



The Origin of Blue-and-white and the Birth of Symbols

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Abstract

As the distinguished representation of Chinese industrial art, blue-and-white porcelain shows the soul of Chinese traditional industrial culture. However, to combine porcelain research with symbolism theories is a process of symbolization. Firstly, the researches on blue-and-white porcelain are part of Chinese traditional industrial art and technology engineering researches while symbolism is a modern study evolved from western linguistics in the 20th century, which is closely connected with structure theories and covers almost all human sciences. To establish inner relationship with good logic and clear intention between China and the western world, tradition and modern, and technology and art is first a typical meaning-endowing behavior.

Keywords: Blue-and-white, Symbol, Cobalt, Naming

As a classic representation of Chinese traditional culture symbol, blue-and-white porcelain has indefinite potentials in connotation. From the perspective of language, blue-and-white porcelain's color is described as a "China blue" and its making technique and entire concept give it the name "the treasure of the nation and the glory of porcelains". Even, in the ancient western world, Chinese porcelains were called "China". Those names imply the relationship between blue-and-white porcelain and nation.

Blue-and-white is translucent white reflecting the blue, pure, plain, elegant and in good taste. Its outlook and quality is similar to natural jade and hence is called "man-made jade", which ensures the mutual reflection between blue-and-white porcelain culture and bowler admired by Chinese people. To get to know the full connotations of blue-and-white, it is a must to understand its origin. To understand its origin, the clear definition of blue-and-white must be understood as the first step. Huibing Li from China's Imperia Palace Museum stated in *The Starting Time of Blue-and-white Porcelain* that blue-and-white porcelain includes at least five elements, namely, pure white porcelain body made by firing at high temperature, translucent white glaze, Cobalt Oxide as the original materials for blue and white, lines and decorations drawn by brush on the porcelain, and glazing the porcelain body with lines and decorations and underglazing color fired at high temperature.

The main difference between blue-and-white porcelain with other chinaware is the application of cobalt, which is also the key point of modern definition and researches on porcelain. Generally, the afore mentioned reasons are why the academic area considers the origin of blue-and-white porcelain to be Tang dynasty.

1. The application of cobalt in chinaware before Song dynasty

Cobalt was sometimes used or used as assistant material in chinaware industry before Song dynasty. However, the application of cobalt was not widely used or the application of cobalt was jus to auxiliary position and did not gain sufficient attentions.

As recorded by historical materials, the application of cobalt blue on ware decoration appeared first on flavor bottles in ancient Egypt. Later, in middle Asia, the decoration of chinaware firstly used cobalt blue and glaze materials. China started to communicate technology of low temperature glass with middle Asia area in North Wei period. The unearthed War Period colored glass ball was found to contain cobalt blue.

Hereby, some scholars consider blue-and-white and blue-and-white porcelain as two different concepts. Blue-and-white

as the color materials is defined according to the application of cobalt decoration and has longer history than blue-and-white porcelain. What is more, because cobalt material contained in the blue glass ball unearthed from Changsha War Period Tomb is the same as that of Mid-east area, which indicates that the blue materials might have been introduced to China from East Asia.

To Tang dynasty, the usage of Cobalt Oxide obtained quite clear concept reference, which are low temperature glazed tricolor glazed pottery and high temperature Tang blue-and-white chinaware. The two types are both glazed porcelain. From 2005 to 2007, archeologists discovered North Wei Stove that was used to fire blue porcelain in Baihe Porcelain Stove Site in Gongyi, Henan province and many Tang blue-and-white porcelain and Tang tricolor glazed pottery horse figurines were found. Together with Tang blue-and-white unearthed in Tang Town in Yangzhou, Jiangsu, these are all cases to prove the application of cobalt materials in China's earlier porcelain industry.

What needs our concern is that through the researches on literatures, the exploration of China cobalt mine started from Song dynasty and these cobalt mines are high manganese cobalt mine. Up to now, no mining materials on the cobalt mines before Song dynasty have been discovered, from which it could be known that the Cobalt Oxide used that time was imported.

