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Original Research Article

The Investigation of Features and Methods of Using “Tongborie” Decoration in Architectural Works of Safavid Iran and Mughal India*

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Abstract

Problem statement: “Tongborie” is one of the dependent elements of architecture in the Safavid Iran and Mughal India eras. Safavids and Mughals cultural and political relations have had a significant role in art influence between two countries so that many arts including Tongborie decorative art which is known as “Chini-khana” in India has gained popularity because of these relations. The main statement of this study is investigating these works in terms of form and application in the architecture of the Safavid Iran and Mughal India eras. This study determines different attitudes of artists in the application of these patterns in the monuments of two lands by investigating form features, patterns, and Tongborie application techniques.

Research objective: The main objective of this study is to investigate how cultural relations between Safavid Iran and Mughal India influence the evolution of Tongborie objects, the recognition of form features, and the use of these designs in monuments of two countries. The secondary aim is to use of resulted knowledge in designing jewelry and handcrafts which has not been addressed in this article.

Research method: The present study has been based on historical findings analysis and description of patterns based on theoretical and visual knowledge and data collection methods including a field survey of monuments, study of internal and external creditable sources, and obtaining knowledge from experts.

Conclusion: This study shows that the decorative element of Chini-khana has entered Indian art under influence of Iran Tongbories and can be categorized into three general forms “Altar”, “Container”, and “Epigraph” Techniques and materials used in Iranian and Indian models have had differences. Iranian Tongbories have been used in interiors with more variety of forms. In contrast, extent models in India have had a variety in mason techniques and have often been used in the landscaping of external surfaces.

Keywords: *Architectural works, Tongborie, Chini-khana, Safavid, Mughal.*

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Introduction and problem statement

Historical studies indicate mutual influences of Iran and India during different periods; however, the extent of these relations is more evident in the Mughal period of India, which coincides with the Safavid period in Iran. Studies also show that Iran's political and cultural influence has been greater than India's influence on the Iranian plateau as if Islam takes Iranian features and the Iranian way of thinking involves Muslim India. Hindu- Islamic or Hindu-Iranian architecture is a result of Iranian Islamic culture influence in this country which combined two traditions (Javanmardi & Ghafariyan, 2017, 3; Ahmadi, 2017, 2), and its signs can be seen in gardens, tombs, and monuments of this period. Also, the influence of Iranian art and patterns on India is seen in many arts including miniature and printed calico. The design of Tongborie is not exceptional in this case. The similarity of Tongborie forms and their application in the architecture of this period in India to Tongborie decoration in the Safavid period raises this question that how was the process of Impact and effectiveness of this art due to the relations between two countries and what are the differences in the samples of the two countries? On the one hand, the extent and way of their application and function can be recognized by comparing shapes and forms of Tongborie in monuments of these two periods and have a more comprehensive look at Tongborie decoration and its differences in the architecture of the two countries. Therefore in this article, the Tongborie works of Iran and India and their patterns and forms are studied. The investigation of how these arrays influence each other, features, forms, and materials used in them are objectives that are followed in this study. To this end, first, some Iranian and Indian monuments that indicate noticeable signs of Tongbories are recognized and comparative analysis is conducted by collecting forms and shapes of Tongborie. Regarding what has been mentioned, related questions of this study are as following:

1. How have been the process of Impact and effectiveness and the way of using Tongborie

decoration in the buildings of the Mughal and Safavid periods?

2. What forms and patterns do Iranian and Indian Tongbories include and what are the formal and technical relations between them?

Theoretical background and literature review

Studies show that Tongborie art has a history before Safavid in Iran and even samples of Tongborie related to Al Mozzafar in Yazd have been identified which of course requires more research. But what is certain is the existence of Tongborie decorations related to the Timurid period in some of the monuments related to 9th century AH in Iran (Hamzavi, 2009). It appears that this art later in the Safavid dynasty and during the relationship between Iran and India is entered into Islamic architecture decorations of this period in India and gains its specific features. In identified studies of non-Iranian studies, Tongborie which is known as Chini-Khana in India has been mentioned. In some of these articles, this decorative ornament is known as the Iranian element which has been entered Indian art (Khan & Imdad, 2011, 7). In a study conducted by Chida-Razvi, Tongborie decorations in Iran have been investigated in terms of application. This study shows that Iran Tongborie decorations are three-dimensional. In a monument such as Chini-khana of Sheikh Safi al-Din Ardabili, they serve as places for dishes while in the music-room of Ali-Qapu, the aesthetic aspect of them has been highlighted. Comparatively, in India, these decorations first have been used to serve as places for things but gradually and from the Jahangir period onward their decorative aspect has been prioritized (Chida-Razvi, 2019). However, this study by a different procedure; in addition to the subject of practical applications of this decoration, has addressed to types of Tongborie forms and patterns in Iranian and Indian architecture and their typology of forms and techniques and paid attention to their influence in the setting of monuments. Samples of Iranian studies which have addressed this subject

