The Compilation of One Object of Timurid Metalwork (12th Century) in the National Museum of Iran with Two Objects in National Museum of Yerevan-Armenia

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ABSTRACT—The art of Islamic Metalwork in archaeology and art has always attracted attention and in this case, the art of Timurid metalwork because of its elegance, designs, Human motifs and Islamic scripts enhance rich value. In this article of research one type of these models that have remained so far unnoticed by researchers at the national museum of Iran, will be studied.

KEYWORDS: Timurid Metalwork, Script, Human Motifs.

Introduction
Metalwork art in Khorasan and the West of Iran in the 7th and 8th centuries AD. Metalwork art was prospered after Mongol invasion to the west of Iran at the beginning of century 7 AD and gradually expanded to Fars and west of Khorasan in the middle of century 8 AD. We cite these mostly based on copper, bronze and brass as the foundation of lamps, torches, mortar and metal cup and other works of art that have survived this art in this period. In this period still applying the Arabic inscription on the metal objects was widespread among the Iranian working. In other words, the art of metalwork before the Mongol invasion to Khorasan and western parts of the country, about Diyar Bakr from Zanjan and Mosul has advanced and these parts were relatively safe of the damaging attacks by the Mongols in part, at the same time this art returned to mainland Iran from the west of the country, especially Khorasan and Fars, so that spread prosperity again. After coming to power of the Timurid and encourage metalworking, the special metal processing art of Timurid emerged. In this era, metalworkers made on metal objects simple design, with ridges and curves, and convex and concave of object body and also often adorned with scripts and various Arab text lines that were initiated by the calligraphers. In the era of Amir Timur Shah Rukh and Baysunghur and other princes, the metal work art was revived same as Seljuk era's art and metalworkers of this era, especially in Herat, Khorasan Province, inlay silver and gold work especially in various containers and weapon from copper, brass, bronze and iron and steel, the (Ehsani, 2003, p. 165). At the time of Mongol domination, Indian craftsmen were used brass and other needed alloys for daily utensils and containers for religious needs and were decorated with shapes made of silver. In India, the use of high jeweled ornaments were made of gold and silver and were decorated with jewels and precious stones. Such a set of jewelry along with other Islamic inscriptions are made at the Metropolitan Museum (Davoudi, 2003, p. 31). Decorative arts heritage of Iran and Central Asia in the ninth century, not only made of the magnificent objects for Timurid art lovers, but were dispersed Timurid style to other places by craftsmen and artists. Features and components of Visual Arts belonging Timurid era of Iran and Central Asia in the ninth century was expanded to other places such as Turkey and India and this made a style of art which could be called International Timurid Style. The characteristics of this style is plant paintings same as Chinese style that has been incorporated with arabesque traceries, and in particular influenced in the promotion and development of an independent style of the Ottoman Empire in the tenth century AD. The Timurid had been so fond of Iranian art, especially Isfahan architecture, when they wanted to bury Timor, the Isfahanian architect was came to build a large deserved tomb in Samarkand. After the death of Timur, his descendants and the statesmen of his time, like Shah Rukh, Amir Ali Shir Navaei, Baysongor Mirza, and Ibrahim Mirza encourage artists in any field and established a new school of art in center of their rule, Herat, the capital of Khorasan. At the end of the Timurid, Timurid metalwork was mastered to made some steel objects, arms and decorated with inlay and silver, they had been working in the service of the Safavid court. Basically Iranian enrichment of the art workings in this period thanks to the skill and experience of its ancestors, would allow the development and the resurrection of metalwork art at this time. In Iran, it was done gradually progressive metal, ie from generation to generation and was handed from father to son. In the middle of the fifteenth century, Iranian metal workers abandoned to follow past styles, especially Mongol style, which was monotonous and boring. These artists due to the spread of new religious beliefs, the Shia, and also the political developments in the country, create new style metal art.
Object Description
Candlestick
Material: Brass
Build and decorate technology: casting, engraving, etching, and silver setting
History: 8th Century AD
Object registration number: 3560
Dimensions: height 32 cm, diameter 5.8 cm
Discovery site: Unknown
Construction site: Probably the West of Iran
The current location of the object: National Museum of Iran