2. The decoding of the blue-and-white origin and criticizing

There are two ways to determine the origin of blue-and-white. The first one is to determine according to domestic and foreign archeology findings over color materials and unearthed objects. The appearance of blue-and-white wares could be dated back to Tang dynasty. The second one is that the manufacture and style of Mid-Yuan dynasty blue-and-white porcelain had been mature and there are a large amount of objects left. Only this period could be considered as the real start of blue-and-white porcelain.

In addition, in Song dynasty, the porcelain industry was developed. However, because few blue-and-white porcelains were discovered or unearthed and most ones are coarse and dark in color, the research field usually ignores them. From the sense of time, Song blue-and-white is the bridge for Tang and Yuan blue-and-white. From the several cases, it could be known that Song blue-and-white color materials had already used domestic cobalt material and the firing temperature reached nearly 1280 degree centigrade.

In order to have a more direct understanding of these three origin ways, we compare the materials and data. Please refer to table 1.

It is shown through materials that although Tang blue-and-white had used imported power blue as the rough materials, because the firing temperature did not reach 1280 degree centigrade and the blue-and-white all had dispelling phenomenon., which was over-glaze decoration, many scholars do not agree to put Tang blue-and-white as blue-and-white porcelain concept, even some scholars categorize it as pottery.

Compared with Tang blue-and-white, more doubts are on Song blue-and-white. The main reasons are the lack of real objects as the proof. Song porcelain industry was developed and there is a saying that there were five famous stoves in Song dynasty, namely, Jun (or Chai), Ru, Guan, Ge and Ding Stoves. However, it is strange that Song blue-and-white porcelain seems to have never existed. There are only two cases in the earlier papers, that is, 13 North Song blue-and-white porcelain pieces unearthed in 1957 in Jinsha Tower Tomb in Longquan County, Zhejiang Province and one South Song blue-and-white bowl piece unearthed in 1970 from Cuihuang Tower, Shaoxing, Zhejiang Province (by examining its blue-and-white color, it has faint scatter feature and is glaze good color). According to Huibing Li, "according to the scientific concept of blue-and-white porcelain, Tang and Song period did not have blue and white".

In recent years, the following Song dynasty blue-and-white was unearthed. They are: a North Song blue-and-white porcelain bowl unearthed in 2003 in Hujiabao Tomb in Wushan County, Chongqing, a blue-and-white jar with cover which has pure color and bright glaze unearthed in 2004 in the No.4 Tomb of Song Dynasty Tomb Groups in Cangqian Town, Yuhang District, Zhejiang Province, and a blue-and-white pillow part which is yellow like white glaze unearthed in 2005 in Song stratum of Song and Jin Site in Lijiazhuang Village, Gucheng County, Hebei Province. These blue-and-whites were unearthed from different areas and their techniques and qualities vary greatly. From their advantages we could conclude that in Song dynasty, the blue-and-white glaze with power blue as the main coloring material. The cobalt material contains manganese cobalt earth mine which is totally different from the cobalt material imported from west Asia that contains arsenic and does not contain manganese; its firing temperature reached 1270 degree centigrade and there are a few glaze below color wares. Its advantages could basically meet the blue-and-white concept requirements.

The firing of Yuan dynasty Blue-and-white porcelain in terms of porcelain clay, cobalt color, stove temperature and the usage of glaze material complies with the judgment requirement of mature blue-and-white. What is more, its production volume was large and there are many unearthed articles. Many chinaware researchers and scholars determine that Yuan Zhizheng Blue-and-white is the origin of Blue-and-white porcelain manufacture according to "the scientific concept of blue-and-white" because only Yuan blue-and-white could meet all limits and requirements of blue-and-white concept.

