

Comparative Historical Study of Changsha kiln Ware: Design for Persian Islamic need



He Renke

Professor, School of Design, Hunan University, China

Mohsen Jaafarnia

Assistant Professor, School of Design, Hunan University, China

Fang He

MDes. Student, College of Architecture, Georgia Institute of Technology, USA

Shiliang Li

MDes. Student, School of Design, Hunan University, China

Project Name: 国家科技支撑计划课题, **Project No.** 2012BAH85F02

Abstract:

This product design comparative study with respect to form preferences, offers diverse challenges pertaining to form preference, cultural preference, economic influences, technological literacy, gender and regional preferences. This paper uses a comparison methodology involving evidences and substantiation data. The data assimilated is based on a widespread historical research conducted on past commercial relation between Persia and China. It has evolved an approach that covers the wide domains of history of the evolution of product forms.

Studying discovered ware of Changsha Kiln and remains of the sunken ship in the sea near the Malaysian coastline have helped build a comparative link between the Changsha Kiln and Islamic Persian porcelain, based entirely on decorations, manufacturing techniques and colour.

In this study one can identify the influences of lifestyle and culture of Abbasid Dynasty on product design development which has been mapped in this research.

Over time, changes in lifestyle and culture have determined the product form which is influenced by a combination of Islamic calligraphy and Persian painting leading to the creation of a new product during that period. Such visual comprehensive study are conducted few and far in between, particularly in the context of product design studies. We believe the study of history often yields clues to the future. Therefore it could form a significant knowledge base for designers engaged in design of products based on different cultural contexts.

Keywords:

- *Changsha Kiln,*
- *Persian painting,*
- *Islamic calligraphy,*
- *Porcelain*

Paper received 5th of May 2015, Accepted 12th of June 2015 Published 1st of July 2015

1 Introduction

Since design of a product namely form and its constituents such as volume, colour, texture, shape, line, point and surface are manipulated by the designer in order to satisfy the user, due to the subjective nature of the visual quality, it is often difficult for a designer to compare the constituents of two different designs that share similar visual characteristics in terms of user's mental models of expectations and desires. This difficulty gets magnified when manufacturers from a different nationality and culture (in our research, he was from China during Tang Dynasty) try and introduce products to another culture (Persian people from the Abbasid Dynasty, 749-1258).

Changsha Kiln was an important kiln area in South China (Tongguan City in Hunan Province) during the Tang Dynasty, active in exporting products to other cultures. Products were moulded figures, jars and utensils designed in different forms and inscribed with varied decorations.

The finished Chinese goods were purchased by Persian merchants who brought these exquisite Chinese earthenware to Persia (Carswell 1985) and other countries in south-east Asia like the Indian subcontinent, Sri Lanka, the Indus Valley, the Persian Gulf, around the Red Sea, the far inlands of Samarra, the Abbasid capital, the far west of old Cairo in Egypt, Antioch on the Syrian coast, and the distant south of Comoros Island and

Zanzibar (Flecker 2001).

