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Aesthetical Study of Patterns and Forms in the Metalworks during Seljuk Dynasty

Ashraf Sadat Mousavi Lar¹, Azadeh Moradi²

Abstract

One of the brightest periods of Iranian art begins with the entrance of the Seljuk dynasty in the land. Metalwork and particularly the use of statues, gold and silver faces restrictions in the Islamic society which have influenced the basis of Seljuk traditional aesthetics. Metalwork is worth to be studied in order to understand basis of aesthetics of Seljuk figures and forms.

This study has chosen twenty samples of metal works from Seljuk and Sasanid eras to get to know the aesthetic principles of Seljuk metalwork. Another inquiry of the paper is to grasp the differences between the metalwork of this era and pre-Islamic period. Research method has been a historical-descriptive and analytic-comparative one. The results show that tribal traditions rules Iranian-Islamic Seljuk metalwork and Islamic tradition has obtained the most frequency after comparisons were implemented. Used metals by the Seljuk respectively are silver, bronze, brass and copper. Construction and decoration techniques include chasing, [casting, engraving, niello (with equal statistics)], inlaying, hammering, [embossing and open working]. Decorative figures include [floral and geometric figures along with inscriptions], animal, legendary and human figures.

Keywords: Seljuk dynasty, Seljuk metalwork, Traditional Aesthetics, Figure, Form.

¹ Ph.D., Associate Professor, Alzahra University, Tehran, Iran.

² M.A. in Art Research, Alzahra University, Tehran, Iran. E-mail: Azadeh_moradi88@yahoo.com

Introduction

Beauty in Islamic art is the manifestation of a total and universal truth. This art is an amazing mixture of graphical borders, formed in sublime and an immortal space. The aim of this art is to endow human environment the harmony as a manifestation of divine unity; and it relieves human spirit from various concerns and refers him back to the infinite unity. Here, tradition ensures the spiritual credit of figures via transferring sacred symbols and patterns.

Seljuk metalworks are the origin of tribal, Iranian and Islamic traditions. The works of this era have been very effective in the process of formation of classic patterns of Islamic art in Iran and some other countries. Understanding the aesthetics of figure and form of metalwork in this period, when the correlation between religion and the government happens for the first time, is the necessity of this research. It is, also, a turning point in understanding how Iran's art works. Making figures via metalwork, particularly the use of gold and silver, is faced with some barriers in Islamic societies. Thus, the traditional aesthetic principles of Seljuk era is completely affected by Islamic attitudes. The formation of this art in an Islamic society is an issue that needs a study of the dominant traditions in Seljuk era.

Questioning dominant traditions in Iran's society in the time, this research aims to achieve principles and basis of forms and figures of Seljuk metalworks and to compare Islamic metalworks with non-Islamic ones in Iran. It aims to find the aesthetic criteria of Seljuk metalwork and compare the Islamic criteria with non-Islamic ones.

In order to attain a reasonable understanding of the aesthetics of form and patterns of metalworks in that era in terms of material , form, pattern, technique and decorations, a statistics population of 20 metalworks from 2 eras of Seljuk and Sasanid ones(as samples of metalwork in a pre-Islamic era) is gathered. The study, then, analyzes the process of metalwork during this shining Islamic period. Finally, the studies applies the characteristics of tribal, Iranian and Islamic traditions of Seljuk society by graphs to that era's metalwork and comes up with some clear results in accordance to current Islamic traditions in the society. Hopefully, this research provides some new materials on the aesthetics of forms and patterns in Seljuk era's metalwork and propels the Iranian art studies in the context of traditions.

Methodology

This research is a fundamental research and its research method will be historical-descriptive and analytic-comparative one. As studies in laboratories is not possible, and just a few first hand resources are available, the data collection is implemented by reading library resources, museums and online resources.

Literature

In the literature of metalwork in Seljuk period, there is no accurate and reasonable research on aesthetics and perception of thought and traditions prevailing in the society of this period. Innovation and unique aspects of metalworkers in this era brings up many questions: Several papers are published about aesthetics of Iran and Islam's art and Seljuk metalwork had been investigated on other aspects.

- "Alireza norouzitalab" in a paper published in 2009 talks about "the beauty and the essence of Islamic Art" and describes Islamic aesthetics in general by expressing different opinions.
- Islamic metal work from the Iranian world 8th-18th centuries Melikian-chirvani, Assadullah souren (1982). London: HMSO.

In this book we can observe and study metalworks of 8th-18th centuries of the Christian era which are kept in "Victoria and Albert" museum in London. This book is one of the best research sources about Islamic metalwork in Iran.

