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## **FEASIBILITY OF UTILIZATION OF MUSIC IN ARCHITECTURAL DESIGNS (CASE STUDY: PERSIAN TRADITIONAL MUSIC)**

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### **ABSTRACT**

Architecture shares many similarities with music in terms of concept and form. Both have their roots in culture of the land from which they come. In a time when architects increasingly tended to cheapness and formal elements in their designs, musical songs, with their deep impressions on human soul, could serve as ideal parameters to endorse architects in their designs. This article seeks to study if it is possible to make use of musical sounds in architectural forms. It's methodology is based on interpretational-historical approach with a case study. Input was collected from library and interviews. To find the answer of question, it initially analyzes on the nature of both music and architecture and then follows by identifying their basic parameters. Then it compares both branches of art which ended recognition of many common grounds in their rules including durations, tensions, utilization of geometry and mathematics.

**Keywords:** *Music, Architecture, Durations, Tension, Proportionalities*

### **INTRODUCTION**

Culture's duty is to represent national identity of every nation. Music and architecture are two prime representations of culture. Iran's music evolved over years under impression of a great variety of factors, which is reflected by paradigms that have been used in Persian architecture. This article reflects on musical and architectural common grounds in order to find a mechanism by which music can be used in architectural forms and its capacities can be evaluated. Mathematics and geometry are thought to have acted an intermediate role to realize such evolution. Having gained an insight into common grounds between music and architecture such as geometrical arrangements which can be observed in sequences, repetitions, mathematical computations, proportionalities, symmetry and paradigms that form the nature of music, author focus on the reflection of these common grounds in architecture. An architectural form that was turned into form by the author is introduced. Then, Persian traditional music was, due music's extent and different styles of sample, preferred.

#### ***Music- Architecture Common Grounds Studies***

Few studies have already been conducted on music and architecture. Although a number of researches can be found to have reflected on music and architecture common grounds, they mainly focus on this matter from sense and content perspectives; while a few of them have a holistic study on both of the arts, which are thought by many eminent figures such as Pythagoras, Plato, Al-Farabi and Avicenna that they are equally enjoying mathematics and geometry in turning quantity (turning sounds by music and materials by architecture) into quality. Hesameddin Seraj's book and article are prominent examples of such studies. Faza magazine is another example that made efforts in this realm by publishing articles on music-architecture common grounds, which mainly focus on general concepts in music. Among Western authors who made efforts on this subject Xanax, LeCourbosier can be named.

### **MATERIALS AND METHODS**

#### ***Research Methodology***

This is a historical-interpretational research which employs research strategies and certain samples. It bases its content upon qualitative methods and arguments. Library and documentary studies form the basis of its analyses, descriptions and interpretations. It starts by an interpretation and analysis of nature of music and architecture and their parameters. Since data and variables of this article are qualitative, a

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qualitative method with a deductive approach, qualitative analysis of variables, analysis of articles as well as interviews is used to unveil common grounds between these two branches of art and their representation are discussed in samples.

#### **Characteristics of Persian Music**

The music that we are inherited can be divided into seven broad systems: Shur, Nava, Mahour, Segah, Chehargah, Homayoun, Panjgah. This categorization was made since forty years ago and is common today (Khaleghi 1991). It has been intended to introduce these systems via formal boards and elaboration on the emotional burden that each contains as well as social, historical and geographical positions in order to make sure all points have duly been taken into account in our effort to find parameters that help turning them into architecture.

1-4- Circular Movement: in Persian music, melody moves in a way that one sound is heard more than others. These sounds (also known astunic) are centered in melody; i.e. it helps melody to develop (Akhvat 2003). Tunicis similar to center of focal point of the picture which changes in different conditions. This center is intended to create reliability and resort (Kiani, 1991). Songs in Iran's music have a continued movement in tetrachord range with constant returns to the tunic of this tetrachord. If melody wants to go beyond a tetrachord, a tetrachord is added to the previous tetrachord to enable melody continue its circular movement in the new tetrachord (2003).