are as following: an article by Valibeig and Sa'adati which by examining Tongborie forms of Chini-khana of Sheikh Safi al-Din Ardabili Shrine have investigated their practical aspect merely in this complex (Valibeig & Sa'adati, 2011). In another study conducted by Parisa AmirHajloo and Saeed AmirHajloo, typology of the most used Tongborie forms in Hash-behesht and Ali-Qapu Palaces and comparative investigation of Safavid pottery form and Tongbories have been discussed (AmirHajloo & AmirHajloo, 2017). In another study, Fatemeh Goosheh has addressed to process of Tongborie development in Iran. This study indicates that the architectural style of stucco decorations in the Timurid period has been manifested in the form of Muqarnas and in the Safavid period in the form of cavity stucco called Tongbori (Goosheh, 2011). In the collection of Islamic art books, it has been paid attention to Tongborie; for instance, Blair and Bloom regard the decorations of the sixth floor of Ali-Qapu as fantastic stucco work which has been hollowed in the form of favorite porcelains of Safavid Kings; and in addition to the acoustic role, have also had decorative one (Blair & Bloom, 2002, 483). It should be mentioned that no study has been carried out on the comparison of this art between Iran and India focusing on the formal and technical typology of this decoration and its effect on the functional and architectural structures. Similar studies have been conducted by investigating Tongbories of Iran and India and emphasizing their application and development process.

Research method

The procedure of research is the analysis of historical findings relying on theoretical knowledge and the description of patterns based on visual knowledge. In this regard, the books and articles related to art and architecture in this period, cultural and artistic communications and transactions, and the way of Tongborie decoration formation are investigated. Referring to historical monuments with Tongborie artistic elements in Iran and India, studying reliable

sources, and obtaining information from experts are the most important things that are considered. To conduct the study, overall 11 Iranian monuments and 22 Indian monuments had been identified and studied which some of them due to their features in both countries had been regarded as landmarks and extent Tongborie works in them include all features of this decoration in both countries in terms of quantity and quality and some others had been observed in field studies which had noticeable works¹ but in this study for brevity, just selected monuments have just been mentioned and extant works in them have been presented as a sample of other works understudied. A comparative study of works of two countries in terms of use of the monument, Tongborie patterns, the way of building they include the most important analytical aspects of the present study.

Tongborie

Tongborie is a type of stucco decoration common in the Safavid period which has been implemented in the form of a cavity (hollow). The surface of work is not balanced and flat in these stucco decorations but cup and jug shapes have been hollowed in the background of corbel (Bozorgmehri, 2010, 133). Tongbories have different applications and can be used as a place to keep the dishes like Tongbories in the hall of Chini-Khana of Sheikh Safi al-Din shrine or control sound energy in Ali-Qapu palace or just have aesthetic aspect like Tongbories of Martha-Peters House. These decorations are typically accompanied by paintings and patterning and its appellation can be found in shapes which Tongborie patterns have been created from them like jug and vase patterns.

In the Mughal period, Persian language and literature had a great influence in India and its samples are even used today which per se can be drawn from this period. Terms such as "Kitab-khana" and "Naqqashi" are some of these cases. Another one of these terms which date back to architectural decorations of this period is "Chini-khana". In a study by Samram Khan and Ayshe Imdad, regional Chini-khanas of

Peshawar in Pakistan were investigated; first, they have studied the meaning of the term “Chini-Khana” in Persian to define Chini-khana and regard it as an indentation and retraction of part of one wall’s surface to rest of the wall which is put as a unit side by side and porcelains² were held and showed in them. They also describe that Chini-khana has been used widely in Iran and formed one of the important elements of interior decorations of governors’ palaces and residences and Mughals interest in noticeable culture and wealth of Iranians in bringing and supporting Iranian art in India has been effective. Chini-khanas were created by arch indentions in interior walls or these decorative arches were even painted on the wall without any dimension (exterior Chini-Khanas) and vases, dishes, other cases were painted in them (Khan & Imdad, 2011, 75). Arch forms (which are known as “Altar” forms in Iran) are regarded as one of the important decorative elements which were a device to show valuable and decorative treasures. Such Altar forms in Chini-khanas are the symbol of the gate of Eden garden which is decorated with flowers, bouquets, and similar things (Baer, 1998, 93). Ebba Koch writes about this as follows: these decorations are shallow indentions³ in the wall which forms of dishes such as bottles and vases were done on them in bulging form, but in real and practical form, these hollow and cavities were used to keep the dishes which historians of Shah Jahan period called it “Chini-khana”. Both decorative forms which do not have practical mode and were created in bulging or flat form by mosaic stone art and cavity forms were the welcomed decorations in the architecture of Jahangir period (Koch, 1986, 34). Ebba Koch has regarded these decorations as unique in Mughals architecture and relates its apogee to the period of Shah Jahan (Koch, 2001, 81). Also in another article by Mehreen Chida-Razvi, Chini-Khana was translated as “China room” into English and refers to a common design in Mughal architecture in which two dimensional or three-dimensional shelves were created on the walls and the dishes could be placed in them or merely