- In a paper translated by L.Baymatov in 2004, "Sergei Agadzhanov" has scrutinized city, trade and handicrafts in Seljuk era and introduces the industrialists and merchants of Seljuk society.
- "Bagher Ayatollahzadeh Shirazi " ,who studied about "metalwork art in Seljuk era" in a paper in 1982, tried to study different aspects of metalwork art of this era but unfortunately this research, according to the year of publishing of it, is incomplete.
- In her thesis in 2014, "Farzaneh Taherinia" studied " the place and application of kufi calligraphy in metalworks of Seljuk era in Iran" and, introducing different kinds of kufi calligraphy on this works, she enumerate the content of these epigraphs as blessing words like mercy bode, joy, prosperity, wealth and health and notify that it won't go further.

Thus, obviously, there is no comprehensive research on this era to introduce the Seljuk metalwork in terms of art and aesthetics with more resources. So, a more extensive study is needed. I hope this paper can offset some of these weaknesses.

Islamic aesthetics

The truth of art lies at the heart of all traditional civilizations, especially the traditional Islamic civilization (Nasr, 2000:46). Tradition¹ possesses a mysterious power which affects civilizations totally and even fortifies crafts and professions do not have any sacred character (Burckhardt, 2013, 8). In traditional civilizations, every art has a symbolic and sacred

meaning that signifies its general and particular meanings (which derives from the Latin word *religat*). Thus, it connects us to God. Every traditional art connects the work of art to sublime and helps the viewer to feel the presence of deity as a result of its supernatural principles, symbols, techniques, forms, and instillations (Nasr, 2000:49).

Since the prophet Muhamed's life until the first decades of establishment of Abbasid caliphate, a comprehensive development of character of Islamic art forms Bagdad (750AD). This development is not only a result of coalition with older cultures opposing Islam and defeated by it, but many local traditions which were controlled and changed by this religion. In Iran, Islamic art adopted many things from pre-Islamic art of central Asia and Iran (Nasr, 1996:72). Islamic art is based on some truths based on keywords like: divine unity, diversity, discipline, science and beauty while unity is the core which leads them toward God. "Muhammad Soheil Omar", the Pakistani Muslim Scientist, has presented different principles of forms and figures in Islamic art in six different categories; the first principle is unity and the second one is beauty. From Islamic vantage point, the important Hadith "Allah is beautiful and likes beauty" defines Islamic art all around the Islamic civilization. The third principle of Islamic art is "ignoring portraits". This art avoids sketching deity in portraits. Another principle in Islamic art is the phrase "there exist no God, rather than Allah" (Soure of Shoura, 11). The other principle is "realism" in the sense of the interpretation of modern followers of "experimentalism", but based on its ancient philosophical interpretation which is loyalty to the true nature of things. This very principle prevents Islam from naturalism. Another Islamic principle of art is the idea that "the world is trivial" which refers to the the ayah "There is no God rather than Allah." This means the destruction of anything than God and the reference of anything toward the almighty. As the ayah "Ah people, you are poor and Allah is the rich and praised" goes, poverty means being insignificant in front of Allah. That's why opulence, richness and luxury of Islamic art is utilizing geometry, arabesque, and sublime rather than Naturalism. The last fact in Islamic art is its being "transpersonal". Islamic art does not seek individuality of human being but keeps firm to the principles which change an artist (Omar, 2000: 79-85). To understand the tradition that controls Seljuk art and considering metalwork and Seljuk aesthetics, we study it in three parts: Tribal, Iranian and Islamic.

Seljuk Tribal tradition

The Arrival of Seljuk Turks is the beginning of a new era in Iran's history: They were considered as Turkmen tribes who came to power in the year 429 AH or 1037 AD in Iran (Kuhnel, 1996: 48).

Seljuk conquered all Iran and Iraq to the borders of Syria and the Byzantine Empire in Anatolia until 1059AD/451 AH and established their own empire. (Morgan, 1994: 39)

Seljuk dynasty is organized in a nomadic way. In the first Seljuk leaders reveal holding the shamanic manner. They respected dream, astrology and prediction (Sattarzadeh, 2004: 20). Hunting and shooting were Seljuks' primary hobbies and common military companions. Hunting deer, zebra, cheetah, hunting-dog, dove and lion is noted as their targets.

Some kings were also interested in taking cheetahs and hawks while hunting. These animals' figures are carved on the metalworks of this era beautifully (Lambton, 2006: 256-257). Tribal tradition can be seen in large size and type of application of Seljuk metal objects and it seems like the role of court tents should be emphasized in the form of their lives. As Robert Irwin believes, many of the most precious works of the ancient Middle East may be designed for usage in outdoors and tents (Irwin, 2010: 169).

Seljuk Iranian Tradition

One of the usual components of a mixed nature that shaped medieval and modern Iran was Sasanid heritage, that is seen in different forms of language, culture, political thought and administrative organizations. The "Siasatnameh" by Nizam al-mulk which is known as "mirror of princesses" and is written as a result Malik-Shah's command is alive. Siyasatnameh's tales demonstrate that Seljuk ruling system were not only influenced by Islamic policies, but it have been influenced by administrative traditions of pre Islamic Iran as well (Morgan, 1994: 34-51).

