

## **Architecture and Illusion in the works of Sheikh Bahai**

Hoda Yazdian & Assoc. Prof. Dr. Hossein Sadri

*Faculty of Architecture, Design & Fine Arts, Girne American University, North Cyprus*

---

**ABSTRACT:** *This paper investigates on the identification and evaluation of the architectural works of Sheikh Baha'i from the prospective of illusionism. Sheikh Baha'i built various urban and architectural monuments in the Safavid period (1501-1722) in Iran, mostly located in Isfahan. The Safavid era was a turning point in Iranian cultural history, which made significant transformations in Iranian architecture. Safavid architecture and urban design followed human centered, rational and at the same time spiritual notions and mostly reflected in the buildings and urban spaces of the period in Isfahan. This period witnessed the most creative developments in art and culture and science, metaphysics and spiritual philosophy. Parallel to this as a combination of science, metaphysics and art, illusionism and its knowledge and implementation raised during this period. Illusion relates to what is unexplainable by common law or phenomena. The illusion is something unusual and fabulous. It is often perceived to be supernatural or magical phenomena, as it does not adhere to commonly experienced circumstances. According to this definition, identification of the intriguing and unusual architectural and urban works of Sheikh Baha'i as examples of illusionism in architecture is possible. Defining diverse methods of implementing illusion in architecture, this article investigates and analysis some works of Sheikh Baha'i according to these methods. Shah (Imam) Mosque, Sheikh Lotf Allah Mosque, Ali Qapo Palace, which is located in Naghshe Jahan square in Isfahan. Also, Minar Jonban (Shaking Minarets) and Si-o-Seh pol are samples of the architectural works of Sheikh Baha'i which used as case studies in this article.*

**Keywords:** *Sheikh Baha'i, Illusion, Safavids, Iranian Architecture*

---

### **I. INTRODUCTION**

Architecture is the art of mysteries, and the architect is the creator of figures, forms and meanings. Creation is a sacred action related to the God(s). For this reason, metaphysics and spiritual philosophy sees architecture as a kind of mystic movement towards God(s). According to this philosophy, architect's training is absolutely related to this notion; in an appropriate environment and time to represent the divine power of creation. Whatever (S)he designs or creates must be fit with the mystic, secret, unusual and intriguing characteristics of divinity and the spiritual nature of it.

According to the literature written on the concept and the realization forms of illusion, we can differentiate the illusions of symmetry, scale, orientation, separation, 'weightlessness', and even "dematerialisation" in accordance with architecture and the built environment. According to Ruskin, these methods endeavor to influence our impressions and perceptions (Spiliotis, 2006).

Illusion in metaphysics as something unusual and fabulous, refers to intangible, metaphysical and anomalous life. The exploratory system of it has in the principle adjusted to the practical judgment skills. The phenomena of figment have commonly been examined by alienists; that is to say, doctors who are conveyed up close and personal with their most striking structures in the rationally disturbed (Sully, 2012). An illusion is something that entices or deceives craftily; impression of what fairly existing so as to carry the misrepresentation of its actual, free nature. Illusions are regularly seen to be otherworldly or enchanted phenomena, as they don't stick to ordinarily experienced circumstances. Their practices are sometimes understood related to the magicians, entertainers, illusionists, who stimulate a group of people with visual and mental misdirection methods. These illusions include confusions, optical illusions, mechanical props and organizing physical expertises. Referring to the famous quotes used by illusionists; "now you see it, now you don't", the ability to control one's view and perception is essential in illusion.

(Spiliotis, 2006). The illusion can be infused at different level by especially requesting spatial and transient examples of incitement.(Robinson,1931).

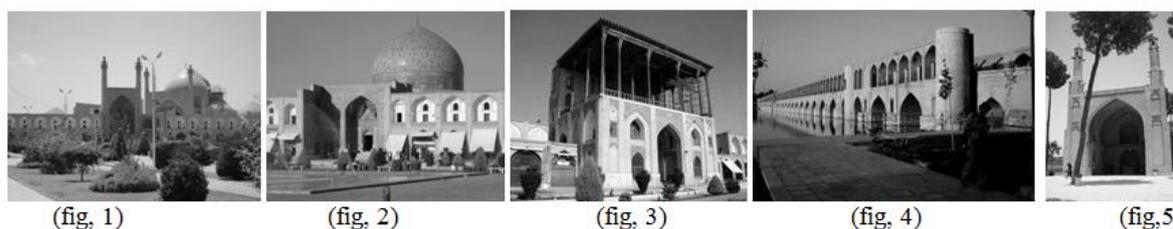
According to the literature the visual and perceptual illusion which is highly used in architecture and other visual arts can be classified in six categories. These are the illusion of scale or length, the illusion of direction, the effect of the location, the illusion of contour, the illusion of contrast and the illusion of perspective.