displayed. Chini-khana was also built on the façade of monuments which was adorned by marbles on the red sandstones (Chida-Razvi, 2017, 10). Nadeem Razavi also considers common motifs of Chini-khana in the Jahangir period including short arches which in them are filled with flowered bulging patterns, wine cups, and jugs and he regards this symbol of Iranians paradise (Nadeem Rezavi, 2002, 132). Chini-khanas can also have other applications; for example, in Terraced Gardens of Indian Mughals, waterfalls are fallen down in the change of each layer often in the form of a thin sheet in front of a wall, this wall includes small niches (Chini-khana) in which small vases of flowers are kept during the day and placed candles during the night which both much beautifully influence on flowing water behind (Koch, 2007, 174). In general, studies conducted by researchers who have focused on Tongborie in Indian architecture imply that Tongborie art as a type of applied decoration has entered the built monuments of India of Mughal period influenced by cultural interactions of Iran architecture and are seen in various forms in them.

Buildings containing Tongborie in Safavid period and Mughal period

Designed monuments with Tongborie decorations in the Safavid period mostly include palaces and houses. A large number of these houses are related to the Safavid period in Isfahan. In the Mughal period, most Tongborie works (Chini-khana) have been used in tombs and castles which include different sets of buildings and are addressed according to the statistical community and the selection method mentioned.

• Chini-Khana of Sheikh Safi al-Din shrine

Sheikh Safi al-Din shrine is formed of different monuments which have been built during different historical periods. Tongborie decorations are located in the interior section of Chini-khana building which overall has been painted, clay-layered, and gilded (Mesbahi, 2009, 24). Basically, Safavid kings were highly interested in collecting and keeping porcelain

dishes and valuable potteries (Blair & Bloom, 2002, 483). These Tongbories have been applied over wall plinths and semi-domes and space around them in flat and concave surfaces. Shape and form used in Tongborie decoration of this monument include Altar and Container forms which of course have a higher percentage of altar shapes and also have more variety which its reason can be found in the holiness of this place (Fig. 1); (Valibeig & Sa'adati, 2011, 124).

• Sharbat-Khana portal of Isfahan Qeisariyeh Bazaar

This Sharbat-khana is located in the upper section of Qeisariyeh Bazaar Portal and can be reached through stairs that are near the bazaar entry. The most important interior decorations of it are Tongbories which have been a place to put the dishes and utensils of the Sharbat-khana in addition to its decorative aspect (Hosseini, 2013, 52). Tongbories have flat, convex, and concave surfaces. They have been placed in upper and lower sections of wall plinths and include Altar and Container forms which the number of Altar forms is more (Fig. 2).

• Ali-Qapu Palace

This palace is located in the western part of Naqsh-e Jahan square and is the most important palace of the royal gardens complex. Tongbories used in this palace are observed in a hall called "Music-Room", This room was for the official reception of the king and a place of the musicians (Pirnia, 2004, 300). Ali-

Qapu Tongborie decorations are in a variety of sizes so that in some, due to their small size, no dish will fit. On the other hand, all the roofs and Muqarnases are covered with these decorations; therefore, aesthetic and acoustic aspects are prioritized in the monument. In building these decorations, Container forms such as stoup and jug have mostly been used and other forms including Altar and Epigraph are less seen. Among designs added to these decorations, clay-layering, gilding, and painting of their components can be seen (Fig. 3), (Sa'adati, 2016, 80).

• Martha-Peters' house

In Martha-Peters' house, Tongbories have been studied due to the uniqueness of their forms among Safavid period houses. "Implemented Tongborie decorations in the central hall of Martha-Peters house can be introduced as the most elegant identified example of this type. The method of building these decorations puts them in the category of tracery. The professional lattice form of the Tongbories is so elaborate that has removed the probability of any use like whatever is in other examples. On the surface of the decorations, the effect of complementary ornament by painting can also be seen" (Fig. 4) (Aslani, 2014, 120-121).