If the relationship between Sasanid metalwork art and Islamic era is such that even it is hard to detect the making date of some metalworks certainly (Zamani, 1965: 167). Iranian art and tradition world view is formed based on "Zoroastrian" and the idea of Dualism. Geometric forms drawn with symbolic and mystic expressions demonstrate mystic Iran's transcendental way of thought (versus metaphorical thinking). Needless to say, the face of good and evil, one looking like an ugly animal and the other one looking pretty, shows the main ideas of mythological arts.

In addition, in this art of super natural world we see natural faces in imaginary forms as the figures are clearly differentiated from normal faces. Taking care of rectangles with two diameters cut each other is also one of manifestations of Iranian and Zoroastrian religions world view according to which the Temples was built.

This views and interpretations of the world and humanity which is based on the notion of light and darkness goes forward and attains its peak in the art of "Manichaean". The Manichaean

people used precious metals to show light in their metalworks (Madadpour, 1995: 99-106). The effects of such attitude are still evident and obvious in Seljuk tradition.

Seljuk Islamic traditions

Seljuk and his family embraced Islam probably in the late fourth/tenth century because of involvement with Muslims (Sattarzadeh, 2005: 21). The Seljuk didn't consider themselves as Iran's king but they adopted the word "Sultan" (an Arabic word meaning power) as their nickname. First and foremost, they were Islamic rulers (Morgan, 1994: 34) who transferred the center of Islamic territory from Arabic lands to Anatolia and Iran. Early sultans (Tughril, Alp Arslan, Malik Shah, Muhammad bin Malik Shah) were heavily religious as Sunnis and they were considered as followers of Hanafi sect (Lambton, 2012:56).

One of the most important representatives of Sunni theology in the territory of Seljuk was the "Ashari" trend. "Al-Juwayni"(478Ah) was one of the ancestors of this school whose theories was accepted throughout the Muslim world.

After his death, his disciple "Abu Hamid Ghazali "(450-505Q) as the representative of Ashari theology and went to Bagdad and achieved a great fame among the people around Nizam Al-Mulk. He combined the science of Kalam with mysticism and stood firm against philosophers². (Jalali, 2004:115-121). In his book "Kimiyyaye Sa'adat", Ghazali has a very interesting piece about art forms and evil in the market, which is an attitude toward the people's lives: "trade was on dealing evil Oud, Harp, and Rubab which are haram: they have been extinct. There were faces made of mud for children to play. Any animal face there is bad and Haraam and its breakage is necessary. Though, it was permissible for trees and plants. (Ghazali Tousi, 2000: 330-331). Another characteristic of the trade organization of the Seljuk period, which is considered as one of the most salient characteristics of the Islamic community until recently, is guilds of different careers in the society (Lambton, 2012: 82). Iranian guilds shaped based on generosity and they were some manly men who came together for righteous or mystical goals and hospitality.

In " Fotovatnameh "(The guild book), it is written that each industry had a symbolic meaning and or professor or master craftsman not only had the duty of teaching scientific techniques of that industry but also he should have mentioned the spiritual importance of that industry³ (Irwin, 2010:195).

As it is mentioned in resources, many elders and Sufi sheikhs of khorasan and Transoxania were firearm makers, welders, wearers, butchers, and butchers while a large part of their disciples were from working class (Agadzhanov, 2004:53).

Metalwork style of Islamic Iran can be found in Seljuk era for the first time (Shpouler, 1990:21) and products and art works released in this historical era were affective in the formation of the classic patterns of art in Iran (Forouzani, 2004:456).

Considering Islamic traditions and Islamic arts features, the characteristics of Seljuk metalworks can be named as the use of inscriptions on the works, wide use of geometric and plant figures, and the lack of blank spaces on the products. Also, united composition of figures, diversity and intensity of colors, avoiding human and animal figures, and avoiding the use of gold and silver are some other features of the era's metalwork.

Seljuk Metalwork Art

Due to the close relations among figures, patterns, and forms in different Seljuk works, Iranian art researchers have mentioned to a defined common method in the era's works of art. Considering the place and development of metalwork in this era, we can consider that method as the most important factor of formation of "Seljuk method". This method's properties include the wide use of images, enrichment of decorations, making mixed figures with more complexity and high density and attraction, richness of colors and the artists effort to reach effects far than physical facilities (Ettinghausen, 1998:50).

According to experts meetings in specific cities, metalwork manufacturing centers have been separately recorded in the history. For example, in the fifth century AH, "Beykand" and the eastern city⁴ were famous for their coppersmith, and "Balkh" was famous for its silver. In the seventh century AH, "Harat" was known for its silver carves on brass. Using Isfahan's name on signed astrolabes shows that in the 6th century, Isfahan was the center of this type of works in Iran (Ferrier, 1994: 176) Among different Seljuk metalwork art societies – that many things have remained from them – we can name "Khorasan". The seven leaf flower figure has been craved on the metalworkers of in that era as a commercial sign (Demand, 2004: 143).