The upper part of candlesticks is the place of candle has script as following:
This means wishing of happiness, health and longevity to the owner of the object. The upper section Candlesticks, part of a candle holder with two horizontal bar divided into three distinct sections; the upper and lower parts include kind of plant paintings with twisted form of abundant grace and in the middle of it, Sols inscription is seen. The background is decorated with a network design. At the neck of container can see four circle decorated with the Image of musicians who are sitting cross-legged and there is a music instrument like Setar in their hands. Inside the circles and spaces between them, twisted designs of plants is covered. By creating a short distance of perforation, on the bottom of the candlestick neck, there is another inscription in Sols script. In addition, in the middle of neck and shoulder can see a kind of a petition form similar to the water waves. Its lower part with a slight protrusion composed a series of etching beams which framed object body from top to bottom. The most prolific and most elegant designs performed on this part of candlestick. Main stage, including horse riding and a big inscription have been limited top and bottom by two symmetrical strips (Fig 1) each of the symmetric strips decorated with very delicate geometric motifs, animals and plants. The strips, which is highlighted by two lines, circles engraved with a design of birds to be seen are full symmetrical open wings. Between circles, continuous diamond designed, which number in the top is three and the bottom between the two circles is four. Into the diamond, similar designs of several plants with geometric arrangement implemented and all empty spaces between the geometric motifs in the bar with dense vegetation has been convoluted schemes. The main role of the middle part is scenes of engraved design of riders are placed within the four circles of each circle is full of plant designs. Each of these bands symmetrically, with geometric motifs, animals and plants is very delicate; the bar, which is highlighted by two lines, circles engraved with a design of birds to be seen with symmetrical wings open and in between the circles, continuous diamond design, which number in the top three at the bottom between the two circles and their number is four. The main role of the middle part, scenes of Equestrian etching are within the four circles of each circle is full of projects that meander plant Circles adorned with birds are located in four corners of each of these projects and caused great decorations. Similar decorative design, that shows two birds facing each other on a brass ewer obtained from the West of Iran dated 7 and 8 centuries AH (Fehervari, 1976, p. 173). Most metal containers of the eighth century had decorated with plant designs on the surface more than just design of bird’s motifs and even human paintings (Komaroff, 1992, p.137). Riders Images have a slightly difference, the bright halo around the head of each of these Images emphasize their personalities. There is a clear halo around the head of the Images can be seen for the first time in Sassanid art in Iran, especially silver containers, which was considered a sign of holiness (Gunter, 1383, p. 48). Arrangement of images is so that in two of these designs, people get a circular wand with circle end which apparently has been used to guide the horse. The details of people's faces seen with weak lines and elegant engraving of the surface but the horses face remains smooth and simple. Moving horses, and guiding riders are shown. Position of the hands and the horse, as well as the riders clothing is similar in both riders, but only difference is the hat form which is seen in congress in one and in the other with flat form (Image 2).
In another circle are designed in between the two above circles, both riders were designed with congregated hats, and the left hand are  seen birds with long tails (Fig. 3). Horse face of one of riders and the lower part of his dress is engraved in detail in comparison to another one, so that all details of the face and horse drawn well. This is true for bird with open wings sit on the hand of the same rider. In contrast, in the other horse riders, not only a horse and a bird not shown in detail, but the wings of birds can be seen as closed form. But the important difference is direction of horse riders face toward the bird because all three Images into three other circle, all three riders look at forward. In between these four circular plan, an inscription is carved on the Sols script: Artist According to the inscription above, which apparently was written in Sols script was eulogized the king, and introduced him as a righteous and honorable person, the ruler the world and also winner and Warrior. The last part of the decoration of these candlesticks has been separated by a congregated engraved body, there are two decorative strips; herbal plot in the recessed of ornamental flowers can see at top row and plants can be seen between four circles painted similar to the inscriptions, which were completely under the scheme of riders, and two other rows are designed just six blades. From the perspective of human and the rider with bird is  very similar to a sample is kept in Victoria - Albert museum ; here not only horse riders took a bird, but added the bird motifs painted on candles around the neck and on the stand in Kofi line. The candlesticks building site it is likely to Armenia, has been dated to the seventh century AH .This is the candlestick where construction is likely to Armenia (Chirvani, 1982, p. 359) .The other comparable samples for this object can be a brass candlestick out of the eighth century which now kept in the Louvre. This similarity in terms of decoration, design, and the engraving is very high. But here the inscription on the candlesticks have written a manuscript line (Chirvani, 1982, p. 175). In another very similar sample which is located National Museum of Iran with plant motifs, there is specific boundaries between the human Images and found objects that represent Sols scripts. Apparently the North West of Iran is making this dish (Feheravari, 1976, p. 192). Role of the riders with bird on their hands were appeared apparently for the first time after Mongol invasion to the eastern part of Iran on the 7th and 8th centuries AD. Proof of this speech can be referred to a silver brass candlesticks from the thirteenth century that images of musicians, dignitaries and horsemen with bird sitting on their hand drawn (Ward, 2005, p. 89)
Two objects of Tumurid period are existed in Yerevan national museum, one a candle same as our example. Since this objects are same art, technical and morphological characterization, we are about to describe them. Technical description and literary objects