Illusion of scale or length	Illusion of direction	Effect of the location	Illusion of contour	Illusion of contrast	Illusion of perspective
-----------------------------	-----------------------	------------------------	---------------------	----------------------	-------------------------

**Table 1:** Illusion types

## II. ILLUSION IN SHEIKH BAHAI WORKS

Baha' al-Din al-'Amili known as Sheikh Baha'i was one of the scientists of Safavid period in Iran who educated many students like Mulla Sadra Shirazi and Muhammad Taghi Majlesi, two famous Shia scholars. He has deep studies and research in diverse fields of science and culture and wrote books in different areas including but not limited to math, geometry, poetry, astronomy, jurisprudence, interpretation (Tafsir), philosophy, mysticism, supernaturalism and architecture. He was conversant in the most sciences of his time that made him be known as Jame Ul Uloom which means the collection of sciences. Kashkool is one of his most important books in which he has discussed about theoretical and practical aspects of architecture, in addition to state philosophy. This book also includes stories and subjects related to supernatural sciences. One of the discussions in Kashkool is about the relation between general and partial in all creation systems and he provides an example of architecture. Some of the other books of Sheikh Baha'i are Al-favayed Al-Samadih and A Compendium of Arithmetic. As an architect, he is the creator of the most valuable architectural works of his period, including Shah(Imam) Mosque(fig, 1), Sheikh Lotf Allah Mosque(fig, 2), Ali Qapo palace(fig,3), Sio Seh Pol bridge (fig, 4), Minar Jonban (shaking Minar)(fig,5) and etc. He was hold also the highest political position in the administrative organization of the Safavid dynasty. Carrying as the title of Sheikh al-Islām (the head of Islam) he was also the highest religious power in his period. He also had a deserving impact on religion and philosophy stability of Safavid dynasty that had an effective role in producing his works (Sardaei Khouei, 2012).



**Figures 1-5,** Photos taken by the author or taken from <http://en.wikipedia.org>

His student Seyed Ezedin Hossein Kerki has also said that:” He was the most lettered and wise scholars of his time and was unique in some knowledge, he desired Sufism and mysticism a lot..”

### Illusion of Orientation

The illusion of orientation is an important method to affect the perception of the visitors in architecture. This illusion is mostly created by using parallels vertical or horizontal and with the parallels at 45° (fig.6-7) (Robinson,1931). In the Shah(Imam) Mosque of Isfahan the illusion of orientation is used especially in the entrance of the complex (fig, 8). The Mosque was built in 1628-1629 in the reign of Shāh Abbās I, and its plan must have been the work of Sheikh Baha'i .( Burckhardt, 2009). Shah Mosque is located on the southern side of the historical Naghshe Jahan square. The orientation of the mosque 45 degrees rotated about the square (fig,9).



### Illusion of Weightlessness & Motion

Sheikh Lotf-Allah Mosque (fig. 10) which is designed by Sheikh Baha'i is located on the east side of the Naghshe Jahan Square, across from the Ali Qapo Palace. Aside from its small size, with its complicated plan, this mosque is one of the glorious and elegant architectural works of Islamic Architecture. The mosques carry a spiritual and emotional features. Entering into the corridor of the mosque from the light outside the first feeling is the deep darkness. The senses of isolation and disorientation is felt in the first seconds (fig. 11). The dome of the mosque lays delicately on the lower structure from and within the doors. It is suspended weightless over the unfathomable volume and shrouded wharfs which give the important backing (Ardalan, 2001).

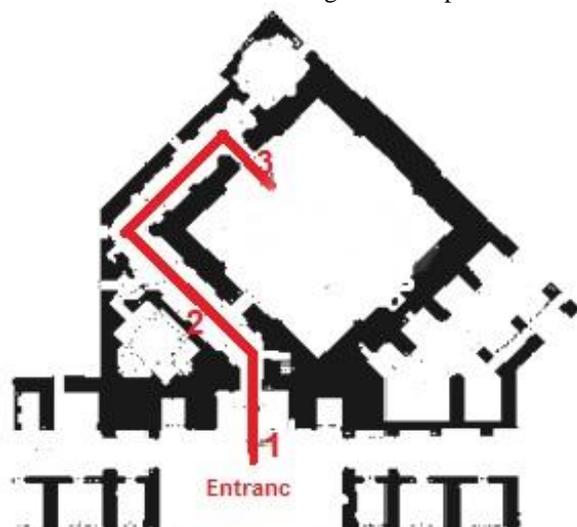


Figure 10 - Plan of the Shaikh Lotfollah Mosque, Isfahan - Henri Stierlin, 1987



Figure 11 - Shaikh Lotfollah mosque corridors, by: Author

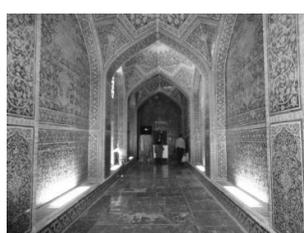


Figure 12 - Lotfollah Dome, by : Author

Inside the mosque many repetitive patterns give curious effects both in direct view and in afterimages (fig. 12).

(McNaughton, 2009). The illusion of motion is a constant feeling inside the building.

