music was considered an artistic element serving to strengthen the spiritual abilities of the individual and a means of approaching God, and in many mystical traditions, music served the path of the mystic and Sufi (Majedi and Shamloo, 2008: 150). On the other hand, spiritual concepts were used as theoretical foundations for creating and shaping music.

#### **ARCHITECTURE, MUSIC, AND CLIMATE**

The relationship between architecture, music, and climate in Iranian-Islamic culture specifically reflects the deep and complex harmonies that these three artistic and aesthetic domains have with each other. Iranian architecture has always been directly influenced by climatic and geographical conditions, and these influences are also evident in music, especially when these two arts are formed in specific environments and by different climatic and cultural needs. In this regard, we can examine how these three domains interact from a technical, aesthetic, and spiritual perspective.

In Iranian architecture, climatic conditions, especially in hot and dry regions, have had a great impact on the design of spaces. For example, the use of windbreaks, central courtyards, and domes are all examples of designs that have been formed in response to climatic and weather needs. These designs provided cool and comfortable spaces for residents by using natural materials, shading, and proper air circulation. Similarly, in Iranian music, the climate and natural environment of each region have had a direct impact on the structure and characteristics of the music of that region. For example, in the southern regions of Iran, music is predominantly rhythmic and energetic, which is in harmony with the environmental and social conditions of those regions, while in the mountainous regions of northern Iran, music is more melodic and calm, which is a reflection of the natural and climatic atmosphere of those regions (Vaziri, 2014: 76). In addition to climatic influences, geometric and rhythmic concepts play a prominent role in both Iranian architecture and music. In Iranian architecture, the use of geometric proportions and order in the design of spaces, including knotwork and tile decorations, is directly related to the rhythm and balance in Iranian music. In Iranian music, these same geometric concepts are used in the form of devices and positions, as well as in the rhythmic structure of music. Rhythms and scales in Iranian music are based on order and proportion, and in some cases, geometric patterns similar to architecture are used (Bolkhari, 2011: 257).

Another common feature of Iranian architecture and music is the use of symmetry and balance. In Iranian architecture, symmetry and balance are very evident in the design of buildings and spaces, especially in mosques and religious buildings. This symmetry is seen not only in the exterior but also in interior decorations such as tiling and stucco, and is considered an integral part of Iranian-Islamic architecture (Navaei and Haji Ghasemi, 2010: 68). In Iranian music, symmetry is observed in the structure of musical pieces (such as preludes, *chamar-e-mizrab*, and *rang*) and also in the use of symmetrical intervals in musical scales (such as *dastghas* and *avaz*) (Portraab, 2010: 153).

Finally, the connection between these two arts and nature and the environment is also very important. Iranian architecture has always made the best use of natural elements such as water, wind, shadow, and light in order to harmonize with its environment. Similarly, Iranian music is also inspired by nature, and many instruments and melodies are directly related to natural sounds and the surrounding environment. In the design of instruments, the climatic environment of each region has a direct impact on the type of instrument and its sound. For example, instruments from the mountainous regions of Iran may have differences in sound and type of structure that are appropriate to the climatic conditions of those regions (Majedi and Shamloo, 2008: 185).

These harmonies and interactions between architecture, music, and climate indicate the deep and multifaceted links of these arts in Iranian-Islamic culture. These three areas have not only progressed independently in the context of Iranian history and culture, but have also grown and developed continuously and harmoniously with each other to form a spiritual and cultural space in Iranian society.

### **THE STRUCTURAL RELATIONSHIP OF ARCHITECTURE WITH MUSIC AND CLIMATE IN IRAN**

The concept of space in architecture and art, as a fundamental idea, has undergone many changes from ancient times to the present. This concept has developed throughout history in parallel with cultural, scientific and philosophical advances and has been reflected in various forms in architectural and artistic works, and has taken on different meanings in the course of these transitions, so that an exact definition cannot be found for it and ambiguity and complexity will always accompany it (Yavari and Hakak, 2015: 18). However, the concept of space has been considered from different perspectives throughout history, and three general approaches are proposed in it. In the first approach, space is recognized as an objective matter and architecture is introduced as the art of organizing space. In the second approach, space is recognized as a subjective matter whose perception is formed in the human mind, and in the third approach, space is considered as an interaction between architecture and humans that is both objective and subjective (Sohangir and Nowruz Borazjani, 2012: 36).