Materials and methods of manufacturing and Decoration of Seljuk era's Works of Art







Most of Seljuk metalworks include home furniture like lamps, lanterns, mirrors, boxes, bowls and trays.

Scientific and writing tools like inkwell and mortar can also be found among them (melikian-chirvani, 1982:23-135). Also, jewelries made of gold and silver like earrings, bracelets or pendants have achieved from this era but their manufacturing site is not recognized yet. In order to understand the Islamic traditions' changes and the changes of pre-Islamic Iran's traditions, some diagrams are provided with statistics population limited to metals. Methods

are those used in manufacturing and decorating Sasanid and Seljuk metalworks, according to which we can show and compare these changes more reasonably. In this research we are going to talk about Seljuk metalwork art.

This statistics population contains 10 different and famous metalworks from each era which have been ready to assess and sampling due to clarity and enough resources.

Table 1. Statistics Population of metalworks in Seljuk era (source: authors)

				
FIG5. BUCKET,(FERRIER,1374,175)	FIG4. EWER,M 44.15	FIG3. TRAY, M 56.144	FIG2.MIRROR,M 42.136	FIG1.EWER, M 33.96
				
FIG10 .EWER,M 59.53	FIG9.MORTAR,M(91.1.527A, B)	FIG8.INKWELL (TARAGAN,2005,38)	FIG7. TRAY, B 34.68	FIG6.INCENSE BURNER,M 51.56

(In the tables, M stands for the metropolitan museum, B for Boston museum, V&A for Victoria and Albert museum in London, and L for Los Angeles museum. The number of each works in the museums is written next to them)

Table 2. Statistics population of metalworks in Sasanid era (source: authors)


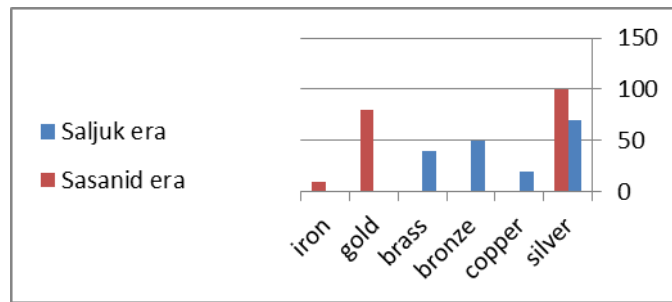
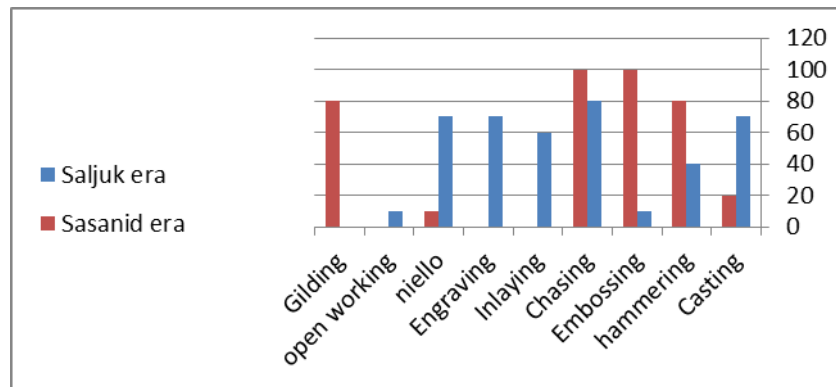
				
FIG 15.SWORD,M 1988.102.44	FIG 14.PLATE, M 63.152	FIG 13.EWER, M 67.10A, B	FIG 12. PLATE, M 1994.402	FIG11.OVAL BOWL ,M59.130.1
				
FIG 20.PLATE, M 34.33	FIG19.RHYTON,M 47.100.82	FIG18.PLATE,L (AC1993.140.1)	FIG 17. VESSEL,M 62.78.2	FIG 16.BOWL, M 1970.5

Diagram 1. The metals which used in statistics population of Seljuk and Sasanid era (source: authors).



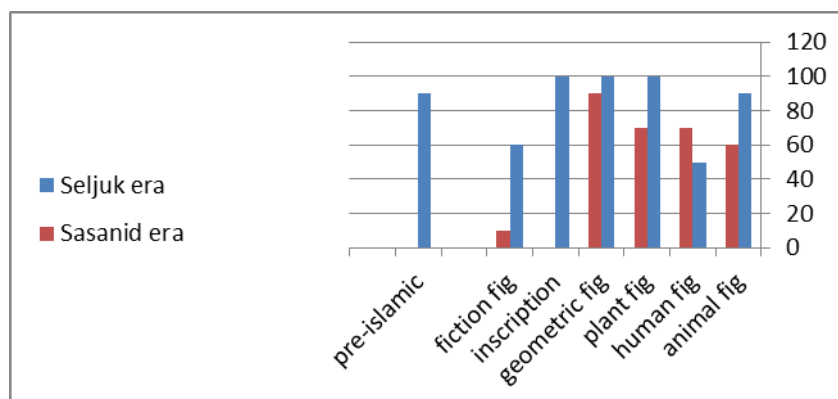
According to the statistics population of the research, mostly used metals in Seljuk metalworks include silver, brass and copper respectively. In this era copper alloy becomes common. In Sasanid era the most common metals were silver, gold and Iron respectively. In Islamic era, brass and copper are used instead of gold and have more applications. Brass has gold's shining and there is no religious limitation to use it.