Object 1: cup (Image 4). The thing with registration number 943-1886 has a height of 13 cm and 12/8 cm diameter at National Museum of Yerevan which is basically the same as previous object made of casting brass, Body is barrel shape on a short stand with ring shape .neck of the container is cylindrical and the edge shows greater thickness. Topographic are small, can be seen clearly. From the perspective of decorative art, the main technique is the art of engraving and stone fitting over a wide area, around the body and neck of the container, silver engraving technique has been implemented with great elegance. Neck and body has connected in a twisted design and a dragon like handle connect them using welding technique together. The microscopy study shown the welding parts as small projections clearly. However, conventional techniques of metal objects such matches from the Islamic period, has been reported previously by other researchers (MelikianChirvani, 1982, p. 53). Also in the background, using the technique of engraving and with the addition of a black substance (that due to lack of licensing for sampling, identify the nature of it was not possible) dark space have developed for more expressive of the engraving designs on the surface of the container. From the viewpoint of typology and the discovery of other similar samples (Jenkins, 1982, p. 112) so I can understand the place of manufacture of such containers may be Herat in Khorasan province. Another very important issue is valuable inscriptions on around the neck and body of container with very fine engraving, which is generally the Sols calligraphy on the neck of container is the inscription with a prayer of blessing and wish health for container owners. Within the body , four rows of two very famous Hafez poems has engraved, which can be explained as follows; the lowest and the highest rows of inscriptions include poems as two parts:

At dawn, waking government came to me / say: wake up cause Khosrow , the beloved of Shirin has come
Drink a cup of wine and look with enjoy / to see that your beloved are coming
Give me reward, Oh lonely man / Moshkin deer came to the Khotan desert

Water of crying brought on the face of unhappy ones / screaming came to help the needy lover
Bird of hearted is fan of lover with eyebrow like arrow / O dove be worry 'cause a falcon came
Oh cupbearer do not be upset of dozens of enemy and friend and give a cup of wine / that what we want not happened and this came

Bad promise was seen by the spring cloud / tears came over lily and lavender and narcissus
Because Saba heard of Hafez words from the Nightingale / with amber came to watch lawn

The two inner rows, read the lyrics below:

What is more pleasure than conversation and spring garden / where the cupbearer is expected to go
Whenever you are welcome to give valuable / not aware of one's work
Closed life of transplant intelligence / her compassionate care is a sad day
Water means life, and thy logo / ROODBAR and good is
If both covered one and drunker from a tribe / that we give our heart
What is the secret behind the curtains / claim your quarrel is with webbed
If oppression and persecution of beloved one is not validate / what is the meaning of forgiveness and mercy of Teacher.