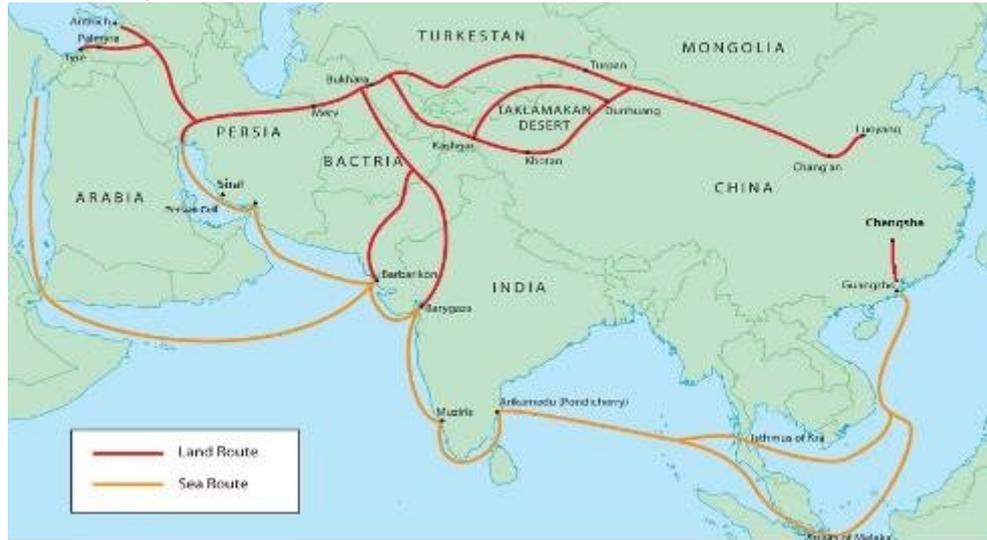


Figure 1. Map of silk roads

2 Method

In product design comparative studies with respect to form preferences offers diverse challenges. Factors could include studies in form preference, cultural preference, economic influences, technology literacy, gender and regional preferences. This paper uses a comparison methodology involving evidences and substantiation data. The data assimilated is based on a widespread historical research of past commercial relation between Iran and China. It has developed an approach that covers the wide domains of history of the evolution of product forms using discovered ware of Changsha Kiln and remains of the sunken ship which fostered a comparative study on Changsha Kiln and Islamic Persian earthenware. This approach is based on decoration, manufacturing techniques and colour.

In 1997 a fishermen just in the north of the port of Tanjung Pandan on the Indonesian island of Belitung, (between Sumatra and Borneo) discovered a sunken ship. Caught on their fishing net were a number of distinctly coloured bowls and utensils which could be easily identified as originating from the Changsha Kiln of Hunan province (Flecker 2001).

The sunken ship contained Changsha ware. A majority of the 56,500 items, were originally packed in either straw cylinders or "Dusun" storage jars (Wade 2003). One Changsha bowl inscribed with a date: "16th day of the seventh month of the second year of the Baoli reign", equal by 826 AD, later confirmed by radiocarbon dating (Scott 2008). The date confirmed that Changsha pottery was only produced during the later years of the Tang Dynasty (AD 618-906). This allowed archaeologists to get a closer look on

the date that the ship might have sailed. The products of ship had an amazing variety of influences and markets signs, including lotus symbols, motifs from Central Asia and Persia, Quran verses inscriptions, and green-splashed bowls popular in Persia (Glenister 2009).

There were other special items found which included a gold cup—the largest Tang dynasty gold cup ever found—and a large silver flask decorated with a pair of ducks. The gold cup had pictures of people performing various actions on its sides, like musicians playing instruments and a Persian dancer, and had images of two men on its thumb plate with features that appeared to be non-Chinese, having different racial features and curly hair (Glenister 2009).

According to archaeological documents, Changsha wares were found in many sites along the sea route, including Kedah in Malaysia, Madras and Mysore in India, Siraf in Persian Gulf (in Iran), Samarra and Baghdad. If we closely look at the connecting route of all the cities on a map, we can establish that it was the same as the Sea Silk Road that connected Changsha and Persia (Li 2010).

In this study one can grasp the influence of lifestyle and culture of Abbasid Dynasty on product design development which has been mapped in this research.

Over time, changes in lifestyle and culture had changed the product form which bore influences on its design like combining Islamic calligraphy and Persian painting in the creation new products during this period. This visual study could form a significant knowledge base for designers engaged in design of products for different cultural contexts.



Figure 2. Products of sunken ship

3 Discussion

Designing is centred on users' needs. Identifying and discovering the need can be the most important part of design research. Many parameters such as physical, cognitive and cultural issues are involved in the identification of users' aspirations and needs.

Chinese manufacturers who previously (in the period of Abbasid dynasty) focused on global design took into account the cultural needs of Persian users to satisfy them in terms of design.

The types and decorations seem to have been developed post contact with the world market. This shows, the designer, could have probably understood the importance of creating form that undertakes inclusive cultural considerations and covered the needs of the Persian market.

There was very little emphasis on gathering pre-launch requirements data involving the user's deepest needs. Marketing data was difficult to interpret and convert into physical design for a designer.