The concept of space in music also has its own complexity and challenges. There are two main approaches in the field of space and music. The first approach considers music to be an auditory art form that lacks the ability to create space, and the second approach considers music to be a composite art form that, with its expressive means, has the ability to represent meanings and concepts in the human mind. This second approach shows that music is capable of creating a space that is not objective and physical, but is understandable to the audience (Sohangir and Nowruz Borazjani, 2012: 39). This concept of space in music and architecture has many similarities, especially when these two arts simultaneously emphasize the construction of space and the transmission of emotions.

### **STRUCTURAL COMMONALITIES OF IRANIAN ARCHITECTURE AND MUSIC**

A structural examination of architecture and music shows that these two arts have many commonalities, which, despite the different expressions of these arts, has led to the closeness of their structure. In fact, both architecture and music are arts that move directly towards the creation of space, and in both arts, space acts as a structural element that shapes the experience of the audience. In Iranian architecture, especially in the Islamic era, space has always been designed as a space for reflection, balance and order. Similarly, in Iranian music, space is created in the form of maqams, devices and songs, using specific rhythms and melodies. In these arts, space is constantly being formed both objectively and subjectively. After creating space, architecture moves towards giving it depth, and it is by giving it depth that movement occurs in them, a movement that occurs both in the theoretical and practical dimensions. The ultimate goal of the artist in both arts is to convey a message to the audience; a message that is a new experience for both the creator and the receiver of the message; and it is from the accumulation of these messages that culture is formed and moves in the context of history (Portraab, 1378: 153).

In Iranian architecture, the use of geometric proportions, symmetry, and alternating patterns is directly related to aesthetic and spiritual aspects. These features are also seen in Iranian music (Flamaki, 1387: 86). In fact, it can be said that both arts use similar rules to organize space and convey spiritual concepts. For example, in Iranian architecture, spaces such as mosques and gardens are specifically designed to create a sense of contemplation, tranquility, and connection to spirituality. These characteristics are similar to what is observed in Iranian music,

especially in the performance of instruments and songs, where rhythm, sound, and silence are specifically used to create spiritual spaces (Vaziri, 2014: 86).

### **CLIMATE AND ITS RELATIONSHIP WITH IRANIAN ARCHITECTURE AND MUSIC**

The climate and geographical conditions of Iran have also played a decisive role in the formation of the characteristics of Iranian architecture and music. Iranian architecture has always been influenced by the specific climatic conditions of this land. Especially in the dry and hot regions of Iran, the use of natural elements such as windbreaks, central courtyards, domes, and awnings to create natural ventilation and maintain the coolness of the space has been common (Shaterian, 2015: 123). In addition to their practical function, these spaces have also spiritually created a space for reflection and connection with nature and God. This harmony with nature has remained as a beautiful and spiritual principle in Iranian-Islamic architecture (Kiani, 2010: 245).

In Iranian music, there is also a deep connection with nature and the surrounding environment. Each region of Iran has its own unique music based on its own climatic and geographical characteristics. In mountainous regions, music is mostly composed of calm melodies and gentle rhythms, while in the southern regions of Iran, music is usually more rhythmic and energetic, representing movement and mobility in hot and energetic environments (Flamaki, 2013: 185). These connections indicate the direct influence of the natural and climatic environment on musical and architectural structures.

### **STRUCTURAL AND SPIRITUAL CONNECTION BETWEEN ARCHITECTURE AND IRANIAN MUSIC**

Finally, it can be said that the connection between architecture and Iranian music should be examined more broadly in the context of the spiritual and philosophical connection of these two arts. Both arts are directly related to the concepts of anthropology, aesthetics, and spirituality in Iranian-Islamic culture. In architecture, interior spaces such as mosques, schools, and homes are specifically designed to create a spiritual and transcendent experience. Similarly, in Iranian music, the performance of instruments and songs is mainly dedicated to creating a spiritual experience for the listener and establishing a special connection with the higher world.

