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Ceramic Art:

The influence of Chinese Porcelain on the history and culture of the world

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According to *Hutchinson Unabridged Encyclopedia* (2009), “the word ceramic is derived from the Greek word κεραμικός (keramos)”. A ceramic object is an object made of clay, hardened into a permanent form by baking (firing) at high temperatures in a kiln. Clay is one of the oldest materials known to humanity and has been used for practical purposes and creative expression since prehistoric times. As civilizations evolved, ceramic materials, techniques, purposes, and design all became more sophisticated and expressive. “Ceramics may be built by hand, cast in a mold, arranged using a slab method, or thrown onto a pottery wheel” (“History of Porcelain”, 2004).

The main categories of ceramic are earthenware (including terracotta), stoneware, and hard and soft-paste porcelain. They are used not only for dishes, vases, and many other practical household objects, but also for construction (bricks) and decoration (tiles) (“Ceramic,” 2009). Hardpaste porcelain is characterized by its “hardness, ringing sound when struck, translucence, and shining finish, like that of a cowrie shell, also known as Italian *porcellana* (“History of Porcelain”, 2004). It is made of kaolin and petuntse (fusible feldspar consisting chiefly of silicates reduced to a fine white powder); it is high-fired at 1,400°C/2,552°F. Porcelain first evolved from stoneware in China in about the 6th century AD. A formula for making porcelain was developed in the 18th century in Germany, also in France, Italy, and Britain. It was first produced in the USA in the early 19th century.

Although ceramic played a part in the advancement of science and technology -- certain elements in nuclear reactors use ceramics, and the linings of furnaces made to manufacture steel are ceramic-based -- it is in the area of art and craft that ceramics has made the greatest contribution. In *East and West: Chinese Export Porcelain*,

Munger and Frelinghuysen-Cooney (2003) note that over the past 5,000 years or so, Chinese porcelain, a category of ceramic also known as hard-paste porcelain, has influenced the trade, history, and culture of many countries in Europe, Asia, and North America, and has raised craftsmanship to the level of art.

The birth of Chinese porcelain took place during Shang Dynasty. Later on, during the Eastern Han period, porcelain technique had greatly improved and the wares were given a distinct name in order to differentiate them from a porous, softer earthenware. The new name was "tz'u", which, later, during the T'ang dynasty, came to mean "true porcelain" ("History of porcelain", 2004).

The most important characteristics of true porcelain are its hardness, ringing sound when struck, as well as its translucence. These qualities are achieved by firing clay (ceramic) ingredients in a kiln. But it took centuries for kiln technology to develop. Robert Finlay (1998) writes that fine-grained soil and the early predominance of ceramics in metallurgy impelled Chinese craftsmen toward a highly effective kiln making. Ceramic variety also stemmed from kiln technology. "The structure of the tunnel-like kilns meant that there were temperature differences of as much as 600C between the firebox in the lower area and the chimney in the upper. In a single operation, high-fired wares could be produced in the lower chambers and earthenware in the top" (Finlay, 1998). This resulted in porcelain vessels that were whiter and harder than those previously made -- a much desired effect, since it allowed ceramics to imitate the pale shades and thin body of silverwork vessels, a medium introduced to China from western Asia in the Tang period.

By the last years of the Song dynasty, however, the "china-stone that was being

mined from deep deposits lacked aluminum oxide, the chemical ingredient that allowed the mineral to withstand high firing” (“History of Porcelain”, 2004). To preserve the quality of their product, the potters began adding kaolin to the china-stone, thereby restoring the percentage of aluminum oxide required. According to Finlay (1998) this was a turning point in the history of pottery. The new formula proved vastly superior to the use of china-stone alone. The addition of kaolin permitted the potters to raise the temperature for firing in the kiln, which led to fusion of the china-stone and kaolin, greatly enhancing the translucency, whiteness, and hardness of the finished product. The snow-white brilliance of the porcelain presented new potential for decoration while its strength meant that larger, more elaborate vessels could now be produced. The Chinese potters had invented a material with which they would change ceramic traditions around the world. Middle-Eastern potters combined Chinese porcelain decoration with elaborate Ottoman designs; Potters in Venice adapted flower patterns from Turkish pottery, while Chinese craftsmen followed the design of Venetian glass makers in porcelain (Munger, & Frelinghuysen-Cooney, 2003). Later, Mexican potters created their own blue and white flow wares because they wanted to imitate the Chinese.