Diagram 2. Methods of manufacturing and decorating in statistics population of Seljuk and Sasanid metalworks (source: authors).



Manufacturing and decorating techniques in the statistics population of Seljuk era respectively include: chasing,[casting, engraving, the application of niello(with equal statistics)], inlaying, hammering,[embossing and open working]. In comparison to Sasanid era,[embossing, chasing],[hammering, gilding] along with casting and the application of niello of Seljuk era respectively are of more variety and quantity. A new method- that culminated in decorating of metal works in 6th and 12th century– is Inlaying (Muhammad Hassan,1998:215) that increased the value of trifle metals and gave them a worthwhile form.

Diagram 3. Decorative figures in statistics population of Seljuk and Sasanid metalworks (source: authors).


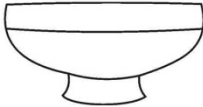


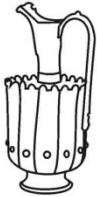
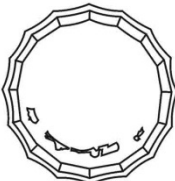
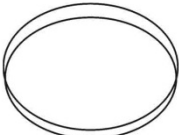


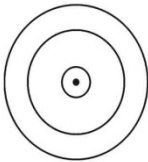


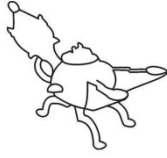
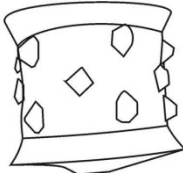



According to the population, the most frequent decorative figures of metalworks in Seljuk era respectively include: [plant figures, geometric figures, inscriptions], animal figures, fiction figures and human figures. They demonstrate that they are compatible with Islamic tradition and intensity of plant figures and geometric and inscription in this era. For the option of “traditions before Islam“ in the diagram, the presence of human, animal and fiction figures are considered that has 90% statistics. Decorative figures of Sasanid’s era respectively are geometric, human, plant, animal, and fiction figures. No inscription was found from this era.

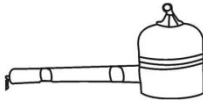


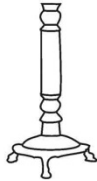

Form and application of Seljuk metalwork

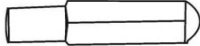

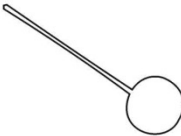
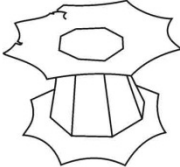

In Seljuk era, a kind of homogenization has occurred in metalworks manufacturing that decreases variety in individual and group productions of metalworkers and limit them by next 2 centuries (Ferrier, 1995:180). This process could be the beginning of a new process in organizing and expanding of Iran metalwork production of that time. This issue is not unlikely because of the economic and export growth in that era.⁵ But unfortunately, the insecurity and collapse of economic system at the end of this era, this process gnaws both in terms of form and individual art production which will affect two decades later. This era’s forms in the production of metalwork include:




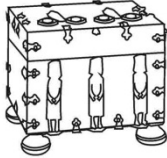

Table 3. The study of form in Seljuk metalwork (source: authors)

				
FIG 25.BUCKET (FERRIER, 1374,175)	FIG 24.FOOTED BOWL (MELIKIAN-CHIRVANI-1982:63)	FIG 23.BOWL V&A M.388-1911	FIG 22.EWER M 33.96	FIG 21.EWER M 44.15
				
FIG 30.BASIN (MELIKIAN-CHIRVANI-1982:63)	FIG 29.TRAY B 34.68	FIG 28.SQUARE TRAY M 56.144	FIG 27. JUG (MELIKIAN-CHIRVANI-1982:120)	FIG 26.MIRROR M 42.136

				
FIG 35. OIL LAMP V&A M.112-1909	FIG 34.MORTAR M 1971.41	FIG 33.PEN BOX M 89.2.194	FIG 32.PORTABLE PEN-CASE (MELIKIAN – CHIRVANI-1982-125)	FIG 31.INKWELL (TARAGAN,2005-38)

				
FIG40.INCENSE BURNER (FERRIER,1374,174)	FIG 39.OIL-LAMP V&A M.68-1922	FIG 38.OIL-LAMP (MELIKIAN – CHIRVANI-1982-101)	FIG 37.CANDLESTICK B 31.767	FIG 36.CANDLESTICK (MELIKIAN – CHIRVANI-1982-113)

