

Inheritance and innovation: casting technology and craft production of bronzes in Shang dynasty (16th BC-11th BC), China

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The piece-mold casting technology in China was initially formed in Erlitou period (18th BC-16th BC) and went to the first climax in late Shang dynasty (13th BC-11th BC), but the details of the evolution path were not clearly known so far. The formation of piece-mold casting technology tradition in ancient China, which is very different from mainly using the forging method and lost-wax process to make bronze wares in West Asia and Central Asia, is closely related to the craftsman's technological choice. Since bronzes production is a complex process, the investigation of casting technology, manufacturing sequence, and the organization of production would contribute to a better understanding of technology, economy, labor organization, social structure and cultural interaction in ancient societies of China. Several foundry sites with remains and a lot of bronze wares of Shang dynasty were found in the central plains of China. From observation of those excavations and many further research, especially the analysis of the excavation of foundry sites with remains and bronze vessels, the casting technology and the craft production of bronzes in central plains in Shang dynasty (16th BC-11th BC) were studied. The inheritance and evolution of the casting technology, the distribution of the foundry workshops, the extent of the large manufacturing scale, which has profound and lasting influence on the subsequent development of the metal technology, were also discussed.

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