This connection between Iranian-Islamic music and architecture, especially when compared to other arts, is so unique that their commonality cannot be limited to formal aspects alone. Just as Iranian architecture, by utilizing sacred geometry and harmonious proportions, attempts to reflect cosmic order in the form of material structures, Iranian music, by utilizing rhythms, angles, and devices, similarly attempts to create a spiritual space that provides a similar experience of harmony and connection with the higher world.

### **THE INFLUENCE OF CLIMATE ON IRANIAN MUSIC**

The climate and geographical conditions of Iran have had a great influence on the formation and characteristics of the music of this land. With its diverse climate, which ranges from hot and dry regions in the south and center to cold mountainous regions in the north and west of the country, Iran has provided special conditions for the creation and shaping of music in different regions. These influences are clearly visible in the different types of Iranian music, especially in the rhythms, melodies, and various instruments that change to suit the specific climatic conditions of each region.

### **MUSIC OF THE HOT AND DRY REGIONS OF IRAN**

In the hot and dry regions of Iran, especially in the central and southern regions such as Yazd, Kerman, Fars, Bushehr, and Hormozgan, music often has rhythmic and energetic characteristics. Due to their specific climatic conditions, which are hot and dry, these regions need instruments that produce a lot of energy (Shaterian, 2015:98) and can artistically convey the dynamic atmosphere of these regions. In these regions, percussion instruments such as "damam", "denbak", "dairah" and "tablah" are common. By creating fast and heavy rhythms, these instruments create a lively and happy atmosphere that is in harmony with the environmental and social conditions of these regions. This music is usually used in ceremonies and celebrations along with rhythmic songs and creates an atmosphere full of energy and movement (Flamaki, 2008:185). In particular, in Bushehri and Hormozi music, the fast and fast rhythms accompanied by strong and frequent drum beats or damam reflect the vibrant and social spirit of the people of these regions.

Also, in the hot and dry regions of Iran, music is used not only for entertainment but also as a tool for strengthening social spirit and cultural interactions. These musics are designed for important social, religious and national celebrations and ceremonies and are particularly in tune with the daily lives of the people of these regions. In this context, the use of repetition and rhythmic patterns is one of the prominent features that helps create a sense of community and synchronicity among the people.

### **MUSIC OF THE COLD AND MOUNTAINOUS REGIONS OF IRAN**

In contrast, in the cold and mountainous regions of Iran, such as Gilan, Mazandaran, Kurdistan and Azerbaijan, the music is more melodic and calm. These regions, with their geographical characteristics, which include mountainous heights and cold and humid weather, have produced music that is accompanied by soft and calm tones. In these regions, wind instruments such as "Ney", "Dutar", "Qara Ney", and "Se Tar" are mostly used, which have a soft and gentle sound that is compatible with the mountainous and relaxing atmosphere of these regions (Shaterian, 2015: 36-38). These instruments work especially well in cold and humid environmental conditions and somehow reflect the feeling of loneliness and silence of the mountains in the music. In these regions, music is often influenced by the natural and social atmosphere in which it is performed. Melodies are usually slow and deep, and in this music, unlike the southern regions, fast and fast rhythms are not used. These differences are directly related to the cold and mountainous climate of these regions. For example, in Kurdish music, the use of slow and melodic instruments, such as the "Rast Panjgah" and "Dashti", is very common, and these instruments usually convey gentle and calm emotions and feelings (Farhat, 2015: 87).

### **INTERACTION OF MUSIC AND CLIMATE**

These climatic and musical differences indicate the mutual influence of the environment and art on each other. In fact, the climate not only plays a direct role in the formation of different rhythms and melodies, but also affects the way and form of using different instruments and ultimately the experience that the listener has of music. Music in Iran is generally closely related to its natural and climatic environment and acts as a tool for communicating with the environment and different cultures. These musics are used not only as a means of entertainment but also as tools for synergy with nature and their social environment and form part of the cultural identity of different regions of Iran. Finally, it can be said that climate has had a profound and widespread impact on the formation and evolution of Iranian music. These impacts are not only observed in the types of rhythms and melodies, but also in the choice of instruments and how they are performed. Music in each region of Iran is particularly in tune with the natural environment and climatic conditions of that region, and in a way, it has made Iranian music a part of the culture, identity, and daily life of the people of this land. This direct connection between music and climate indicates the complex and harmonious interactions of the two with nature and the environment, which has served as a tool for establishing spiritual and social communication throughout the history of Iranian music.