2-4 Decoration: no paradigm in Persian music is left free from decorations. In Persian music, decoration is the smallest part of a musical song which is to complete the main song. They play a significant role in an artistic presentation and playing them needs special skills. Their absence renders the musical songs seem boring and absurd (Kiani, 1991). In other word, decorations are similar to the lingual elements that connect sentences or meanings with each other. They also are used for diversifying musical paradigms for the purpose of diversification of details (Okhovat, 2003).

3-4 Perspective & Dappled Shades: musical words are often stated clearly. Strong pitches, movements of a melody in pitch regions of the instrument which creates shades and lights in music, whose samples can be observe in contemporary Persian music. In contemporary music, perspective tends to be idealistic and tensions are started with the least loudness towards highest loudness or vice-versa (ibid).

4-4 Arrangement and Integration of Paradigms: Forming general patterns using simple or compound paradigms is a matter that Iran's music seeks to achieve. Repetition is a factor with significant role in arrangement of paradigms (ibid, 107).

In most eastern cultures, modality of formation and development of melody is based upon objective changes in melody sample or model. Indeed, Persian music combines sound syllable to form musical words or paradigms, which can be categorized as single- syllable two-syllable, three- syllable and four-syllable. Musical words are short (Kiani, 1992).

5-4 Symbolism: Persian music tends to be symbolist because its roots date back old time. CheharDastgah for marking an important event such as new year or wedding ceremony, CheharMezrab (four-beater) and symbolic figures such as PanjDastgah and Haft Dastgah as well as prayer-like repetitions are all representations of Persian musical symbolism (Okhovat, 2004). Symbolism in instruments is a common thing. It is also common that the four main elements (fire, air, water and soil) are used in instruments: the first line symbolizes soil, the second line symbolizes water, the third one symbolizes air and the fourth one symbolizes fire.

Also the relations of the twelve signs of Zodiac with four tunings of lines, four curtains and four lines of Oud is another example (Masoudieh, 1986).

6-4 Vibrating: another characteristic of Persian music is paradigms vibrating. It means simplifying paradigm in terms of geometrical form. It has several reasons: this is to make a capability of repetition and to seem more conforming to natural samples in order to be remembered conveniently and understood easily. When vibrated paradigms are understood by listener accompanied by ensuring provocation of emotions towards these paradigms not only makes reception of decorations and their connections and integration possible but it contributes an important factor to convey a sense of pleasure to listener as well (ibid, 110).

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### Similarities of Music and Architecture

According to Cicerone, there is only one single harmony in the world: notes harmony. Art and science, one with its vast scope and the other with its techniques, do not contribute to completion of such harmony, instead the key for resolving many problems that the ‘harmony’ poses lies in mathematics. Also, as was mentioned earlier, what which helps shapes and forms start to develop in architecture is geometry and conformities as well as musical conventions. So it seemed that from among all similarities that exist between music and architecture, and ‘absorption’ and ‘duration’ are two parameters that give rise to a musical work and distinguish ‘Dastgahs and Gammes and even the works themselves. For instance, what which distinguishes between Dastgah-eShurand Dastgah-eMahour is the existing durations among their notes, and all Gusheh of a musical tone start to connect with each other although having the same durations. Music and architecture similarities will be elaborated more in the following sections.

1-5 Hierarchy: in architecture, hierarchy is too distinct the meaningfulness of a particular form or space from other forms/spaces by means of their size or place (Groiter, 2003). ‘Hierarchy’ principle has also been focused on by Persian music either in substitution of musical formal patterns or the modality of arrangements in Gusheh in musical tone development course.

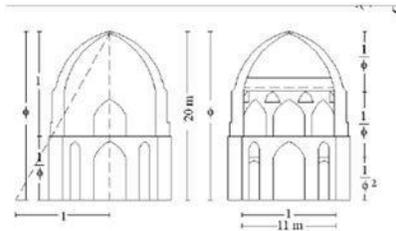
2-5: Unity In multiplicity: unity is a quality that gives identity to an artistic work. In both music and architecture, as excellent arts, unity comes as a means to integrate differences and secret complexities. Unity-orientation in Persian music is represented by circular movements of instrument’s different Gushe (Hazaveii, 1984). In Persian -Islamic architecture such elements can be observed in arabesque ornaments and structural decorations as well.