### Illusion Of Height

The Ali Qapo palace is located on the west side of Naghshe Jahan Square in Isfahan. Differences between two sides of the building create height illusion. The place from the Naghshe Jahan Square side looks two floors with balcony on top, and from the backside palace its sixth floor. (fig. 13)



Figure 13 - Ali Qapu palace ,Author

### **Illusion of Reflection**

Si -o -Seh Pol bridge is one of the most famous bridges in Isfahan. It comprised of a progression of 33 curves and built in 1602 by Shah Abbas-I for one of his Generals. The name Si-o-Seh Pol (fig, 14) gotten from the Farsi language for 33 (Si-o-Seh). The reflection of the bridge in water creates an amazing horizontal line (Savory, 1925). Likewise, to the extent we can see total illusions of the third- dimensional kind in scaffold curves. It is clearly observable in the shadows that they cast (below), as well as through the unpretentious shades that show up on their surfaces. All materials, whether wood, clay and so on, have diverse, intelligent properties and opacities that can naturally be understood. The merest indication of evaluating shades gives the eyes unobtrusive intimations as to the structure, profundity and the substance. The expansion of reflections can likewise demonstrate the positions of other light sources and adjacent articles (McNaughton, 2009).



**Fig. 14.** Si-o-Seh pol perspective. [www.wikimedia.org](http://www.wikimedia.org)

### **Illusion of Movement**

Minar Jonban which means shaking minarets) (fig, 15-16) is another architectural masterpiece of Sheikh Baha'i. It is located between Najaf Abad City and Isfahan City in Iran (Jazini, 2007). This illusion in this building is that when someone shakes one of the minarets the other one also is shaken and following that the shaking of the whole building can be felt.

This building is the most unusual and mysterious works of Sheikh Baha'i, Scientists for centuries tried to find out the reasons of this interaction. This building is a great example of movement illusion in architecture.



**Fig.15,** Minar Jonban perspective. ([wikipedia.org](http://wikipedia.org))



**Fig.16,** Minaret.( Jazini,2007)

### III. CONCLUSION

Sheikh Baha'i is one of the most important and main characters of architectural movement in Safavid era and Isfahan school during the 16th and 17th centuries. It is interesting to note that most works and books from this era have a supernatural base and, for this reason, they have preserved their glory and worthiness and never make the readers or viewers tired.

Historical researchers and their accuracy subjected to variations, because of lack of enough documents remained. Nevertheless, it's been tried to find a relation between the works of Sheikh Baha'i, according to some of the remained historical works and the people's perspectives about supernatural science. Sheikh Baha'i designed buildings that revealed the spiritual nature and supernatural of the artistic work and its mysteries and by watching that work. One can realize the mental and spiritual features and beliefs of the architect because of the illusion that applied to his architectural works.

In this article his works were evaluated under the five different types of illusion and examples of his works was introduced. As a result this article tried to show how illusion can be employed in architecture to give a supernatural and spiritual feelings.

### REFERENCES

- [1]. Ahari, Z. (2012), Isfahan school in Urban planning, Art university, P. P. 12-16.
- [2]. Ardalan, N (2001), The sense of Unity "The Sufi Tradition in Persian Architecture", translate: Jalili, V. p, 153, Published: khak.
- [3]. Burckhardt, T. & Nasr, H (2009), Art of islam, Language and Meaning, P.160-165, Published: Library of Gongress.
- [4]. Freud, Z. (1989), The future of an illusion, W. W. Norton & Company, P. P. 81-83.
- [5]. Jazini, M (2007), Sheikh Bahaei Myth, Iran Zamin thirteen, no: 3624.
- [6]. McNaughton, Ph (2009), Perspective and other optical illusions, P. P. 24,26, 46. published: wooden books.
- [7]. Merriam-Webster.com Merriam-Webster Dictionary -2. The Two Faces of Jesus by Robin M. Jensen, Bible Review, 17.8, Oct 2002
- [8]. Robinson, J.O (1931), The Psychology of Visual Illusion, P. P. 10, 30 . Dover publication.
- [9]. Sadri, H. (2011) Şark Şehrinin Uyanışı: Nakş-I Cihan Meydanının İnşası ve Şehircilikte İfahan Okulu (Turkish), Title in English: "Revival of an Eastern City: Construction of Naqsh-e Jahan Square and Isfahan School of Urbanism", Mimarlık Journal of Architecture: 360, July 2011, Ankara, ISSN: 1300-4212.
- [10]. Sardaei Khoei. A.(2012), Shaykh-i Bahā'ī Makhzan-al-Asrar Seir-o-solouk, Published: Khoei P. P. 11-12.
- [11]. Savory, R. M, (1925), Iran under the Safavid, Translate: Azizi, K. P. 164, Published: Sahar.
- [12]. Spiliotis, A. (2006), Illusionism in Architecture. Manchester Metropolitan University, P.P. 7,11.
- [13]. Sully. J (2012). Illusions A Psychological Study , Kegan paul, Trench. P. P. 217-221.