### **THE IMPACT OF CLIMATE ON IRANIAN ARCHITECTURE**

Iran's climate and geographical conditions have had a major impact on the development of architectural styles. In hot and dry regions, the need to maintain coolness and proper ventilation of spaces has led to the creation of architectural features that are specifically suited to the climatic conditions of those regions. In Iranian architecture, windcatchers, central courtyards, domes, and canopies are among the prominent features designed to optimize energy consumption and natural ventilation in spaces. These architectural elements have been important not only from a practical perspective but also from a spiritual and aesthetic perspective, as each of them plays an important role in creating a calm space away from climatic pressures.

For example, in Yazd architecture, windcatchers act as a means of absorbing cool air from above and distributing it throughout the interior spaces. Similarly, in mosques and religious buildings, domes and minarets are designed as symbols of human connection with the sky and God Almighty, in which not only climatic function is considered, but also spiritual influences and connection with the higher world can be seen (Kiani, 1379: 245).

In the cold and mountainous regions of Iran, the design of spaces is such that they protect against extreme cold, and the use of insulating materials in walls and ceilings is particularly common. Interior spaces are usually designed in such a way that they use the heat of the sun during the day and retain heat naturally at night. These



special spaces are usually built to create a safe and comfortable environment for residents against harsh climatic conditions (Navaei and Haji Ghasemi, 1399: 68).

These musical differences are mainly due to different climates and the way music interacts with the natural environment. This indicates the deep interaction of Iranian music with the environment and the social and cultural needs of each region. In this context, music acts not only as an art for entertainment, but also as a tool for harmonizing with the natural and social environment.

### **CLIMATE AND SPACE IN CONNECTION WITH MEANING IN IRANIAN ART**

The connection between climate, space, and meaning in Iranian arts, especially in architecture and music, reflects the deep attention of Iranian artists to creating a spiritual and transcendent experience that is connected not only with nature but also with God and the spiritual world. Iranian arts, especially architecture and music, have always sought to create a space that leads humans to think, reflect, and ultimately spiritual connection. These two arts, in the context of Iran's specific climatic conditions, provide new experiences for their audience by designing spaces that each consider a part of human spiritual and spiritual needs.

### **EXPRESSION OF SPACE IN CLIMATE**

In Iranian architecture, climate directly affects the design of space, and this effect is especially evident in religious buildings, such as mosques and shrines. These spaces are designed in a way that not only responds to climatic needs, but is also suitable for spiritual and religious experiences. In mosques, domes and minarets are used that point towards the sky and guide people to the upper world. Domes, which symbolize the sky, have a specific orientation and enter the interior space from above in harmony with light. These designs allow the space of the mosque to create a spiritual and divine environment in addition to its functional features that invite the individual to silence, reflection, and communication with God.

In these spaces, natural light plays a special role. The light entering through windows and openings symbolically means "divine light" and "liberation from darkness." This lighting not only affects the human soul spiritually, but also helps the person to meditate in a relaxing environment. The use of this natural light in Iranian architecture, especially in mosques and religious buildings, is particularly evident in the design of ceilings, domes, and porches. For example, in the Grand Mosque of Isfahan, light shines through the ceiling openings into the interior, thus creating a spiritual and relaxing atmosphere (Nasr, 2013: 123).