**Figure 1: Notes movement around the main note in AvazHomayoun, a sample of unity – orientation in Persian music and Persian mosques domes- Sheikh Lotfollah Khan Mosque (author: author)**

3-5 proportionality: it is an element that shows what relation is there between two things (Groiter, 2004). Artistic proportionality stands for mathematical proportionality in art. In architecture, it is directly linked with rhythm and homogeneity and discipline. An architect, knowledgeable in proportionalities, is able to induce what he has in mind to audience. In exceptional cases, breaching proportionality is a technique to bold something. Although musical notes have created gammes in music, notes durations give rise to proportionality which provokes certain feelings. Such proportionality has, in turn, helped a variety of music modes in Persian musical system.

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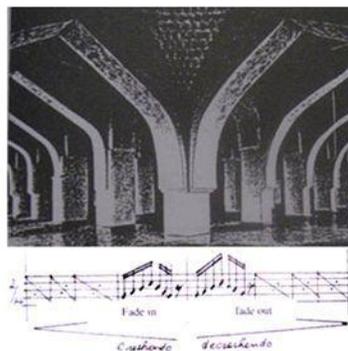
**Figure 2: Proportionality in Persian architecture- Tajolmolk dome in Esfahan MasjedJame (source: author)**

4-5 symmetry: it refers to an equal distribution of forms inside a monument around a line which is known as axis with a central point which is known as center (the same 333). It has not only significant role in polyphonic music, but it makes notes reading more easily as well (the same 151). It further can visually trigger a sense of calmness and relaxation through evenly distribution. This applies to music as well. It can be observed in music as ‘question’ and ‘answer’. In architecture plays the role of mirror symmetry in music: upward notes of the previous motif complete the musical sentence in the form of downward and return to the main note (Haj, 2001).



**Figure 3: Mirror symmetry in music and architecture- Taj Mahal monument (source: author)**

5-5 Rhythm: in music, it occurs when harmonic repetitions occur, which can be discerned by ‘accents’ (Marzban 2005). In addition, it can induce a sense of dynamic harmony in audience. Rhythm is a discussion in music that depends upon time while in architecture it depends upon space. There is no doubt that these two have peculiar conformity (Geznakis, 1999).



**Figure 4: Rhythm and repetition conformity in music and architecture- MasjedJame Esfahan (Seraj, 2011)**

Rhythm reflects in architecture by means of techniques such as harmonic sequence of shades, light, moderate colors and lines (in direct and curve forms) (Filinejad, 2006). It can be created in a number of ways: by alteration in space such as choosing it to be open or closed, wide or narrow, up or down etc., and

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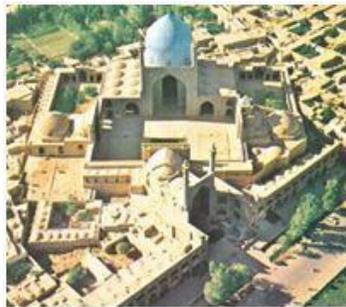
by alterations in light as well as by creating dark and clear spaces (Falamaki *et al.*, 2008). Simplest form of rhythm in architecture can be seen by harmonic repetitions along a direct line.

6-5. Repetition: it is a decisive factor in arranging a number of components into a composition. Repetition in rhythm form, as can be seen in music or architecture, is a very simple principle in creating a composition. It seeks to induce a sense of cohesion (FonMise, 2004). The best way of creating rhythm and internal divisions in an architectural or musical work is to employ repetition technique. The following figure reflects repetition in both architecture and music (Seraj, 2011).



**Figure 5: A sample of repetition in details of Esfahan Marketplace (source: author)**

7.5 Passage: it is a term that exists in both music and architecture which refers to passing or a route for passing. In both music and architecture it stands for the act of connecting two differing spaces in the form of joints. In architecture, passage refers to ‘a space that connects one part of a building to another part’ (Harris, 2006). Similarly, in music it refers to a piece of musical work that is designed to connect two important parts of the work – in terms of form.