Introduced to Europe in the 1500s, Chinese porcelain wares were regarded as objects of prestige and luxury. The examples that appeared in Europe in the fifteenth and sixteenth centuries were often mounted in gilt silver, which emphasized their preciousness and transformed them into entirely different objects. “By the early sixteenth century—after Portugal established trade routes to the Far East and began commercial trade with Asia—Chinese potters began to produce objects specifically for

export to the West and porcelains began to arrive in some quantity” (Munger & Frelinghuysen-Cooney, 2003).

As the export trade increased, so did the demand from Europe for familiar forms and shapes. European forms such as mugs and candlesticks were unknown in China, so models were sent to the Chinese potteries to be copied. While silver forms probably served as the original source for many of the forms that were reproduced in porcelain, some art historian think that wooden models were provided to the Chinese potters.

European aristocracy, however, aspired to manufacture their own porcelain and not depend on the Chinese. A stumbling block was to determine what sort of material to use. Many years and lots of money later, the secret of porcelain manufacture was actually discovered by the alchemist Johann Friedrich Bottger. “In 1701 Bottger fled Prussia when he angered King Frederick I by failing to turn base metals into gold. Seized by Augustus of Saxony and forced to work on creating porcelain in the dungeons of the Jungfernbastei in Dresden, Bottger bitterly wrote over the entrance to his laboratory that ‘God the Creator has made a potter out of an alchemist’” (Finlay, 1998). After several years of labor, Bottger produced his “first piece of hard, white, translucent porcelain in early 1700s. It consisted of Colditz clay (a source of kaolinite), calcined alabaster, and quartz” (Munger and Frelinghuysen-Cooney (2003). A year later, Augustus opened the Royal Saxon Porcelain Manufactory at Meissen, northeast of Dresden.

As porcelain factories began to appear in Europe in the early eighteenth century, the demand for Chinese export porcelain began to diminish. New geographical markets, however, revitalized the porcelain industry. The United States, right after its newly found

independence of 1784, entered into trade with China. Personalized porcelains often depicted a variety of American themes and motifs, such as including the American eagle, and the country's forefathers—especially George Washington (“History of Porcelain”, 2004).

But by the beginning of the 19th century, American porcelain collectors turned to porcelain factories in France. In “Old Paris Porcelain for the American Market”, Karla Albertson (2001) writes that “Parisian factories were quick to respond to changes in taste, supplying dining wares and decorative pieces in a variety of styles to meet the strong demand among upper- and middle-class American consumers.” Parisian porcelain manufacturers marketed their wares to American consumers. They geared their production to demand on this side of the Atlantic, turning out more of the table services and decorative pieces that sold most quickly at the retailers. “The Metropolitan Museum appropriately owns a pair of vases, circa 1831-35, with views of Broadway and the interior of the Merchants' Exchange; another pair of the same period with tranquil paintings of the city seen from Governor's Island and the Elysian Fields in Hoboken, New Jersey, overlooking the Hudson River” (Albertson, 2001).

The influence of Chinese porcelain wasn't limited to only manufacture and trade. It extended to the art itself. In North America, many porcelain artists went beyond the famous blue and white flow design of utilitarian wares, such as plates and vases, to create hard-paste porcelain sculptures. Borrowing freely from different time periods and cultures, unlimited by past traditions, they took the art of porcelain design further than the Chinese potters millennia ago ever dreamed of.

Inspired by the North American artists, many Europeans sculptors and potters began to

experiment with the composition of elements comprising hard-paste porcelain in order to create sculptures of intensely complex structure. In his article “Complicated Simplicity” Frank Steyaert writes:

In recent years, Belgian ceramist Lut Laleman began attracting attention with her composition and design of high-fired (‘true porcelain’) figures. Laleman's work is made of extremely thin coils of porcelain clay, which, through superposition, form a wall. The coils themselves establish a pattern. White porcelain alternates with black in the fine walls. Some coils are attached in a way so as to create a feeling of depth. Because porcelain forms can change during the firing when reaching maturation, Laleman chooses a design that distributes pressure equally in a natural way. Strength increases with depth. (p.3)

The art of Chinese porcelain has played a crucial role in bringing the artistry of porcelain to different parts of the world, as well as to different and often seemingly unrelated disciplines (architecture, sculpture, silverwork, etc.) It set forth a novel and creative multi-cultural synthesis that has helped the way the world looks at a work of art.

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