To sum up, the starting point of blue-and white should be Yuan blue-and-white, Tang and Song blue-and-white. Or according to researches on color material and technique, it is west Asia or ancient Egypt, which could not be fixed. The author believes that for the reference system, the researches and judgment should add one item that is as the understanding of starting point and birth, the establishment of naming and symbol reference is critical. In all researches on origin, there include the confirmation of the naming as a symbol. Naming and the so said birth usually are twins. Around the birth status, there should be three typical statuses, "gestation stage", "infancy stage" and "mature stage". It is debatable to simply judge an object with mature period standards or to measure statue according to scientific concept. A simple example is that human being is "advanced animal that could walk upright, could speak and could use tools". However, a new born baby could not meet the requirement while we could not deny the fact that the baby is a human being (the human being here is a symbol that has specific reference).

Hence, it is obvious that the most reliable method to determine whether certain object or concept is born is to name and to establish the reference relationship as symbol. When we call someone's name, only when there is a reference relationship between the name and the person could we have a series of decoding and cognition process such as where he or she is, what he or she is doing or what is wrong with him or her.

Therefore, we might wonder how the specific symbol for blue-and-white comes into existence.

3. The birth of symbol

The simplest method to determine the birth of a symbol is to name. Once the name is fixed, the cognition of the concept has common start point. It could not only be applied to existing real object and also be applied to virtual object. The typical case is that Mendeleev invented Chemical Elements Periodic Table although many elements have not been discovered by then, but people had already had initial understanding of these elements' features. As virtual real object, the object has been born in concept.

Of course, the naming currently known does not remain unalterable. It has the following change ways:

3.1 Pre-naming

Pre-naming is to predict things that have not come into existence by way of logic deducing and is to give birth to the virtual body and concept of the object, which is nothing more than a concept.

3.2 Nanie name

Nanie name is the name at the earlier stage. Usually, nanie name is used temporarily when the object's features have not become mature and its mark and reference need further confirmation.

3.3 Name change

Name change is usually become the special attributes of the object are found or the influence of environment changes the object's functions or reference. Of course, there might be some accidental elements.

3.4 Unearthed name

Due to various historical reasons, some objects would disappear or extinguish. However, after certain period of time, due to the trigger of some elements, the object is cognized again. Usually, the object is named a new name which sometimes might be different from the original name.

In addition, naming will vary with geography, environment, content, usage and receiving groups and other objective elements. What needs special emphasis is that language description is not the only way for naming. It might be a kind of mark, an action, a group of notes, or even a kind of smell. All in all, the apperception forms that are used for communication among groups could all evolve into the naming with symbol features.

With human beings as the case, we make analysis on the birth of blue-and-white porcelain and come into conclusion as is shown in Figure 1.

This paper takes Tang and Song dynasty blue-and-white porcelain as the birth point of blue-and-white porcelain is out of the consideration on its symbol attribute rather than its scientific attribute. The precondition is the independences of its attributes and the establishment of clear reflecting relationship between referee and referrer when blue-and-white porcelain as symbol.

The independence means that the object could be recognized and cognized without depending on other bodies, not as glass, Tang Three Colors, or part of flavor bottles. Its detailed connotation refers to the specific object. It could be compared but could not be replaced. Although the features of blue-and-white porcelain at its earlier stage do not satisfy modern people or even it might not have this name, as a special chinaware technique, it has come into existence.

The same decoding and animadverting way could be applied to other similar questions related to birth, such as football. It is publicly agreed that football originated from the UK although the rules for football that time are not standard and the boy looked like basketball. However, as a group sport, it has set up special reference relationship overtly (anyway

who could assure that we play football the same as today?).

It is the same for symbols. Blue-and-white porcelain was given to birth in China rather than west Asia or other areas. To study blue-and-white porcelain from the perspective of symbol, we must have a good understanding on its origin and manufacturing, including what it is and what it is used for. To put it in other words, it is a question about to produce what for what purpose.

4. The reference meanings with the evolution of blue-and-white porcelain concept

With the constant change of the history, environment and description objects of chinaware manufacture and usage, the reference meanings of blue-and-white porcelain has experienced many changes too. In different context, blue-and-white porcelain has different meaning reference or has different meanings.