### **MUSIC, AN EXPRESSION OF CLIMATE**

In Iranian music, just like architecture, climate and environmental conditions have a great influence on its structural features and content. Each region of Iran, with its own climatic characteristics, has developed music appropriate to its geographical conditions. In the hot and humid southern regions of Iran, music is usually rhythmic and energetic, which is in harmony with the dynamic and social atmosphere of those regions. For example, in the music of "Bushehri" and "Hormozi", the use of percussion instruments and fast rhythms is very common. These instruments, such as "dammam", "dairah" and "tonbak", due to their powerful sound and ability to create fast rhythms, create a lively and dynamic atmosphere that is meaningfully in harmony with the hot and humid climate of southern Iran (Flamaki, 2013: 185).

In contrast, in the mountainous and cold regions of Iran, music is more melodic and calm. These musics typically use wind instruments such as "nei" and "dutar" which have a soft and calm sound that is in harmony with the cold and dry conditions of these regions. These instruments are designed in such a way that they have the ability to create spiritual and contemplative spaces in the listener. For example, in Kurdish music, the use of wind instruments such as "nei" and "dutar" is more common, which create a calm and deep space and naturally reflect the cold and calm mountainous atmosphere of Iran (Nawabi and Haji Ghasemi, 2019: 36).

### **CLIMATE AND THE CONNECTION WITH THE SPIRITUAL SPACE**

In both arts, namely architecture and Iranian music, the element of climate is indirectly and implicitly effective in conveying spiritual and mystical concepts. In architecture, this connection can be seen through the use of light, shadows, and interior space. For example, in the design of Iranian gardens and courtyards, the use of water

and greenery symbolically helps to create a spiritual and relaxing atmosphere. These spaces are not only climatically suitable for living, but are also designed primarily as spaces for contemplation and closeness to the higher world. In Iranian music, instruments and melodies are also designed to be in harmony with the spiritual atmosphere and nature. In this context, the use of specific instruments and specific performance techniques, especially in mountainous and tropical regions, are meaningfully related to the natural environment and climatic conditions of that region. For example, instruments such as the "ney" and the "dotar instrument", which are common in cold mountainous regions, are particularly in harmony with the cold and dry atmosphere of the mountainous regions of Iran due to their quiet and gentle sound and play a significant role in creating a spiritual and contemplative atmosphere. Finally, the connection between climate, space, and spirituality in Iranian art, especially in architecture and music, reflects the deep interest of Iranian artists in creating spiritual and mystical experiences. In architecture, the design of spaces according to climatic characteristics is not only done with the aim of adapting to natural conditions, but also plays a special role in creating a spiritual space for reflection, worship, and communication with God. In music, climate has directly influenced the formation of the types of instruments and rhythmic and melodic characteristics, so that music in each region is in harmony with its climate and natural space, and in a way provides a spiritual experience for the listener. This interaction between climate, space, and spirituality in Iranian arts has made them a tool for achieving deep artistic and spiritual experiences for its audience.

## CONCLUSION

The relationship between architecture, music, and climate in Iranian culture clearly demonstrates the complex and harmonious interaction of these three areas, which together lead to the creation of a spiritual and cultural space. Climate, as a determining factor, has had profound effects on the formation and development of both the arts of architecture and music in Iran. Considering the specific climatic characteristics of different regions, Iranian architecture has made designs that, in addition to responding to environmental needs, specifically create spiritual and contemplative spaces that guide humans towards a connection with God and the higher world. In these spaces, the use of geometric proportions, light, shadow, and other natural elements has always been aimed at creating a spiritual and transcendent experience for the inhabitants and visitors of those spaces.

In Iranian music, climate and geographical conditions have also influenced the rhythmic, melodic, and various instrumental characteristics. Music in each region is specifically coordinated with the environmental characteristics of that region and is directly related to the climate of that region. In hot and dry regions, music is often rhythmic and energetic, while in cold and mountainous regions, music is more melodic and calm. These differences indicate the harmony of Iranian music with the natural and social environment, and specifically emphasize the transmission of spiritual and mystical concepts.

Finally, Iranian architecture and music are considered not only as independent arts, but also as tools for establishing a spiritual space and connection with the environment and God. These two arts, using the climatic and cultural characteristics of Iran, have acted synergistically to create spiritual and contemplative spaces in this land. Hence, the connection between architecture, music, and climate in Iran specifically indicates the mutual influences and harmony between art, the natural environment, and spirituality, which ultimately leads to a cultural and spiritual experience.