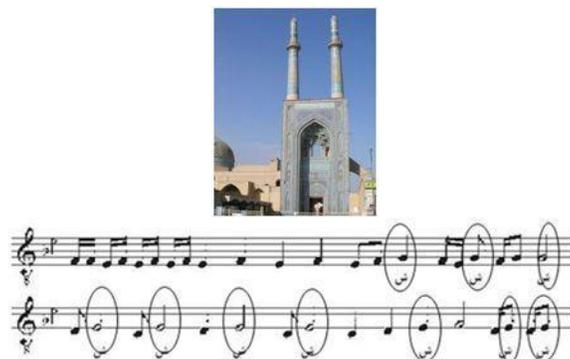


**Figure 6: A sample of modality in a musical work which can be seen in circulations of entrance door of MasjedEmam (Imam Mosque) in Esfahan**



8-5. Accent: it means bolding a component to be distinguished from other components. It is important and is realized by stressing on certain sounds or tones in a musical work or by stressing on a particular section of the monument in architecture. MasjedJame Yazd in Yazd city is a prime architectural example of accent (Filinejad, 2006). Accent, when distributed properly, has a remarkable impression in composition. This holds for music as well. Stress is indeed a tension of forces that guide audience’s view. In most of Persian Maghams, one sound has a more prominent and more attractiveness than others (Farhat, 1999).

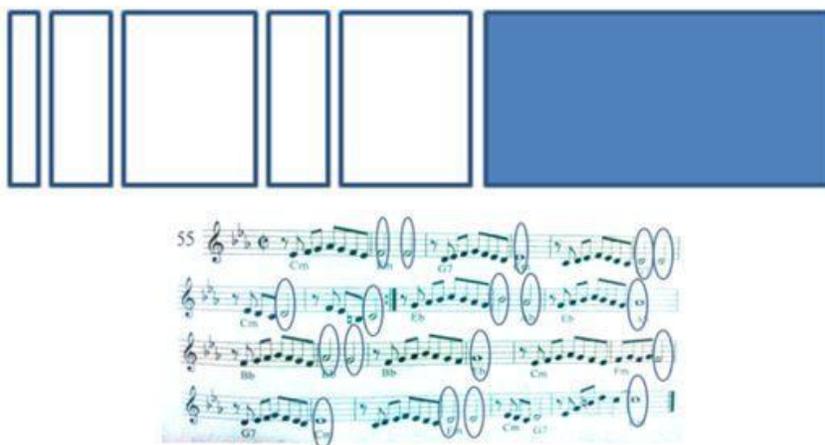
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**Figure 7: Stress in the second introduction of song, MirzaAbdollahRadif (course of development) and entrance door of MasjedJame Yazd (source: author)**

9-5: Hauteur: it refers to a climax, shortness or long, pitches of a sound or a musical work. A musical form is created by a sound in pitch range. This range is referred to as ‘climax’. In architecture, the height of a monument and its proportionality of elements is called ‘height’ (Mallah, 2004).

10-5. Tension: it is a vital aspect of both architecture and music. Music’s building blocks have time aspect and so the tension in music can be said to be of time nature. Sounds that extend for a long time are capable of inducing a sense of relaxation while those which extend for a short time can provoke a dynamic emotion. On the other side, tension in architecture is a matter of space, which occurs in relation to one of the monument’s structures and draws attention to that structure. For instance, a mosque can convey the message that it is a place for heavenly acts by including tension in minarets (Samimi, 2004).



**Figure 8: Intension in music and in architectural motifs or sizes (source: author)**

11- **Intensity**: it is a qualitative characteristic of sound which can be used as a means to intensify sound. By a sudden, gradual change in sounds intensification, it can be possible to provoke a special emotion in listener (Samimi, 2004). In Architecture, visual signs distance from observer has a direct impact on clearness and discernment of sizes. According to perspective, closer the visual signs to human, clearer they appear, vice-versa. Architects also use these visual signs to provoke special sense in observers (Samimi, 2004).