The hermit seeks Kosar wine and Hafiz a cup / up in the middle of what is God will

![Image 4: Brass cup (Archive of Yerevan national museum)](image-url)
Object No 2: candles (Image 5)
The thing with registration number 352-1286 has a height of 24 cm and 17 cm diameter at National Museum of Yerevan which is basically the same as previous object made of casting brass, and relatively long bodies that a series of plant designs around the body and scripts with elegant engraving have been performed. Two drawings of plant include the highest part and the lowest part of candlestick body is framed. Through engraving parts, the stone fitting is embodied using silver and the background with elegant hachure. Into the some regular geometric frames, a part of Hafez poems have engraved as below:
I am famous in your love like candles / I am reside in dormitory of soldiers like candle
Day and night, cannot sleep because of grief / I am crying like candles because of your leaving
Similar examples of this type of candlesticks that are kept in some museum of the world, have been reported (Pigott, 1999, p. 75).

Archives of the National Museum of Yerevan
X-ray fluorescence (XRF) Test on objects

Metal surface analyses by X-ray fluorescence may show only approximately combination of these two object

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<tr>
<td>94</td>
<td>Copper</td>
<td>64</td>
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<td>5</td>
<td>zinc</td>
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<td>0.3</td>
<td>Lead</td>
<td>0.5</td>
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<tr>
<td>0.1</td>
<td>Iron</td>
<td>0.2</td>
<td>Iron</td>
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<tr>
<td>0.07</td>
<td>Silver</td>
<td>0.09</td>
<td>Silver</td>
</tr>
<tr>
<td>0.09</td>
<td>Antimony</td>
<td>0.05</td>
<td>Antimony</td>
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<tr>
<td>0.02</td>
<td>Arsenic</td>
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<td>Arsenic</td>
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According to the elemental analysis, brass used for making objects grouped under the title of yellow brass No. 1. Metallographic ally, this kind of brass is seen as yellow because of high level of zinc in its composition and it is very strength, so different metal work processes on them such as engraving pen need more power. Also brass used for the construction of item No. 2 grouped as a simple brass object. Usually a maximum of 5% of zinc is used in them and due to high percentage of copper, in most cases their surface is dark (Farhang, 1987, p. 85).

Conclusion

Regard to technical issue of this article, studies have shown that silver twisted wires are used to stone setting quite same Timurid period of Yerevan national museum. Type of etching, carving, and polishing the outer surface of the containers are quite similar cases which emphasize the importance of implementing above techniques in the Timurid period. Typefaces of Sol’s calligraphy on the container and brass cup of Armenia, Yerevan National Museum are quite similar and elegant pen is used to unload the surrounding text. Metal analyses of this brass cup indicate the artisan of Timurid era make good combination on brass which in addition to physical strength have very elegant color. Meanwhile, this metal combination could minimize the corrosion and this provide the health of object. Metal objects of Timurid period is considered as most interesting example of Islamic metalwork that
can be seen a set of art techniques on this object. Surely silver stone setting in Timurid period was common on containers with hand like a dragon. In one hand, Islamic inscriptions on these objects can provide useful information about concentrated and diverse production of these examples. Most significant object is the oldest script of poems of big poets such as Hafez. During centuries 8 & 9 Hijri, the Islamic metalwork art is distinct example than past periods, the origin of this art is major parts of Khorasan city and also west parts of Iran, where played important role to develop this art. In the same period, some techniques such as extent engraving on brass and admiralty brass containers increased the beauty of works. Also using geometric proportions of Sol’s calligraphy on containers which eulogize the rulers, doubled the beauty of works. In this course, extensive use of techniques such as etching on the surface of containers of brass and bronze added to the beauty of things, the use of geometric proportions third line the walls of containers, often in praise of their owners, the beauty was doubled. Of course, the most dominant painting on the things of this period is marked human paintings, usually with a bright halo around their heads. Images on the containers are drawn in various modes such as horse riding, gala, playing polo and playing instrument.

References