## REFERENCES

- [1] Adinehfar, Atefeh et al. (2019). Study of common elements of Iranian architecture and instrumental music, a case study of the Ali Qapu monument in Naghsh-e Jahan Square, *Islamic Lifestyle*, Volume 3, Issue 13, 266-275.
- [2] Balkhari, Hassan. (2011). *Philosophy of Islamic Art*, 1st edition, Tehran: Scientific and Cultural Publications.
- [3] Balkhari, Hassan. (2005). The Cosmological Position of Sacred Geometry, *Fine Arts Journal*, Volume 10, Issue 24, pp. 5-14.
- [4] Portrab, Mustafa. (2019). *A New Look at Iranian Music Theory*, Second Edition, Tehran: Nay and Ney.
- [5] Khaleghi, Ruhollah (2006). *History of Iranian Music*, 10th Edition, Tehran: Safi Alishah Publications.

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- [6] Rezaeini, Mohammad. (2003). The Position of Religious Music in Ancient Iran, *Fine Arts Journal*, Volume 13, Issue 13, pp. 106-117.
- [7] Samipour, Timin and Seydian, Seyed Ali. (2016). Interpreting the elements of music and architecture with a common language: a case study of traditional Iranian music and architecture, *Comparative Art Studies*, Volume 6, Issue 11, pp. 99-113.
- [8] Sohangir, Mohammad; Nowruz Borazjani, Hassan. (2012). A comparative study of the conceptual link between the space of music and architecture in the pre-modern era and afterwards in the Western world, *Bagh Nazar*, Year 9, Issue 23, pp. 33-46.
- [9] Shaterian, Reza. (2015). *Climate and Architecture of Iran*, Fifth Edition, Tehran: Simay Danesh.
- [10] Shariatrad, Farhad. (2019). Semantic Links between Architecture and Music: A Reflection on the Common Value of Iranian Architecture and Music, *Soffe Magazine*, Volume 29, Issue 4, 19-38.
- [11] Sadeghpour Firuzabadi, Abolfazl; Khalilzadeh Moghadam, Maryam. (2011). The Book of the Month of Art, Volume 13, Issue 138, pp. 104-111.
- [12] Alizadeh, Hossein and others. (2019). *Theoretical Foundations of Iranian Music*, 3rd Edition, Tehran: Mahur Cultural Institute.
- [13] Farhat, Hormoz (Mehdipour Mohammad). (2015). *Instrument in Iranian Music*, 6th Edition, Tehran: Part Publishing.
- [14] Flamaki, Mohammad Mansour. (2013). *Principles and Readings of Iranian Architecture*, 1st Edition, Tehran: Faza Publishing.
- [15] Flamaki, Mohammad Mansour and others. (2008). *Architecture and Music*, 3rd Edition, Tehran: Faza Publishing.
- [16] Kiani, Mohammad. (2000). *Iranian Architecture*, 1st Edition, Tehran: Samt
- [17] Majedi, Hamid and Shamloukia, Shabnam. (2008). Studying the Influence of Nature and Environment on Iranian Music, *Environmental Science and Technology*, Volume 13, Issue 2, pp. 95-103.
- [18] Navaei, Mohammad; Haji Ghasemi, Mohammad. (2019). *Brick and Fantasy*, 2nd Edition, Tehran: Shahid Beheshti University Press.
- [19] Nasr, Seyed Hossein. (2013). *Islamic Art and Spirituality*, translated by Saeed Rahimian, second edition, Tehran: Hekmat Publications.
- [20] Nasr, Seyed Hossein. (2009). *Knowledge and Spirituality*, translated by Inshallah Rahmati, fourth edition, Tehran: Sohravardi Publications.
- [21] Vaziri, Alinaghi. (2014). *A New Look at Iranian Music Theory*, first edition, Tehran: Nay and Ney.
- [22] Yavari, Hossein and Hakabashi, Sara. (2015). *Fundamental Concepts in Architecture*, first edition, Tehran: Sayeban Honar.