

A comparative study of Chinese and European bronzeware

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China and Europe, similar in size, are located at the eastern and western ends of the Eurasian continent and bred their own distinctive bronze civilizations in the Bronze Age.

Landscape of bronze civilization

A large number of bronze objects dated to around 2000 BCE have been discovered in archaeological sites such as Qijia in Gansu Province and Shimao in Shaanxi Province. This indicates that northern China and the Central Plain had entered the Bronze Age at around that time. Roughly 500 years later, the southern region, centered on the middle reaches of the Yangtze River, entered the Bronze Age under the influence of the Central Plain bronze civilization. At that point, the coexistence of the bronze civilizations in the Central Plain, the north, and the south of China was basically formed, which lasted until the end of the Bronze Age.

The bronzeware produced and used in northern China was mainly composed of weapons, tools, and decorations, which were not essentially different from those of the Eurasian steppes in types and casting techniques—the bronze civilization in northern China was an important part of the Eurasian steppe bronze civilization. In the Central Plain, however, a bronze civilization represented by containers was formed, demarcating itself from the bronze civilizations outside of China. The bronze civilization in southern China, though similar to that of the Central Plain, had unique characteristics in terms of combinations, shapes, decorations, and burial situations. It was classified as the secondary type of the Central Plain bronze civilization.

Around 3000 BCE, the Bronze Age began in Southeastern Europe, and gradually covered the entire European continent over the next 1,500 years. The bronze civilizations in most parts of Europe were similar in certain respects, and were dominated by bronze weapons, tools, and decorations. However, because of the complex and diverse natural environment in Europe, European bronze civilizations presented various regional characteristics.

Deeply influenced by the bronze civilization of the Fertile Crescent on the eastern coast of the Mediterranean Sea, Southern Europe entered the Bronze Age earlier, and made remarkable achievements in bronze portrait sculptures. Eastern Europe, especially the southern region, entered the Bronze Age around the same time as Southern Europe. Its bronze artifacts presented an obviously steppe style, and its bronze weapons were highly developed. Under the influence of the bronze civilizations of Southern and Eastern



A bronze *he* vessel with a rabbit-shaped button on the lid, belly decorated with horned animal face motifs, and a dragon adorning the spout. Unearthed from the tomb of Marquise Yi of Zeng. Photo: Ren Guanhong/CSST

Europe, the inland areas of Central and Western Europe also entered the Bronze Age at an early time. Populations in Central and Western Europe developed and utilized many bronze tools for agricultural purposes. Bronze cremation urns and wine jars were also popular. Based on their own cultural traditions, the coastal areas of Western Europe and the Iberian Peninsula formed the Atlantic Bronze Civilization with distinctive bronze objects such as carp's tongue swords, end-winged axes, and hog-back knives. Northern Europe entered the Bronze Age later due to its distance from the core area of the European bronze civilizations, as well as the lack of copper and tin resources. Still, it was responsible for the creation of characteristic bronzes such as the Trundholm sun chariot.

The mountains and rivers in China, running mostly from east to west, together with the influence of latitude and climate, resulted in greater cultural differences between the north and the south than between the east and the west. Such features also manifested in Chinese bronze civilizations. Due to the powerful bronze civilization in the Central Plain, the influence of northern China's bronze civilization was basically restricted to the areas along the Great Wall and to the north. Southern China's bronze civilization was basically distributed in the regions south of the Qinling Mountains-Huai River [a reference line used by geographers to distinguish between northern and southern China]. This is how the three bronze civilizations in China coexisted and developed together.

In contrast, the landscape of European bronze civilizations was more complicated. Major influences came

from the Mediterranean bronze civilization of Southern Europe and the steppe bronze civilization of Eastern Europe, together with the repeated impact of steppe populations on Southern Europe and the rises of ancient Greece and Rome, making the diverse European bronze civilization landscape more complex and changeable.

Differences in appearance

The bronzes in the Central Plain and south of China were mainly vessels or containers. Most of the bronzeware dated to the Xia (c. 2070–1600 BCE) and Shang (c. 1600–1046 BCE) eras were wine vessels, while food vessels dominated the Zhou Dynasty (c. 1046–256 BCE). The bronzes in northern China were similar to those in the Eurasian steppe, where bronze weapons, tools, and decorations were quite popular. Although there were regional differences in European bronzeware, most of the bronze artifacts were weapons, tools, and decorations, particularly axes and swords of various types. Relatively few containers and musical instruments made of bronze have been found.