12-5 Contrast: in music, silence in arrangement and forte and piano is similar to empty and filled space in architecture (Seraj, 2011). Contrast endorses meaning and makes communication more convenient. In music, when a special musical instrument is more prominent than other instruments in an orchestra or when a melody is more prominent it can create contrast.

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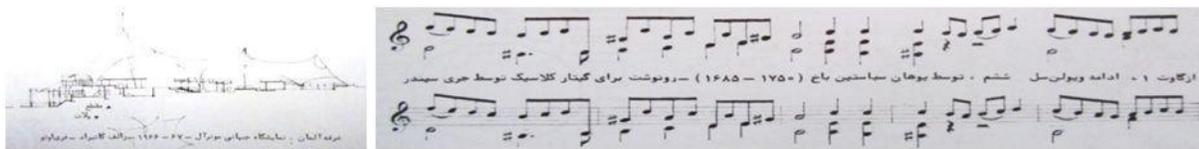


**Figure 9: Contrast (empty and filled space) in architecture (source: author)**

13-5 Silence: it is known as the most sacred part of music, where it regains rhythm. The same silence in architecture can be conveyed by a stop space for preparation to move once again. Without silence, music and architecture become boring. Silence is a practical matter in architecture. Squares and urban nodes are prime examples of silence in architecture. Sometimes, silence can be passed to audience by including a special element in a monument in order to catch the eyes of audience (for example by location of an artistic work along a moving path) (Sadeghpour and Khalilzadeh, 2011).

14-5 Start Point and Ending: both architecture and music start from a specific point ending in a specific point. These points are of great importance. In music, starting point is basic note, in terms of form, and ending point is compound notes that are comprised of basic note and tunic that are known as ‘dove wing’. In architecture, audience is initially introduced a general form and then the details and forms are revealed by them. This can be the ending point in architecture.

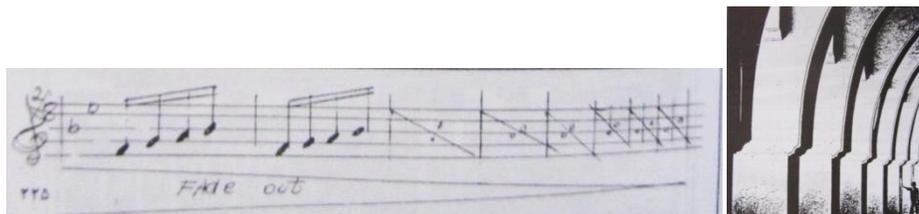
15-5 Assumed Factor: this is a line, surface or volume that is used to organize and arrange a special form of space (Di, 1998). It creates discipline. For instance, musical lines act the role of assumed factor form a basis for reading notes and tetrachords. Orderly durations and inter-notes discriminations in a musical arraignment have such a role (the same 358). In architecture, axis plays such a role. Axis and line are prime examples of assumed factors



**Figure 10: Assumed factor in music (line) and in architecture (surface) (Ching, 2008)**

16-5. Glisando: it means moving finger on a line and returning to the main note. In music, this term is used when a surface joints another softly and it returns the original surface. ‘Zenakis’ describes displacement of direct lines and the alterations that it faces in architecture as ‘Glisandi’ (Mallah, 2004). Also, such a connection is based upon a fundamental pattern (Ardalan and Bakhtiar, 2000). This also holds for music.

17-5. Perspective: architectural perspective is similar to musical Fade Out; i.e. a rhythm is repeated and faded out. Visually, perspective has two forms: form distance to close which is known as ‘fade in’ and from close to distant which is known a ‘fade out’ (Seraj 201, 265). In contemporary music, perspective is more realistic, by tensions that start by pure calmness and then begin to be heard strongly, or vise-versa (Okhovat, 2003).