For the makers of blue-and-white porcelain, it is a special technique, a way for making living, and a body for spreading creation thoughts and language. What is more, in the process of long term production and technique breakthrough, due to the standard procedures and certain limits deviated from traditional technique and literary quotations, myths, as well as the original art logic combination with imagination, assumption, reasoning and innovation, blue-and-white porcelain must be carrying the spiritual thoughts of porcelain makers in some aspects. It is said that in Jingde Town, porcelain makers has certain totem and symbol procreation worship towards stove gate.

Blue-and-white porcelain is widely used and is the necessity for common people in China in their lives. It is the most basic tool for living. When the poor were deprived of production and living articles for use to the utmost, a blue-and-white porcelain bowl with a gap could bring the most direct courage for living. Blue-and-white porcelain is closely connected with human beings living. In traditional Chinese families, it is normal that they do not have color porcelain and it would be weird if they do not have blue-and-white porcelain. For traditional Chinese, blue-and-white porcelain is their daily friend. They depend on it, are familiar with it and even to be too familiar to forget it. To put it in other words, traditional Chinese are accustomed to be living with blue-and-white porcelains in their daily lives. The usage of blue-and-white has mounted from mastership to some kind of conditioned reflex or natural reflection. Its visual features also become part of Chinese aesthetic habit. Researches show that this kind of group awareness could be brought into gene memory under certain conditions due to mutual accommodation which further slightly changes gene codes. Generally speaking, we believe that the recognition of blue-and-white porcelain has become part of Chinese people's blood and becomes a symbol for Chinese.

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Table 1.

	Color material	Clay and quality	Glazing method	Temperature (Centigrade)	Color effect
Tang Blue-and-white	Low manganese low iron cobalt containing copper (imported from midwestern Asia)	Aluminum clay, coarse, loose, rice gray, poor firing degree	Engobe among glaze, the ground coat is white with yellow, the quality is loose	Sub-high temperature (1200-1250)	Dense and bright and has crystal spots
Song Blue-and-white	Domestic cobalt containing high amount of manganese oxide (from Zhejiang, and Jiangxi)	Coarse, gray white, a few are white and fine in quality	The ground coat is shallow blue, white with yellow or light blue glaze. There are underglazed color and over-glazed color	Underglazed is 1270 and overglazed is between 700-850	Most are dark blue or gray blue. Some are even with black. Color is not bright because of domestic material
Yuan Blue-and-white	Domestic produced high manganese low iron blue materials, imported low manganese high iron blue materials	Porcelain stone plus Gaoling earth, a little gray and yellow, loose	The ground coat includes blue white and egg white, strong sense of milkiness	Between 1250-1300	Domestic material: blue green with gray black. Imported material: blue jade green and bright with rusted iron spots

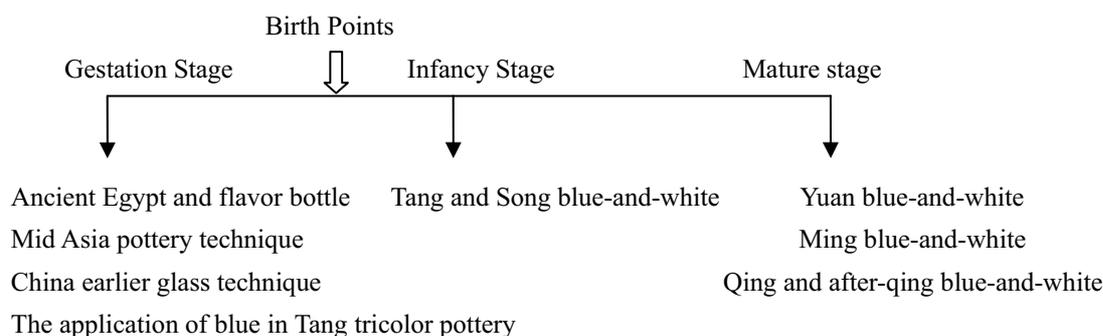


Figure 1.