• Jahangir Mahal (India)

This monument is regarded as one of few surviving buildings from Akbar period (Mughal King III) which was appointed to the legal heir and because



Fig. 1. Tongborie Decorations of Chini-Khana of Sheikh Safi al-Din shrine. Source: Isfahan Cultural Heritage Archive.

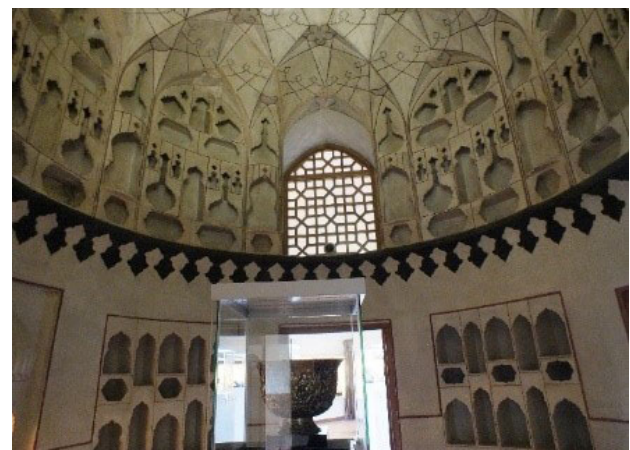


Fig. 2. Tongborie Decorations of Sharbat Khana of Isfahan Qeisariyeh Bazaar in a room called Cylindrical. Photo: Mehrnoush Soltani, 2018.



Fig. 3. Tongborie Decorations of Ali-Qapu Building in Isfahan. Photo: Mehrnosh Soltani, 2018.



Fig. 4. Tongborie Decorations of Martha-Peters House. Source: Shamsi-Kopae, 2010, 35.

of that is known by this name. Iranian architecture features in Jahangir Mahal have had a great influence on local architecture. The arches are pointed and chini-khanas are formed beautifully and masterfully (Poorjafar, Baghai & Poorjafar, 2015, 224). Chini-khana decorations include Altar and Epigraph

patterns in one of Jahangir Mahal rooms (Fig. 5). The decorations have been simple and implemented on flat and smooth surfaces but Chini-khanas which have come in the library of this complex include very beautiful decorations of painting and gilding in which Altar and Epigraph forms have been used and are very similar to Tongbories in Chini-khana hall of Sheikh Safi al-Din Ardabili (Fig. 6).

• Diwan-i-Aam

Many of the existing buildings such as Diwan-i-Aam in Agra Fort are related to the period of Shah Jahan. Diwan-i-Aam as its name implies was the place for lecturing of the king in public. On one side of the building is the jharokha chamber where the kings spoke (Alfieri, 2000, 242). Decorations of this chamber are Chini-khana and mosaic stone art (pietra dura) (Gupta & Sharma, 2013, 93). “Abdul Hamid Lahori”⁴ also in his book Padshahnama (Shah Jahannama) regarded the Chini-khana decorations extent in “jharokha” Diwan-i-Aam a place to put the dishes which were filled with gemstones (Fig. 7).

• Amer Fort (Palace)

This fort is located in Rajasthan, the residence of Hindu kings and most of the Chini-khana decorations used in the palace have been done by Iranian artists and mirror makers who came to India in Shah Abbas Safavid period. Sheesh Mahal or the same Mirror Hall is located on the first floor of Diwan-e-Khas which is also known as “Jai Mandir”. Chini-khana decorations have been used in different parts of Diwan-e-Khas including the entrance which has been decorated with mirrors, stucco, and forms of stoup and jug. Generally, the design of jugs with long necks was very common and used to be generally created on stucco surfaces deeply to indicate signs of real dishes of glass and brass, even sometimes they are done as shallow and convex works (Fig. 8), (Michell, 2007, 30-36).

“Sukh Niwas” is located across from Sheesh Mahal. This building is a private palace that has been used for resting. Chini-khana decorations with Container patterns like vases and sugar bowls have been performed and painted on stuccos of a wall but



Fig. 5. Chini-khana Decorations of One of Jahangir Mahal Rooms. Source: Klingelhofer, 1988, 160.



Fig. 6. Chini-khana Decorations Available in Jahangir Mahal Library. Photo: Mehrnoush Soltani, 2019.



Fig. 7. Diwan-i-Aam in Agra Fort and Chini-Khana Decorations Used in Its Chamber. Photo: Mehrnoush Soltani, 2019.