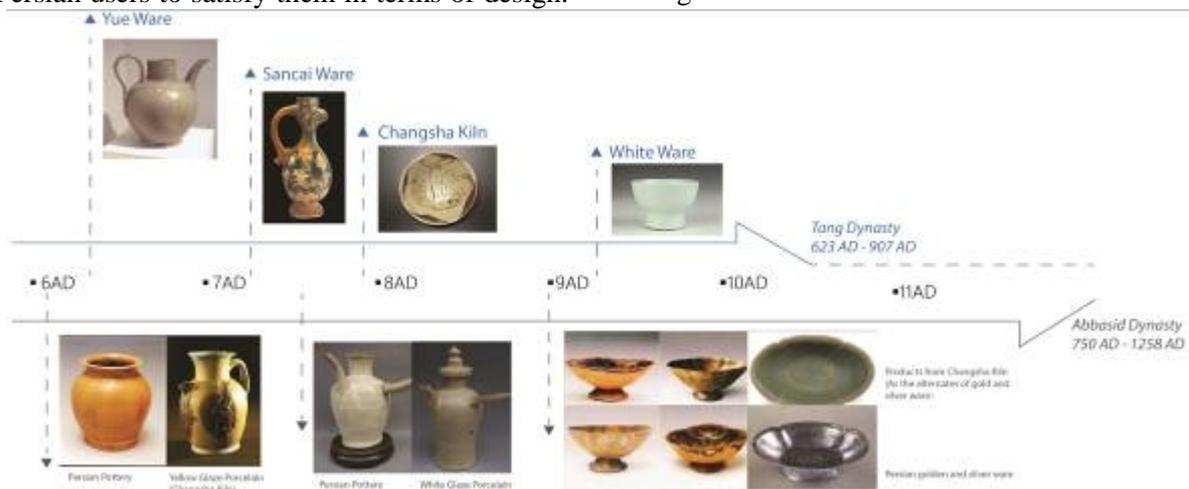


Figure 3. Timeline of Abbasid and Tang dynasties

3.1 Calligraphy of Allah

There are many stories revolving around the meaning of calligraphy as perceived by different cultures and nationalities. Stories revolving around honesty, braveness etc are often spun around calligraphy. But there are many stories in each culture which impact everyday events and this finds reflection even in the conversation of the people. Cultural stories and their own meanings influence the design of a product. We highlight this fact in the frame of our discussion as we consciously study how one

culture influences the design of another. For example in past the potteries made in Persia had the name Allah written on them which is related to the cultural belief of the region. Simultaneously as Chinese imported these potteries to China and began manufacturing and exporting them for the Persian people, they treated the calligraphy of Allah (which has its own meaning for Persian people) as a visual form and used it in their own pottery in a graphical line.



Figure 4. Left, Changsha ware with graphical line. Right, calligraphy of Allah on a plate.

3.2 Colour of gold and silver vessels

Another noteworthy fact remains that, Moslems were forbidden from using gold and silver in the making of products for daily use because it was a reflection of mammonism and noblesse. But Persian people during that time wanted to use golden and silver vessels, as only royal families could afford the use of these kinds of vessels. So the Chinese designers keeping this fact in

mind, coloured the potteries; using yellow colour representing gold and white (light gray) representing silver. That’s why eventually Persian people purchased ware in golden and silver colour from China. During excavation in the ancient site of Siraf of the Abbasids dynasty, located near the Persian coast in Persian Gulf, many pieces of Changsha Kiln ware were recovered (Li 2010).



Figure 5. Yellow and white products.



Figure 6. Similarity between metal vessels and Changsha wares

3.3 Islamic calligraphy, Persian painting

After Islam made an entry in Persia, the Sassanid art form where artist enjoyed the liberty to use everything in the artwork, changed because of Islamic rules. The artists were forbidden from drawing live creatures. Therefore for a long time figures of animals, human and plants were forbidden to be drawn on the products for decoration and just they were using geometric patterns. Eventually however Persian artists began decorating and

mixing the calligraphy of the verses of Quran with plants and animals. For example here one can see (figure 7, Left) the mixture of calligraphy of the verses of Quran, plants and deer in a geometric shape. Chinese artist derived inspiration from this and began drawing animals like deer on products (figure 7, Right) which they planned to send to Persia. An important fact remains that a deer is a Persian symbol and it is not a typical Chinese symbol.



Figure 7. Left, Persian artwork of Abbasid Dynasty. Right, Changsha ware



Figure 8. Left, Persian art work in era of Abbasid Dynasty. Right, Changsha ware

For another example here one can see (figure 8, Left) the mixture of plants and fish in a plate (9th century, Abbasid Dynasty, Ashmolean Museum, University of Oxford). Chinese artist derived inspiration from this and used fish on products (figure 8, Right) which they planned to send to Persia. Important point, Chinese have fish in their art but their style is totally different with Persian style.

3.4 Colour of blue and technical issue

The Changsha kiln noted for its underglazed decoration was known for its variety of products, especially its early painted decoration of figures, natural ornaments and calligraphy (Flecker 2001). Of course the documents highlight potters working near Changsha displaying different techniques of pottery and underglazed decoration with Persian Cobalt

taken to China from Persia during the Sassanid Dynasty. Because of this reason we can see a similarity between Persian artwork in era of Abbasid Dynasty and Chinese ware.