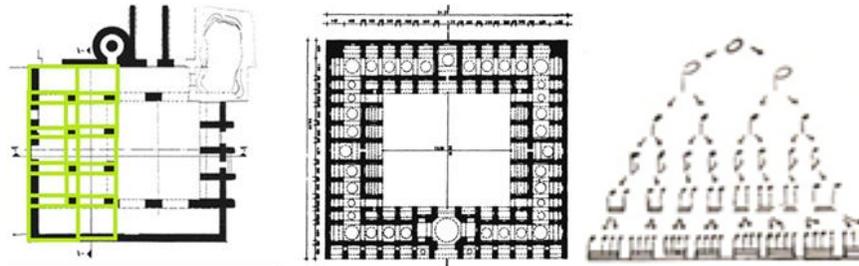
**Figure 11: Perspective in architecture and music (Seraj, 2011)**

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18-5 Harmony: it means a discipline and order among building blocks of a phenomenon. In music, it means discipline and order of sounds (Sadeghpour and KhalilzadehMoghadam, 2011). It is represented by motifs and themes in architecture. ‘Color, shape softness, reflections etc., all can be harmonic’ said Bruce Alsob, British architect. Such a harmony can be observed in music as well by and between sounds and sentences and themes etc. this is slightly different from harmony knowledge as a multi-sound technique in music (Fillinejad, 2006).

19-5 Color (Rang): sound has a feature that cannot be assessed. It is known as color (Rang) or material of the sound which has a direct link with the instrument it comes from (Samimi, 2004). In music color is composed of movement, continuity and weights. A musician can make use of color to depict any scene that he has in mind (Mallah, 2004). In architecture, visual signs have two features color and composition which are both related directly to the thing that has created such signs. Everything has the potential to provoke a certain feeling in humans (the same).

20-5. Repetitions: it is referred to small sizes and quantities that can be used everywhere they were needed. It is, in other words, a pattern by which architect can make sure of balance and beauty of his work. It also gives a unity to the monument in architecture. It is a repetitive and fundamental element in music that can also be generated to Persian music as well. A great variety of Persian musical Gusheh are made by repetition of a type melody in different forms and types.



**Figure 13: Repetitions in music and repetitions in Lar caravanserai and FahrajMasjedJame plans (source: author)**

21-5. Space: space is the most notable common ground between these two arts. Space is taken form by time and place. Unlike architecture, music does not deal with the space directly; instead it uses induction of special space for ensuring impression on listener. This moving space is the peak of music’s power (Marzban, 2005). Both architecture and music can employ ‘space’ as a means to impress audience. Architectural space is the one which is created by forms (either positive or negative), while in music it is dynamic and unlikely to be defined or described, and also it cannot be limited to forms (either they be positive or negative). By understanding a space in an architectural monument, it is possible to gain a certain feeling just like the one which a musical performance can induce (Blessner & Salter, 2009).

22-5. Being introversion: HomayounKhorram described Persian music as the one which delicately provokes an interesting feeling in listener and called it as a ‘introversion music’ (Kohrram, 2010). Persian music invites listener to concentration and relaxation, trying to heal listener and guide him/her to highest peak of humanity by stopping his/her inner dialogues. Unlike western musical instruments, Persian instruments are lower-sounded with an introversion personality (Zahedi, 2003). The same applies to Persian Architecture as well.

23-5. Utilization of Geometry and Mathematics: geometry and mathematics in both architecture and music serve as organizing force that drives elements towards highest beauty. An architectural monument and a musical work both are normally composed of differing elements and parts.

Musical weights are based on mathematical relations. Music is an art branch which has its roots in mathematical ratios and proportionalities. It evolves by geometry. Acoustic- knowledge of turning architecture ideal for music- is a common ground of mathematics in both architecture and music. Designing certain scenes such as concerts and operas are in need of physics.

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The following table provides a number of features that music and architecture share. It also reflects the capability and possibility of turning music into architectural form as well.