Fig. 8. Chini-khana Decorations in the Form of Mirror in Entrance Setting into Sheesh Mahal. Photo: Mehrnoush Soltani, 2019.

Chini-khana decorations above the wall plinths are in the shape of an altar placed in a hollow and have a three-dimensional form (Fig. 9).

Itmad-ud-Daula Garden-Tomb in Agra

All motifs used in the Itmad-ud-Daula's tomb were inspired by Iranian samples. In Jahangir period, many Safavid artists such as Agha Reza and Gholam moved to the Jahangir court (Gupta & Sharma, 2013, 113). In fact, patterns that include Eden cups, fruits, and trees are Chini-khana motifs that have been performed in internal walls of tomb as a painting into around shelves and as a stone mosaic in the external walls of tombs façade. These patterns have even been performed on surfaces in entrance gates into the complex by marble on the red sandstone (Fig. 10).

• Tomb of Mariam-Uz-Zamani

One of the last buildings built by Jahangir was his mother's tomb which is located in Sikandra. The external façade of the monument includes Chini-khana decorations, which have been worked by cup and jug forms convexly and are the exact samples of decorations which Ebba Koch has mentioned to them in her article and considered the decoration as shallow indentions which stoup and jug forms have been worked on them (Fig.11), (Koch, 1986).

• Bibi Ka Maqbara

This tomb was built by the order of Aurangzeb and for his wife "Rabia-ud-Daurani" and is a vivid copy of the Taj Mahal which is located in a garden. The entrance gates leading to the garden are decorated



Fig. 9. Chini-Khana Decorations in Sukh Niwas in the Form of Three Dimensional and Painted. Photo: Mehrnouch Soltani, 2019.

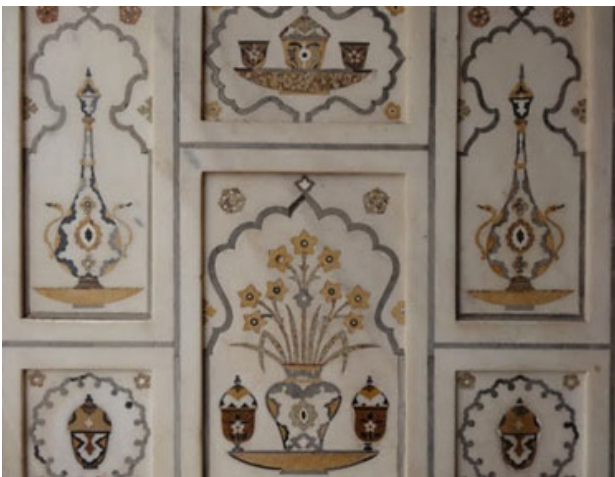


Fig. 10. Chini-khana Decorations in the Internal Façade of Itimad-ud-Daula Tomb. Photo: Mehrnouch Soltani, 2019.

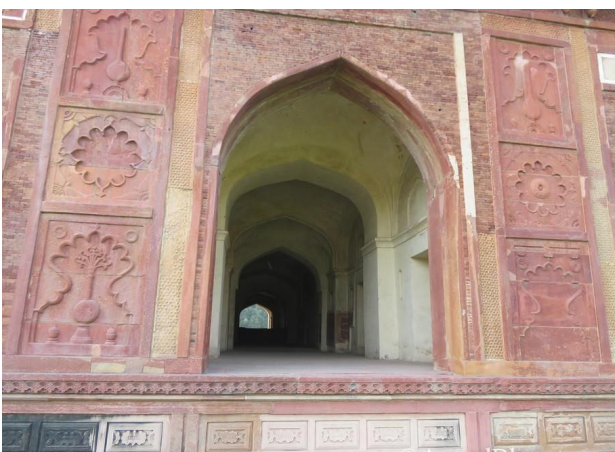


Fig.11. Chini-khana Decorations in the external Façade of Maryam-Uz-Zamani Tomb. Source: www.anandbharat.com.

with multicolored stucco decorations (Alfieri, 2000, 271-272). Internal walls of the entrances, there are Chini-khana decorations on flat stucco surfaces

which are visible in the lower parts of the wall and come in three-dimensional forms and on the upper parts of the wall, decorations are two dimensions and come in the shapes of stoups and dishes inside the Altar, Chini-khana decorations have also been used in the external façade of the gate like internal part (Fig. 12).