				
FIG 45. HEAD OF MACE (POPE&ACKERMAN,1387,1289)	FIG 44. BUCKLER (MELIKIAN-CHIRVANI-1982-73)	FIG 43.LONG-HANDLED SPOON M 2002.20	FIG 42. BOWL-STAND (MELIKIAN-CHIRVANI-1982-90)	FIG 41.INCENSE BURNER M 51.56

				
FIG 50. AMULET L (M.2002.1.545A-B)	FIG 49. INDIGO CRUCIBLE V&A 1533-1903	FIG 48.ROSE-WATER SPRINKLER (MELIKIAN-CHIRVANI-1982-121)	FIG 47. COMBINATION LOCK BOX B 55.1113	FIG 46. FLASK V&A M.54-2-1971

Iran's art has always been functional. Studying Reza Abbasi museum's Seljuk fat-burning works of art shows that "Ergonomic"⁶ and "Antropometric"⁷ principles - some sciences known just recently - that they're the century's science can be found in these works. It is because technical principles like fueling the wicks, floodlight and appropriate emission of light, being easy to transport, use convenience by exact design and arrangements of the relationships between the source and the pipes. Also, safety and stagnation of fat - burners is another feature of them. By the way, all the applied properties in practical components of these works of art do not neglect the decorative part and include both decorative and applicable functions (vafaei, 2015: 96). Colors enrichment is also a property of Seljuk style that is occurred in metal works by fabrication (and the use of niello) which is caused depth

creation, being colorful, and polyphony of metal works in this era. Brass's yellow has intensity and also depth but like yellow light has special transcendental quality and looks like white. The copper's redness is like a symbol of revitalization (madadpour, 1975: 233) and, next to other metals, presents other beautiful aspects of Islamic art.

Content Analysis of Seljuk metal works

Producing beauty in Iranian art is based on decoration. In Islamic art, decoration is used to present the sublime atmosphere; it's a tool to bring honor to the materials. "Behold, we have willed that all beauty on earth be a means for her beauty"(kahf-7)(Rahnavard,2006:78). Generally, this era's artists don't like blank space in their works and they fill all the spaces of their works. They, also, replaced small and compact pattern with single usual patterns of Sasanid's era (Lakpour,1996:13). Arabesque patterns harmonizes vertical and horizontal lines of margins and decorative pages by its torsions and adapts the whole with details. These patterns may have religious source where animals and plants were respected (Zamani, 1973: 17-34) interwoven Arabesques are used to yield more complex effects and create depth illusion. It's unlikely that a thinker looks at these complex works and doesn't think about Allah's infinite power (Irwin, 2010:281). Geometric decoration attain their highest level in Seljuk era (Figures 51& 53). A close relation between geometric, cosmology and semiotics has guided researchers to change supernatural and religious geometric content in presented patterns (Wilson, 2011: 21). The emphasis on "the one" is secret of geometric patterns' richness in Islamic Art. This nature of Islamic art is the base of geometric expansion. Because the geometric form that shows symmetry is always centripetal. In Islam, geometric shapes are symbols of sublime things and math is the representative of reasonable world based on which God made this physical world. These patterns represent divine center "wherever you turn, there is God's countenance" (Baghareh – 115) (Omar, 2000: 82).

Since the end of the second century HG, simulation sanctions are evidently written in Muslims books, but in action this sanction is about simulation in large scale to validate public show of them. Apparently, the common thought about luxury-oriented caliph's courts was that if the picture of live creatures doesn't make shadows and is in small scale or doesn't get used in decorating daily things, it's not prohibited. As a result, creatures' pictures are still there in Islamic era. But gradually they charged to decorating figures and got the same value as geometric and flower patterns. This art is known as an old tradition among people who created Islamic civilization (Arabs, Iranians, Turks, and Moguls). So, Islam reinforced a taste among these people that is part of their fate (Janson, 1980: 203-204) and also, in some dishes based on common tradition from old times, some parts were made like animals body (Ehsani,