**Table 1: Similarities of Music and Architecture (author)**

Concepts	Music	Architecture
Hierarchy	Prelude, introduction, a number of Gusheh after introduction, four-beater form, ballad, percussion form, Rang form	Entrance, path division, path change, stop for deciding direction and visual productivity: access hierarchy
Unity (centrality)	- Melody ablaut, - return to the main tetrachord - notes movement surrounding tunic	Utilization of symmetry, proportionality and colors in a monument Arabesque or curling curves Circular forms such as circle (Hosseini Rad 2003, 184)
Proportionality	- proportionality in length of sounds and distance and frequencies of notes - Do: Fa is 3 to 4 - Do: Sol is 2 to 3 - Do: Do in the next gamme is 1 to 2 Application of proportionalities in time, golden proportionality	Proportionality in length, width and height Employment of proportionality in place volume, golden proportionality
Symmetry	- third line in 5-line carrier of symmetry axis - mirror symmetry in notes	Symmetry in outer volumes in inside space Symmetry in doors
Rhythm	Harmonic repetition Quick or slow movements which are produced by means of sounds or silences	Change of space either it be close or open, narrow or wide, upward or upward Sequence of enlarged or shortened volumes, light and shade, colors etc.
Repetition	Music return path, repetition of motifs	Repetition of windows Repetition of engineering designs- arabesque Repetition of motifs Repetition of pillars and walls
Connection	Connector piece which makes connection between two main pieces Zinat notes separation (connection of two notes by zinatnote and conversion of jumping movement to gradual movement)	A space that connects a part of building to another part. Corridor is a connector. A turn of 45 degrees in entrance corridor of Masjed Imam in Esfahan
Stress	Relying on sound, by this sign the note must be stressed Stress by means of breaking rhythm Stress by means of creating a central point	Relying on reveal of part of the building Relying of creation of gravity and centrality Relying on reaching peak Relying on repetition Relying on contrast
Hauteur	Climax in music	Length or shortness of a part of the building

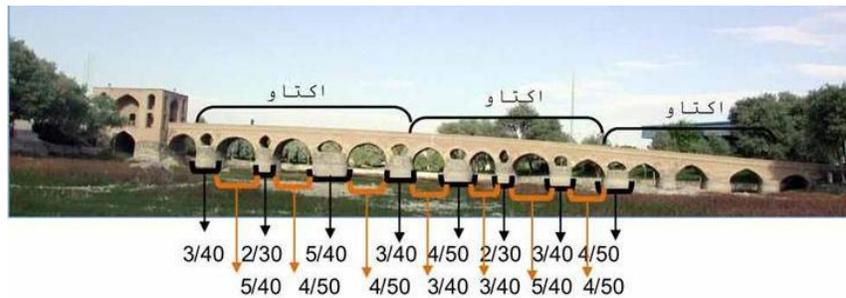
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Tension and durability	Sounds whose duration is long or short	Utilization of visual signs
Intensity of duration sound of visual signs	A note that has more intensity than other notes A note that is moderate than other notes	Larger or smaller volumes with getting closer to each other Utilization of light and shades for better clearance
Contrast	Has silence and voice and pitch. Contrast in melody and harmony	Has light and shade, height and shortness, clearance or obscurity and contrast of spectrums
Silence and movement	Moving and dynamic but it may occasionally induce silence  Silence	Empty space and static but it may occasionally induce dynamicity and movement Sections that passer stops such as squares and urban nodes
Assumed factor Glisando	Carrying lines in music Moving fingers on strings and return to the main note	Axes in architecture Displacement of direct line and changes in architecture. Glisandro occurs in architecture when a surface joins another softly and then return to its original position
Respective	Tensions that start slowly tending to become strong or vice-versa. Gradual reduction of intensity at the end of sentence. i.e. the former is Fade In and the latter is Fade Out	It is a fundamental principle in architecture 3D Understanding of space
Harmony	Proportionalities of sounds Proportionalities of musical sentences Proportionalities of echoers	Harmony of colors Harmony of composition Harmony of forms and shapes
Improvisation	If singer or composer gets away from the known Radifs to compose a song that fits, he has improvised	Utilization of a general structure similar to a hall and its differing elements such as ornaments, boards, light, shade, color and partitions
Material, color and composition of sound in music	Color and material of sound corresponds with the musical instrument	material of sound in music is similar to color and light and compositions in architecture
Repetitions	Every note is a basic module in a performance notes tension units. Circular note is a repetition	Repetition in architecture in referred to a unit that repeats and organizes the space
Subjectivity	Objective aspect of subjective geometry	Hearing aspect of objective mathematics
Form and melody	It has form	It has melody
Function	It has various functions such as religious, residential and cultural etc., functions	It has different forms such as march, morning, military, dance etc forms
Formation	Time, volume, length, width and height	Time, frequency of sound and rhythm
Scientific basis	Geometry, mathematics in architecture	Mathematic in music theory