In terms of decoration, Chinese bronzeware is remarkable for its finely decorated surfaces. There are countless bronze artifacts with exquisite decoration. Abstract animal patterns such as *shou-mian* [lit. beast-face] and *pan-chi* [Chi is a legendary hornless dragon] motifs are most commonly seen in Chinese bronzes.

There are relatively few bronzes with decorations in Europe. Most of the decorative patterns on European bronzes are depictions of production, daily life, sacrificial rituals, wars, and mythological stories, in which

human imagery plays an important role. These patterns are highly realistic, which is quite different from the decorations on Chinese bronzes.

The casting of solid utensils such as bronze weapons and tools is a simple process, in which a liquid copper is delivered into a mold that contains a negative impression of the intended shape. Solid objects such as bronze weapons and tools in China and Europe are basically cast by this method. The casting of bronze containers is much more complicated. There are two ways of casting bronze containers. The first method begins with copper sheet, which is then bent, hammered up or down into an intended shape or joined by riveting, soldering or lapping. Most of the European bronze vessels were produced in this way.

The other method is highly complex. After a desired vessel was fashioned from clay, it was covered with an additional layer of clay that, when dried, was carefully cut away in matching vertical sections to create the casting molds [*wai fan*]. The original clay model was then shaved down for the interior core [*nei fan*], and the mold sections were reassembled around it to make the outer walls. The space between the core and outer molds was then filled with molten bronze. Most of the Chinese bronze vessels were cast in this way.

The fine bronzes such as human portraits and animal statues popular in Europe, especially in Southern Europe, were mainly produced by a technique known as lost-wax casting. Chinese academia has not reached a consensus as to whether lost-wax casting was applied in the Chinese Bronze Age.

Cultural significance

Bronzeware in the Xia, Shang, and Zhou eras symbolized aristocratic status, such as the use of *jue* vessels [people regarded *jue*, a type of wine vessel, as a symbol of social status by using it in formal settings with a prescribed set of ritual actions] in the Xia and Shang dynasties, and *ding* vessels [an ancient cooking vessel usually supported by three or four columnar legs; the number of ding a person owned was determined by his rank in the social and political hierarchy] and chime bells [In ancient China, chime bells were musical instruments dedicated to the upper class, and a symbol of social rank and power] in the Zhou Dynasty.

The use of bronzeware in Europe was mainly for war, sacrifice, production, and daily life. In addition, the function of European bronzes as an indicator of social status was mainly manifested in the number, size, and quality of the burial bronzes.

The reason for the differences between Chinese and European bronze civilizations lies in the vast geographical spaces between them—there were few cultural exchanges between them. It is these differences that lead to the diversity of civilizations.

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Marquis Yi of Zeng's Zun and Basin
Photo: Ren Guanhong/CSST

Marquis Yi of Zeng's Zun and Basin

By REN ZHIYU

The Tomb of Marquis Yi of Zeng was discovered in Hubei Province in 1978. Yi was thought to be the ruler of the Zeng State in the early Warring State Period (476–221 BCE). An astonishing collection of burial objects has been found in his tomb, including a set of bronze bells of different sizes and pitch sequences weighing nearly five tons. Another set of bronze vessels also stands out with its peculiar design and advanced casting techniques. It is known as Marquis Yi of Zeng's Zun and Basin.

This is a set of wine vessels consisting of a bronze *zun* and a bronze *pan* [a basin]. A *zun* was used to contain wine while *pan* held water, which could be used to warm or cool the wine. They are individual pieces yet designed to be a perfect match. The height of the *zun* is 30.1 cm, with a diameter of 25 cm. The *pan* is 23.5 cm high, with a diameter of 58 cm.

This set was probably not made for practical uses, because its functional parts are covered in delicate decorations. The mouth of the *zun* is covered with multi-layered hollow decorations, which from a distance resemble clouds, but is actually a hollowed-out texture composed of intertwined dragons and snakes. On the neck of the *zun*, there are four leopards crawling upwards, their bodies also decorated with hollowed-out dragons and snakes. The belly and feet of the *zun* are decorated with *pan-chi* [hornless dragons] motifs and dragon reliefs. The *pan* was made more sophisticated.

Archaeologists have agreed that this set represents the highest quality and the most advanced technique of bronze artifacts in the Warring States Period. There has been debate on how such a masterpiece was created. It is said that a man spent twenty years making a full-scale replica using a technique called lost-wax casting. However, the replica is still far from the original in terms of exquisiteness and verve.