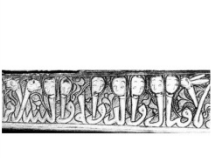

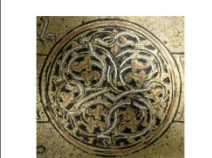

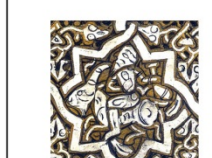
2007: 137). In this era metal censers made in lions' shape were also prevalent (Figure 6). It seems like their form were inspired by lions of drinkers in western churches named Akumanil which were common in the west (Talbot rice, 1996: 80). "Zaki Muhammad Hassan "the Islamic art researcher believes that Europeans were in the middle east inspired by some patterns from east for the church phloem's (Muhammad Hassan,1998:213). In Iran, lion is an old symbol: It is visualization of patience, pride and wrath. In ancient mythology, lion was a symbol of tombs and castle's guard and was referring to worshipping sun-God (Hall, 2000: 61-64). In 6th century, the production of censers in lion form abruptly eradicated (Ferrier, 1995: 171). Some beautiful writing tools are remained from this era; Inkwells are round small dishes (Figure 8) that have a cap like cones and remind Seljuk tombs and cone tents (Talbot Rice, 1996: 68). In illustration of animal patterns, metalworkers were inspired by their surrounding environment (Figure 25& 26) but mostly forms of these animals(like lion, tiger, deer, rabbit, peafowl, duck, horse, hawk and a bird that a plant came out of it's beak in Sasanid way) seem to be for Sasanid (Pope& Ackerman, 2008: 2471). For example, in some innovations can be found in some figures like some rabbits are of larger ears than usual (Lakpour, 2010:286) (Figure 51). In 12th century, some astrology pictures got usual on metalworks and constellations can be found on them a lot. In this era, astronomy is very important, however "Malik Shah" found an observatory in 467 D. and also ordered to create Jalali Calender to improve Persian calendar. Also, some fiction animal figures can be found in this era (Forouzani, 2014:443). Some of these shapes along with other Chinese art techniques have entered Iran in this era. Bronze mirrors are examples of these works that can be found among them (Muhammad Hassan, 1998: 214). The Sphinx picture that refers to sun, life and life after appeared here in the century's illustration.

And also, "Harpy's "picture- a bird with human's head that brings luck and happiness can be found on metalworks (Irwin, 2010:293). In 6th century, Iranian artists used to wed some figures that were regarding human. Most of these figures are valid and show a short person with turban on head and a scarf around their waist. In some pictures they were shown with a halo around their head. That doesn't mention to person's sanctity like Christian art (ibid, 307). In those days, the heads of famous people were decorated with a crown. The Iranian's black long hat was very common between people on Sasanid time. In addition to that, turban was also common in Khorasan, Ghom, Harat, Sistan (Spuler, 1980: 415) that was known as a special cloth; So, these clothes – unlike many reviewer's idea—are Iranian (Muhammad hassan,1998:216).These human figures were used to describe legends, constellations, hunting scenes, formality, sports and war and described individual life less (Figure 51). In Sasanid art, some king's lives were illustrated, but in Seljuk era, human was used as a tool on works. In terms of content, some differences in decoration can be detected as well. Like the picture of a

king who is playing the lute when some minstrels were doing this in the past (Heydar abadian & abbasifard, 2009: 87).

Using “Vagh tree “⁸ – the fiction pattern – happened in this era that can be found as a human or animal decorative in inscriptions (Azhand, 2009: 8) (Figure 55). Divine art of Islam matches Allah’s words and the revelation of Qur’an (Nasr, 2000: 51). The inscription on the works can illustrate the Islamic tradition. The content of Seljuk inscription is supplications that are written in Kufic and added to beauty property of things by designing in right place (Taherinia, 2014: 98) and have increased traditional objects in decorative aspects. Most of Iran’s metalworks in 5th and 6th centuries D. do not have any sign and inscriptions neither have date nor title. They even do not mention the appropriators’ and maker’s name. By the end of 8th century, when writing on bronze and brass stuff gets popular, these objects remain without name (Pope & Ackerman, 2008: 2882).

Table 4. Some figures which used in Seljuk metalworks (source: authors)

				
FIG 55. INSCRIPTION, (MELIKIAN-CHIRVANI-1982-71)	FIG 54. FICTION FIGURE, B 21956	FIG 53. GEOMETRIC & PLANT FIGURE, M 451187	FIG 52. ANIMAL FIGURE, M 451491	FIG 51. GEOMETRIC & HUMAN FIGURE, M 451491

Conclusion

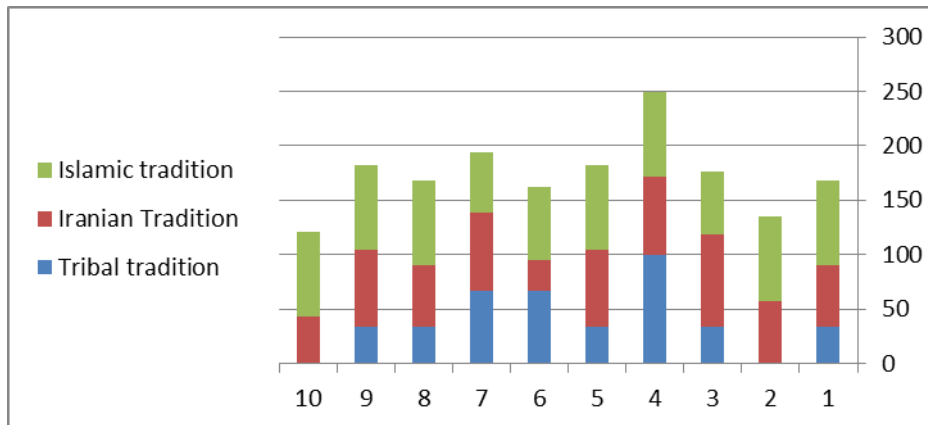
Iran’s art and culture in Seljuk era is affected by Islamic, Iranian and tribal customs. According to correlation between religion and government, on that time Islamic custom and culture form the base of thought in society.