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**Correspondence of Persian Traditional Music and Traditional Architecture**

1-6- Historical Shahrestan Bridge: this bridge is located in eastern Esfahan city on Zayandehroud river. It has thirteen foundations and twelve rock support. It is noteworthy that the number of fountains corresponds with the number of Persian music gammes (seven Dastah and five Mugam). This bridge has eight smaller openings that are seen in different forms from the first supports to the eighth of them. Also it seems that architect of this monument has stressed on the number ‘eight’ by holes. This can signify the degrees of octave durations in music. In addition, appearance of this bridge reflects seven musical notes. The conformity and harmony between these support durations with musical gammes has added to the beauty and artistic looks. That is why this has been a prominent monument in Esfahan after lapse of centuries (Nikounejad, 2013).



**Figure 14: Approximate size of supports and openings of Shahrestan Bridge**

2-6. Broujerdiha House: in this monument, hierarchies are similar to hierarchy in Mahour musical tone. The main entrance .... Hashti (Covered entrance) ..... Door ..... corridor..... Yard..... GholamNeshin (ambulatory corridor) ..... maze corridor ..... TabestanNeshin (summer rest place)



The first introduction

GushehGoshayeshGushehDelkeshGushehIraq

**Figure 15: Hierarchical system in Mahour musical tone and its comparison with hierarchical system of Boroujerdiha Houser (AakhavanSarraf 2004).**



**Figure 16: Symmetry and repetitions in Boroujerdiha House from right to left (author)**

**Utilization of Music in Architectural Designs**

General forms of musical tones (Dastgah) are less dynamic than Gusheh. So it was decided to use a Gusheh from Shour musical tone. It was chosen because descend is a pattern or tone that occurs at the end of most Gusheh in a musical tone to end that Gusheh (Pourtorab *et al.*, 2012). Descends play an important

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role in all musical tones. In most of musical tones there is more than one descending pattern (Farhat, 2001). In design of the following form (by author) nets tension has been used. It was observed that other features of descending Gushehsuch a hierarchy, rhythm, harmony etc., can be seen in form.

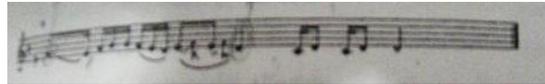


Figure 17: Melodic form of ShourDecend (Farhat, 2001)



Figure 18: An architectural form designed based on descending Gusheh in Shour musical tone – by author (source: author)

### Conclusion

From of variety of studies that have already been performed on the common grounds that both music and architecture share it can be concluded that these two branches of art have close links with each other in terms of structure and concepts. Also they both have their roots in culture which can serve as an evidence to prove that music has capability to be converted to form. Music, from one hand, shares many similarities with architecture and, from the other hand, it is considered as the most subjective art which induces its emotions without any intermediate. It can provide a pattern to architects to inspire them in their architectural designs. It can provoke their innovations. Many eminent figures including Pythagoras, Plato, Al-Farabi and Avicenna considered the concept of music and its impressions as a result of its notes tensions. They even attributed these proportionalities to heaven. It can be hoped that conversion of music to architecture can convey the same impressions that it is originally anticipated. It can be a pattern in architectural designs because both art branches share many similarities in their materials (sound and building materials) in addition to their similarities such as hierarchy, rhythm, proportionality etc. on the other hand, music and architecture both have their roots in culture. Musicians have achieved much pleasurable proportionality during thousands of years. By using these parameters, human cultural identity can be included without resorting to formal repetitions and imitations.

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