It was during Sassanid Dynasty that porcelain (white china) was one of the important imported goods of Chinese merchants, because Persian people had the tradition of putting seven symbolic foods in white china bowls as part of the arrangement of Persian Spring Festival they call “haft chin” (Rezaii 1999), (Enayatollah 2008), (Azari 1988) & (Fitzgerald 1969). Chinese Potters inspired the development of Persian pottery which included painting their designs directly on the clay body or dip coating and then covering them with a clear glaze before firing.



Figure 9. Persian cobalt on products, Left Abbasid Dynasty, Right Chinese ware

Persian Cobalt is a chemical element that imparts a blue colour to glazes of ware. There is a modern pigment known as “cobalt blue,” cobalt aluminate, which was first manufactured in Europe in 1802 (Gettens 1955) but has been identified on painted pottery from Egypt of the 14th century B.C. (Riederer 1974). Cobalt blue and Smalt have not so far been reported among pigments used in Persian manuscript illustrations or wall paintings (FitzHugh 1988). Blue ceramic glazes colored with cobalt have been identified from a wide geographical area. Various cobalt compounds were used for this purpose, among them cobalt oxide and smalt. Had a long history in Asia. The earliest known object containing cobalt is a blue glass lump dated to about 2000 B.C. from the site of Eridu, in southern Mesopotamia (Garner 1956). Cobalt has also been identified in blue glass

from Egypt of the late 16th century B.C. (Farnsworth and Ritchie 1938), from the Aegean area at about the same date, and from Roman Pompeii and Syria (Sayre 1964), as well as in late Parthian beads from northern Persia (Oda 1966). The Chinese were coloring blue glass with cobalt under the Chou dynasty (Ritchie 1937). The earliest Chinese cobalt glazes date from the Tang period (Gettens 1955), but perhaps the best-known use of cobalt on Chinese ceramics is the underglaze-blue decoration on blue-and-white ware of the Yüan (1279-1368) and Ming (1368-1644) dynasties (Young 1956). There is some evidence that Persia may have been a source of cobalt for Chinese ceramic glazes (FitzHugh 1992). A material called su-lai-man by the Chinese (Pers. solaymani) was imported into China in the 15th century (the name maybe has relation with

famous Persian merchant Soliman Sirafi, were from Siraf Port, he used to travel to India and China for commerce in 851); a colouring material sometimes ambiguously translated from the Chinese as “Mohammadan blue” was also available (Watt 1979). In India the blue glazes on 16th-century tiles from Bihar and on late Mughal tiles have been found to be coloured with cobalt (Lal 1953) (FitzHugh 1992).

Identifications of cobalt in Persian blue glass and glazes are relatively few, but it is generally assumed that a deep blue color, usually identified as “azure” by early European travelers, betrays its presence, whereas greenish or turquoise blue is usually owing to the presence of copper. According to modern mineralogical literature, there are extensive deposits of cobalt ores in Azerbaijan (Palache et al. 1944), at Qamshar, near Kashan (Ladame 1945), and at the small towns of Meskani and Talmesi about 30 km west of Anarak; there are lesser deposits at Emamzada Dawood near Tehran and Berenjiki in Baluchistan (Harrison 1979). Cobalt ores are also found at the Ketri mines in Rajputana, India (Palache et al. 1944). The evidence from Mesopotamia and China suggests that Persia was the chief source of cobalt ores in the ancient world until the late Middle Ages (FitzHugh 1992).

4 Conclusions

Here we have traced the historical perspective that influenced the development of aesthetics of Changsha wares in Abbasid Dynasty period. We have found the factors that influence user's response to the visual form. They include considerations involving visual elements and their inter-relations. The user's response to the visual products helps in creating and communicating meaning and finally gives room to cultural consideration influencing user's response to product forms.

This context of understanding is not limited only to the above examples on potteries, as there are probably more products having a similar underlying story like that of the relationship between erstwhile Persia and China.

Based on the above explanation, we have understood that a designer needs to understand a user's preference, model his products and keeping the user's needs transform these into physical and visual properties.

Therefore contribution of Persian and Chinese

designers to a wide range of arts, design and commerce disciplines are often overlooked. This paper provides a glimpse of the rich cultural heritage within the Persians and the significant role that Chinese have played in the advancement of product design. It presents the rich creativity of Chinese designers in period of Tang Dynasty, traces the Persian art and Chinese regions and dynasties, highlighting their relationship from the inception until the present.