• Shalimar Garden in Srinagar

Shalimar Garden is regarded as a famous royal “Srinagar” garden (a state in Kashmir). The garden is famous for its Chini-khana decorations which have been created behind waterfalls or a place in which waterfalls down from upper to lower. The decorations which once have kept oil lamps, the vases are put in them at the present so that their colors are reflected behind flowing water. Today, the garden is a public park (Fig. 13), (Shalimar Bagh, n.d.).

Discussion

After investigating Tongborie works in Iran and India and studying cases of buildings, it is necessary to discuss the data that will guide the research towards its goals. The data explore Tongborie works in terms of forms, added decorations, and applied techniques and compare them based on form and type relations. Therefore, the target factors of investigation can be as follows.

• Applied forms in Tongborie decorations of Iran and India

With regard to conducted investigations on the selected buildings which were addressed in Table 1, Tongborie decorations of Iran and India can be studied under three groups and general formats. Group one includes forms with “Altar” patterns, these patterns are among the most used forms in Islamic art which have been used in other arts such as praying rugs and printed calico and their prominent models can be found in architecture buildings of the Islamic period called vault and arch. The second group includes Tongbories whose forms are drawn from types of dishes, ewers, jugs, and vases and can be called “Container” Tongbories. The third



Fig. 12. Chini-khana Decorations in Entrance Gate to Bibi Ka Maqbara. Source: www.indiathatwas.com.



Fig. 13. Chini-Khana Decorations in Shalimar Bagh. Source: www.archnet.org.

group includes “Epigraph” forms. This naming has been done due to that overall form of them which is driven from Epigraphs engraved on the body of buildings in the architecture of the Islamic period and the prominent models have been used in Islamic buildings in Iran and India. In Tongborie decorations of Iran, apart from the mentioned forms, we can see patterns of animals, plants, and which have been worked in tracery form in buildings such as Martha-Peters house of Armenian House of Isfahan which this method cannot be seen in any Tongbories of India. Tongborie patterns have been used in many buildings of Armenians living in Isfahan and with the same method of Islamic buildings of the Safavid period which its examples are seen in Minas’ and Haratian’s House. Using Tongborie elements to decorate and set the interior of the house is one of its features in Safavid Iran whose form of use can be seen in other Iranian buildings and it is discussed in the following.

• Comparing buildings containing Tongborie elements in Iran and India

Using buildings to which Tongborie decorations have been applied is very widespread in Iran and India. In India, these patterns have mostly been applied in palaces (forts), tombs and garden-tombs, and some caravansaries, mosques, and gardens. In contrast, a collection of these patterns are often seen in palaces, houses, and some special public buildings such as Sharbat-khana, Chini-khana (museum). Common cases are frequently related to palaces. It seems that using Tongborie is mostly related to buildings through which a daily life routine, materialism, and vitality are reflected. The special use of Tongborie on the upper floor of Ali-Qapu Palace and its music room and Hasht-Behesht Palace as a private promenade also confirms this. Chini-khana building was also added to Sheikh Safi complex later and has had museum land use for some people. Sheila Blair and Jonathan Bloom regarded the title of Hasht-Behesht palace which includes beautiful decorations of Tongborie elements implies that the palace has been established to enjoy the pleasures of heaven on earth (Blair & Bloom, 2002, 490). But in India, tombs, mosques, and some palaces have the highest number of Tongborie elements. Perhaps the reason why these motifs of cups, fruits, and trees were widely used in the tombs of this period is not unrelated to the concept of heaven and the desire for a heavenly place and the enjoyment of heavenly blessings for the buried person, especially that most of these tombs are built in a garden which is a symbol of heaven on earth. In Indian palaces which have been established in the form of forts for various governmental purposes, Tongborie patterns have also been used in public places and outdoor spaces; therefore, they can be considered in relation to spiritual goals of the society like other artistic components of that land. Another point is that Tongborie has also been used in non-Islamic buildings of both countries. In series of buildings of Amer Fort Rajasthan which are related to Hindu kings, Tongborie patterns are seen in plenty

Table 1. Comparing Patterns and Forms Used in Iran and India Tongbories. Source: Authors.


