Iranian art and culture in Seljuk era originates from Iranian, Islamic and tribal traditions which has been a base for thought and tradition of the society considering the cooperation of the state and people in those days. Metal works on Islamic era can be seen in Seljuk era first. Islamic art of this era is based on the main traditions of the society have attained different forms, patterns and methods from Iranian and central Asia’s art and have put them in the structure of the state and reflective principles of Islamic art. The principles of this art can be belief in a unique God, beauty, neglecting imagery of human and animals, realism (loyalty to the nature of things), this world’s insignificance and being transpersonal. Most works of Islamic artists and Seljuk metalworkers are based on them. According to this, Seljuk metalwork Islamic traditions are: using inscription on works, the wide use of geometric and

plant figure in order fill blank spaces, coherent combination of colors, and abstinence from using gold and silver.

We drew this diagram to confirm the researches and define the traditions used in Seljuk metalworks that shows Islamic traditions intensity then other traditions Iranian's custom has ranked 2nd in this diagram.

Diagram 4. Comparative study of traditional characteristics in statistics population of Seljuk metalwoks (source: authors)



Numbers 1 to 10 in Diagram 4 respectively represent the numbers of illustrations in table 1 of statistical population of Seljuk metalworks

According to the research's results, utilized metals in these works of art respectively include: silver, bronze, brass and copper. In comparison to Sasanid era (pre-Islamic period), brass and copper were used more than Sasanid's era and had more applications. Manufacturing and decorating techniques of the Seljuk era respectively include: include Chasing,[casting, engraving, the application of niello(with equal statistics)], Inlaying, hammering,[Embossing and open working] and they have more quantity and variety than Sasanid era's works of art. The new method of this era is inlaying that has culminated the value of different metals and gives them an indescribable form promoting Islamic decorative art.

That increase trifle metals value and bestow a great from to things. decorative figures of metal works in Seljuk era are plant figure geometric, inscription, animal and fiction figures and show this point that they compatible with Islamic tradition and intensity of plant figures and geometric and inscriptions in this era.

Seljuk artist separates many human and animal patterns like decorative elements from past using Iranian's tradition and presents them in new geometric shapes and escaped from individual work in Sasanid's art. These small, compact patterns guide the audience to unity. In painting animal patterns, metalworker is inspired from his environment. Some innovations

can be found in the same figures, like some rabbits with longer ears than usual. Other common figures in this era include astrology. Fictive phenomena like sphinx can be found on stuff. Also Seljuk artists worked on human figures. That they were used to describe individual lifeless-using “Vagh tree“ the fiction pattern – occurred in this era – that can be found as human or animal decorations in inscriptions. Divine Islamic art matches the word of God and the revelation of Quran strong link and their application are 2 other aesthetic aspects of them and technical and practical principles while they don't decrease work's decorative value. In this era, a kind of homogenization is found in the production of metalworks that causes limitation in stuff's shape in subsequent centuries. So, we can categorize them into specific types in process of Seljuk metalwork.

Based on the findings, the dominant tradition in Seljuk metalwork is Islamic tradition which could create unique effects such as forms and cold worthy and brilliant works to this land's art.

Notes

- 1- Tradition is what binds all human affairs to Divine truth (Nasr, 2000:45).
- 2- Ghazali revived theology reflected in incoherence of the philosophers and shows the way against the philosophy and in reasonable ways notice it's risks for religion.
- 3- A piece of blacksmith “Fotovat Nameh“: Question: if anyone asks you what is important in Blacksmith? Answer: First Being chaste, second Being Cleaned, third being honest, Fourth keeping masters store cleaned, fifth being truthful, sixth helping masters, seventh praying for masters and elders, eighth donating for God's sake, ninth praying five times a day, Tenth knowing masters Duty, Eleventh not to talk rude to customers, and twelfth being consistent in works (Saraf, 1991 : 159).
- 4- Byknd (pyknd / payknd / paknd) historical city in the “Furnac “ of Bukhara and the eastern city of East in Transoxania.
- 5- If from the signs of economic growth and development in Iran in century 5-6 / 11-12 we can notice to some Factories like shoemaking that its documents and information is obtained (Agadzhanov, 2004: 52)
- 6-Ergonomics is the science of human action and efficacy study which examines the features and capabilities of the human and thereby adopt provide coordination between the work and human,

7- Anthropometric includes measurements like body length, weight and volume of the organ, space, movement and angles of limb movement and obtained statistics and in formations is used in determining shapes and sizes of tools and consumption things and also in designing work place.

8- Superstitious which has spring in morning and fall in night and its said that it's fruit is like human another animals and its speaks (Dehkhoda dictionary).

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