5 References

1. Azari, A. (1988) *History of Relation of Iran and China*. Tehran: Amir Kabir Publication. ISBN: 964-00-0467-7
2. Carswell, J. (1985) 'Blue and White: Chinese Porcelain and Its Impact on the Western World. Exhibition Catalogue.' Chicago: The David and Alfred Smart Gallery, *University of Chicago*, 1985
3. Enayatollah, R. (2008) *Iran and Turk in Sassanid Dynasty*. Tehran: Scientific and Cultural Publication.
4. FitzHugh, E. W. and Floor, W. M. (1992) Cobalt a chemical element that imparts a blue color to glass and glazes and to certain pigments. *Encyclopaedia Iranica* <http://www.iranicaonline.org/articles/cobalt-sang-a-lajavard-blue-stone-also-applied-to-lapis-lazuli-and-ultramarine-lajavard-e-kasi-ceramic-blue-la/> accessed in October 2014.
5. Farnsworth M. and Ritchie, P. D. (1938) 'Spectroscopic Studies on Ancient Glass. Egyptian Glass, Mainly of the Eighteenth Dynasty, with Special Reference to Its Cobalt Content,' *Technical Studies in the Field of the Fine Arts* 6.
6. Fitzgerald, F. S. (1969) *Horizon History of China*. Scribner; First edition (June) ISBN: 828100276X
7. Flecker, M. (2001) 'A ninth-century AD Arab or Indian shipwreck in Indonesia: first evidence for direct trade with China.' *World Archaeology* 32: 335–354.
8. Garner, H. (1956) 'An Early Piece of Glass from Eridu,' *Iraq* 18/2.
9. Gettens, R. J. (1955) *On the Early Use of Smalt as a Paint Pigment and Its Possible Asiatic Origin*, unpublished ms., Freer Gallery of Art, Washington, D.C., ca.
10. Glenister, R. (2009) 'SECRETS OF TANG TREASURE SHIP: ABOUT'. *National Geographic Channel*. 2009. Retrieved 8

- July 2011. <http://natgeotv.com/asia/secrets-of-the-tang-treasure-ship/> accessed in November 2014.
11. Harrison, J. V. (1979) 'Minerals,' in *Camb. Hist. Iran I*, pp. 489-516. FitzHugh, E. W. 'A Pigment Census of Japanese *Ukiyo-e* Paintings in the Freer Gallery of Art,' *Ars Orientalis* 11.
 12. Huibing, Li (2010) 'Porcelain Exportation and Production in China', <http://www.gotheborg.org/~gothebor/exhibition/huibing.shtml/> accessed in October 2014.
 13. Ladame, G.. (1945) 'Les ressources metallifères de l'Iran,' *Schweizerische mineralogische and petrographische Mitteilungen* 25.
 14. Lal, B. B. (1953) 'Composition and Technique of Some Glazed Tiles from Historic Monuments,' *Science and Culture* 19.
 15. Oda, S. (1966) 'A Chemical Study on the Glass from Noruzmahale Site,' in N. Egami et al., *Dailaman II. The Excavations at Noruzmahale and Khoramrud, 1960*, Tokyo.
 16. Palache, C. ; Berman, H. and Frondel, C. (1944) *The System of Mineralogy*, 7th ed., I, New York.
 17. Rezaii (1999) 'How Haft chin became Haft sin'. <http://www.24onlinenews.ir/news-28862.aspx/> Accessed February 2015
 18. Riederer, J. (1974) 'Recently Identified Egyptian Pigments,' *Archaeometry* 16.
 19. Ritchie, P. D. (1937) 'Spectrographic Studies on Ancient Glass. Chinese Glass from Pre-Han to T'ang Times,' *Technical Studies in the Field of the Fine Arts* 5.
 20. Sayre, E. V. (1964) *Some Ancient Glass Specimens with Compositions of Particular Archaeological Significance*, Brookhaven National Laboratory, BNL 879 CT-374, Upton, N.Y.
 21. Scott, R. (2011) 'The treasure trove making waves'. *BBC News*. 18 October 2008. Archived from the original on 8 July 2011. Retrieved 15 February 2011.
 22. Wade, G.. (2003) 'The Pre-Modern East Asian Maritime Realm: An Overview of European-Language Studies'. Working Paper Series , *Asia Research Institute, National University of Singapore*. No. 16: 20.
 23. Watt, J. C. Y. (1979) 'Notes on the Use of Cobalt in Later Chinese Ceramics,' *Ars Orientalis* 11.
 24. Young, S. (1956) 'An Analysis of Chinese Blue-and-White,' *Oriental Art*, N.S. 2/2
- Project Name:* 国家科技支撑计划课题,
Project No. 2012BAH85F02