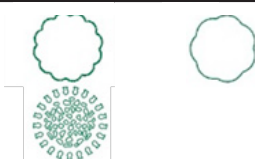
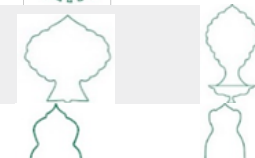

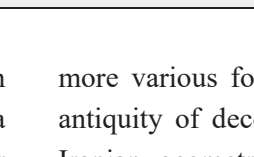
Number	Building (Iran)	Building Use	Common Patterns		Building Use	Building (India)
1	Chini-Khana Hall of Sheikh Safi	To Keep the Dishes			Tomb	Itmad-ud-Daula Tomb
2	Ali-Qapu	Palace			Mirror Palace	Sheesh Mahal (Amer Fort)
						Sukh Niwas (Amer Fort)
3	Ali-Qapu	Palace			Mirror Palace	Sheesh Mahal (Amer Fort)
	Martha-Peters	House				
4	Chini-Khana Hall of Sheikh Safi Shrine	To Keep the Dishes			Tomb	Itmad-ud-Daula Tomb
5	Ali-Qapu	Palace			Tomb	Itmad-ud-Daula Tomb
6	Ali-Qapu	Palace			Mirror Palace	Sheesh Mahal (Amer Fort)
7	Ali-Qapu	Palace			Private Palace	Sukh Niwas (Amer Fort)
8	Ali-Qapu	Palace			Mirror Palace	Sheesh Mahal (Amer Fort)
9	Ali-Qapu	Palace			Tomb	Itmad-ud-Daula Tomb
						
10	Sharbat Khana of Qeisariyeh Bazaar	Sharbat Khana			Mirror Palace	Sheesh Mahal (Amer Fort)
11	Sharbat Khana of Qeisariyeh Bazaar	Sharbat Khana			Mirror Palace	Sheesh Mahal (Amer Fort)

Table 1. Continuation of Table 1.

Number	Building (Iran)	Building Use	Common Patterns	Building Use	Building (India)
12	Chini-Khana Hall	To Keep the Dishes		Mirror Palace	Sheesh Mahal (Amer Fort)
13	Ali-Qapu	Palace		Tomb	Bibi Ka Maqbara
14	Chini-Khana Hall	To Keep the Dishes		Tomb	Bibi Ka Maqbara
15	Sharbat Khana of Qeisariyeh Bazaar	Sharbat Khana		Garden	Shalimar Bagh

and there is a various set of Tongborie patterns in Armenian houses living in Isfahan and even in a building like Bethlehem Church in Isfahan, Altar Tongborie patterns have been used in interior spaces of the church which all refers to a various range of usage of this element in buildings of two countries.

• Variety of forms used in Iranian and Indian Tongborie decorations

Although in general, the number of buildings decorated with Tongborie ornaments in Mughal India is more than ornaments in Safavid Iran, the forms used in Tongborie decorations in Iran are more diverse than in India. For example, in a building such as Diwan-i-Am in Agra Fort, only three forms of Tongborie have covered all surfaces of the building, but in a building such as Ali-Qapu and Hasht-Behesht of Isfahan, all surfaces of the walls of the building are covered with various forms of Tongborie. The reason for this can be found with attention to quantity and number of buildings in Mughal period and requirement for building plenty and decorating them as a dominant system and entered culture into a different field. But in Iran due to its special use, the frequency of these decorated buildings by this ornament has been more limited, and instead, these elements have been able to have

more various forms and ornaments relying on the antiquity of decoration art and various patterns of Iranian geometry. Also, Container Tongbories of extant models in India are different from Iranian models. These types of forms have frequently combined with one Altar pattern and are seen in fact and as a form of a Container, stoup, or jug which Altar pattern has encompassed them. Just in two buildings, Bibi Ka tomb and Amer Fort complex, we see Tongborie forms of Container type which have been used alone and without being put into another form.

The use of the Altar form in Iran and India has a distinction so that in most of the Indian Altar models, we see round arches as multifoil arches. Perhaps the reason for this can be related to the public use of multifoil arches in the Islamic architecture of India. In contrast, we see more use of pointed cinquefoil arch in Altar Tongbories of Safavid period that again its reason can be found in the architecture of Iran and frequent use of pointed arch in this period.

• Materials and techniques used in the construction of Tongbories

In the Safavid period, Tongbories were made hollow and by stucco, so that appropriate space to perform decorations was divided by stucco boards

into the desired form and then two general modes pre-cast and in-situ (carving forms at the place of installation) are used to perform shapes on stucco surfaces. But in India, different materials have been used to perform Tongbories which the most common of which has been stone. In two-dimensional works (such as Itmad-ud-Daula Tomb), sometimes the stone mosaic method is used to perform designs using colored stones, and sometimes, like the outer walls of Jahangir tomb, white marble is mosaicked in red sandstone. The fact that stone has been used extensively in these works can be related to two subjects. First, stones are found in abundance in India, and stone architectural works are often seen in buildings of other religions; also, because Tongborie decorations in India were used in the exterior façade in addition to in inside the building, stones could be one of the best materials compared to stucco for outdoor and outside weather conditions. But because all Tongborie elements have been used in interiors in Iran, the best material to build and form has been stucco, and using stucco has been made creating variety in patterns feasible and on one hand, stucco is available abundantly in Iran and it has long been noticed by architects in decorative works. Another extent technique in India is embossing Container forms on stone in some buildings. Also in many modes such as entrance gate into Akbar tomb, Tongborie decorations have been created in the form of painting, painting on stucco, and or tiling walls. Amidst, some India Tongborie elements were decorated with colorful glasses and mirrors which models of these decorations can be seen in Sheesh Mahal and Amer Fort.

