

I 次の文を読んで、問いに答えなさい。

In the year 433 BC, Marquis Yi, ruler of the state of Zeng, was buried in his four-room tomb along with his most cherished possessions. These included bronze weapons, elegant bronze vessels, and accessories for chariots; and most famously, an enormous set of bronze bells arranged into a single musical instrument that likely required five people to play. In the afterlife, the Marquis would have everything necessary to remain happy and comfortable and to prove that he was a man of wealth—the bronze bells were perhaps the most important symbol of success. Marquis Yi was buried when the Chinese Bronze Age<sup>1</sup> was nearing its end. China as a unified state did not yet exist. Most of China resembled Medieval Europe<sup>2</sup>—a fragmented mixture of small states trading and warring with each other using metal weapons, whose people sometimes lived in small, protected cities.

The technological development that indicated the shift from Stone-Age<sup>3</sup> technology in around 1700 BC was the creation of bronze—a mixture of copper and tin which is harder and more durable<sup>4</sup> than either of those metals. Tools and weapons were among the earliest bronze objects made in China. Bells also appeared near the beginning of the Bronze Age. “The earliest bells seem to have been made for the collars of horses and dogs and other pets,” says Keith Wilson, curator<sup>5</sup> of ancient Chinese art at the Smithsonian’s Freer and Sackler Galleries. He adds that the bells probably helped to find the animals, and that there was also evidence of them being used as ornaments for horses—like jingle bells. Wilson is the curator of the new Sackler exhibition “Resound: Ancient Bells of China,” which features more than 60 Bronze-Age Chinese bells, some of which are being displayed to the public for the first time.

By the time Marquis Yi was ruler of Zeng, those simple “jingle bells”

had generated a complex musical tradition. The more complex two-tone bell “seems to have emerged through experimentation in the Western Zhou period, from 1050 to 771 BC,” says Wilson. He goes on to say that during this experimental period, the bells were produced in many different shapes and sizes.

Thus, Chinese bellmakers had gradually figured out how to make musical instruments that produced two different tones in the same bell, forming them into just the right oval<sup>6</sup>—rather than circular—shape. Controlling the exact tone of a bell before it has even been produced is extremely difficult. Precise proportions of copper, tin, and any other additions to the bronze have to be carefully controlled, and the measurements of the mold<sup>7</sup> have to be exact. “The strongest piece of evidence that bellmakers understood this fact is the set of 65 bells that was found in the Marquis Yi of Zeng’s tomb,” Wilson explains.

In the middle of the Eastern Zhou period (770–255 BC) during which Marquis Yi lived, displays of bronze bells and other bronze objects were an indication of wealth and political status. They were part of a ritualized<sup>8</sup> form of court music that also included strings and wind instruments. Maintaining an orchestra on that scale required a lot of resources. Marquis Yi was only a minor ruler, so the bells and orchestras maintained by more powerful rulers may have been even more impressive.

The bells which will be exhibited at the Sackler should sound exactly the same today as they did thousands of years ago, in theory. But the question of whether or not to try ringing the bells is a controversial one even within the Smithsonian. Some think that the risk of damage is low and the benefits of recording the tones of the bells outweigh any small risk of damage. Others disagree. “They were surrounded by soil and water and you’ve got corrosion,”<sup>9</sup> says Donna Strahan, head of the Freer/Sackler Department of Conservation and Scientific Research. “So it is possible that

if you struck that bell it would fall apart...knowing that it has been buried for two or three thousand years, and it's green with corrosion, you know you've got an issue." Wilson disagrees. He thinks that it would be safe to ring the bells a few times and record them for future generations. Wilson claims that without striking the bells, they are no longer bells anymore, but merely artifacts.<sup>10</sup> No antique bronze Chinese bells are known to have fallen apart as a result of being rung, but Strahan does not want one of the Sackler's bells to become the first.

China is vast, and technological innovation happened at different rates in different areas. A few areas were already producing iron as early as 600 BC. Marquis Yi's tomb contained tons of bronze but no iron. Unlike in most other parts of the world, bronze goods continued to be produced in large quantities even after people had learned to work with iron. It wasn't until the second century AD that iron bells (made for temples) overtook bronze bells in popularity.

(Adapted from a work by Jackson Landers)

(注)

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|--------------------|---------|
| 1. Bronze Age      | 青銅器時代   |
| 2. Medieval Europe | 中世ヨーロッパ |
| 3. Stone-Age       | 石器時代の   |
| 4. durable         | 耐久性のある  |
| 5. curator         | 学芸員     |
| 6. oval            | 卵形の     |
| 7. mold            | 鋳型      |
| 8. ritualized      | 儀式化された  |
| 9. corrosion       | 腐食      |
| 10. artifact       | 人工遺物    |

[1] 本文の意味, 内容にかかわる問い(A)~(D)それぞれの答えとして, 本文にしたがって最も適当なものを(1)~(4)から一つ選び, その番号を解答欄にマークしなさい。

(A) At the time of Marquis Yi's death, which of the following was NOT true about most of China?

- (1) It was yet to be one united country.
- (2) It was a region with commercial activity.
- (3) Its Bronze Age was reaching its conclusion.
- (4) It was completely different from Medieval Europe.

(B) According to the text, what can we say about two-tone bronze musical bells made in China during the life of Marquis Yi?

- (1) They were made in a variety of shapes.
- (2) They were made by a very difficult process.
- (3) They were undergoing a lot of experimentation.
- (4) They could only make a single sound when they were struck.

(C) Why does Wilson believe the bells should be played?

- (1) To prove that they can survive thousands of years buried in soil.
- (2) To preserve their sounds for people to listen to for years to come.
- (3) To entertain visitors to the Smithsonian's Freer and Sackler Galleries.
- (4) To demonstrate how much the tone of the bells has changed since they were manufactured.

- (D) According to the text, what is true about bronze in ancient China?
- (1) People stopped producing it once they had discovered how to work with iron.
  - (2) It wasn't used for making weapons until halfway through the Bronze Age.
  - (3) It was at one time regarded as an important metal by those with wealth and status.
  - (4) It remained the most popular material with which to make bells until well into the fourth century AD.

[2] 次の(1)～(5)の文の中で、本文の内容と一致するものには1の番号を、一致しないものには2の番号を、また本文の内容からだけではどちらとも判断しかねるものには3の番号を解答欄にマークしなさい。

- (1) Marquis Yi was buried with his favorite possessions to keep him satisfied after his death.
- (2) Some of the earliest bronze bells are believed to have once been used to locate pets.
- (3) Bellmakers at the time of Marquis Yi were unable to control the exact tone of a bell during its manufacture.
- (4) Marquis Yi maintained the smallest orchestra of any ruler in the middle of the Eastern Zhou period.
- (5) There have been several recent cases where an antique Chinese bell has been broken as a result of being played.

[3] 本文の内容を最もよく表しているものを(1)～(5)から一つ選び、その番号を解答欄にマークしなさい。

- (1) A biography of the ruler of the state of Zeng, Marquis Yi
- (2) A musical history of ancient China during the Bronze Age
- (3) The debate over whether it is safe to play ancient Chinese musical bells
- (4) An example of technological advancements in bellmaking in ancient China
- (5) The fact that iron bells became more popular than bronze bells in ancient China