Therefore, Tongborie elements are seen sometimes in three-dimensional and often two-dimensional forms. Although there are also two-dimensional decorations with Altar forms that have been performed as tiling in the Safavid period, the Tongborie technique does not belong to them and one of the main requirements of Tongborie creation works in Iran is their cavity and three dimensional. One of the other outstanding differences between Iran and India Tongborie

elements is the place of using these elements on the surface of walls. In Iran, Tongbories have just been used in interiors, flat and concave surfaces, under arches, and or Muqarnas of the ceiling; but in India, the use of this decoration in exterior façade of buildings are seen more than extent models in interiors. In contrast to Iranian models, all of them have been performed on flat surfaces.

• Added decorations

In the Safavid period, paintings (drawn inside of Tongbories), clay-layering, and gilding were mainly used for the decoration of Tongbories. Such decorations are seen in Chini-khana hall of Sheikh Safi Shrine and Ali-Qapu palace. In Indian Tongborie elements, decorations include gilding and painting especially in the library of Jahangir Mahal; but in other Tongborie elements which have been worked with stone in two and three dimensional or even those which have been painted, there is no other added decorations, which may be due to the variety of colors used in them and there has been no need for complementary decorations.

Conclusion

Tongborie has been one of the common decorations in the Safavid period which regarding the wide cultural relationship between Iranians with India in that period and Mughal Muslim kings interest in culture and art of Iran has been entered into the architecture of India and has been called “Chini-khana”. Investigating different forms of Tongborie in Iran and India and studying the similarities of used forms, they can be identified in three general groups of “Altar”, “Container”, and “Epigraph” Tongbories which in addition to them, some other forms are also seen in Iranian models. Tongborie models are observed in buildings with various applications in Iran and India, but this element is strikingly present in public places and outside in India and there is evidence indicating that Tongborie like other decorative arts of India has been used to display religious and social goals and beliefs. But in Iran, Tongborie models can be seen in the interior

and private spaces of houses, palaces, with some special uses which seem to have more relation with creating beauty and joy in the flow of daily life and materialism.

a comparative study of the building and the sample of the surviving works show that the works of Indian Tongbories have less variety in patterns than the Iranian ones. It appears this has been because of the extensive use of this decoration in the exterior façade of many Mughal period buildings and the necessity for performing the decorations fast and feasibly. On the other hand, the more limited use of this decoration in special spaces, supported by the use of various decorations of Iranian geometry in architectural decorations, has increased the variety of Tongborie patterns in Iranian buildings. Also, one of the most important features of Tongborie art in the Safavid period is the use of these elements in interiors emphasizing three-dimensional forms and working in concave and curved surfaces which results in extra complexities of form and creation of beauty in the space besides the uses such as place of putting the dishes and setting sound. In contrast, Indian models have added to the beauty of building by using more various techniques of performance and using colorful mosaic stones and they have often been used in building façade of flat and surfaces and exteriors except in some cases. Therefore, on the one hand, Tongborie decoration has caused beauty in the facades and exterior surfaces of public buildings in India relying on different performance techniques and a variety of materials. On the other hand, diverse three-dimensional forms and numerous motifs of Iranian Tongborie in the Safavid period have had a special application in the interior design of buildings and the creation of beautiful works of art in Iranian living space. So although, based on extant evidence, Tongborie decorations as one of the cultural relationship achievements has entered into Mughal period buildings from Safavid Iran architecture context, with regard to the presence of different cultural and geographical backgrounds and regardless of extent commonalities, the evolution of

this element in the architecture of the two countries both in form and performing techniques and in terms of pattern and its use in the setting has paced separate ways and each has met the needs of their audience.

Endnotes

1. To study all investigated buildings, refer to the thesis of this paper in Tehran University of Art.
2. Ebba Koch cites this according to Abdul Hamid Lahori, historian of Shah Jahan period. Lahori in the book of Padeshah Nama (Shah Jahan Nama) writes about decorations of Diwan-i-Aam of Agra Fort: Chini-khana decorations of this room were used to keep the dishe.
3. Niches
4. Historian of Shah Jahan Period

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