

中国田野考古报告集

襄汾陶寺

1978 ~ 1985 年考古发掘报告

第一册

中国社会科学院考古研究所
山西省临汾市文物局

编著

文物出版社

ARCHAEOLOGICAL MONOGRAPH SERIES

TYPE D NO. 55

Taosi Site in Xiangfen

Report on Archaeological Excavations in 1978 – 1985

(with an English abstract)

By

The Institute of Archaeology, Chinese Academy of Social Sciences
Linfen Municipal Cultural Relics Bureau, Shanxi Province

Cultural Relics Press

Beijing • 2015

Taosi Site in Xiangfen

Report on Archaeological Excavations in 1978–1985

(English Abstract)

The Taosi site lies within the boundaries of Xiangfen county, Linfen City in Shanxi Province. It is situated east of the Fen River, on the alluvial fan at the foot of Taershan, a range of the Taiyue Mountains. Its exact coordinates are N35°53', E110°29'. The shape of the site is irregular. The site measures 3.3 km in length from northwest to southeast, and between 600 m to 1.8 km perpendicular to that length. It covers an area of around 4300,000 m². Due to human activities, the ground cover has been damaged, giving way to soil erosion, and forming two major gullies, "Nangou" and "Zhaowanggou", and multiple small gullies within the site. The total area of these gullies is estimated to be more than 600,000m². As a result, some prehistoric remains have been severely damaged.

Between 1978–1985, a team jointly established by the Shanxi Archaeological Team from the Institute of Archaeology, Chinese Academy of Social Sciences, and Linfen Municipal Cultural Relics Bureau conducted the first excavation of the site. The dig continued for 15 seasons, and covered an area of 7,000 m². The most significant findings were the remains of Miaodigou II Phase Culture, which existed only in parts of the site, and Taosi Culture, which was the dominant culture of the entire site.

Most of the records of the first excavation can be found in *Xiangfen Taosi*, a report edited by Gao Wei from the Institute of Archaeology, Chinese Academy of Social Sciences. The report is divided into three portions: the preface, the first portion and the second portion. A brief introduction is made at the preface, mainly on the natural environment and the historical and geographical background in the Taosi Area, as well as the discovery and excavation at the site. The first portion includes the summary of the site, Miaodigou II Phase culture, Taosi culture occupation site, Taosi culture burials, and the understanding and discussion, which shows the detailed field excavation data and the related interpretation and discussion at the stage. The second portion, divided into fifteen topics, is a multi-disciplinary analysis of the environment surrounding the site, utilizing geology, geomorphology, paleomagnetism, pollen analysis, tree analysis and zooarchaeology, physical anthropological researches, analysis of different excavated materials including pigment, pottery, jade and bronze vessels, radiocarbon dating, experimental reconstruction of pottery vessels, studies of

acoustics of musical instruments and the preservation of wooden artifacts, were also included. The report has 2 million words, 139 tables, 501 illustrations, 417 plates, and was published by Cultural Relics Press.

The Miaodigou II Phase cultural remains were found in Unit III, underneath the Taosi cultural layers. In addition to the cultural layers, 17 cave dwellings, one kiln, 78 ash pits, and one infant urn burial were found in an area of 1500 m². Remains include artifacts of 255 pottery, 215 stone (including blanks, debitage and raw materials), 38 bone, one shell, one tooth, and large amounts of broken pottery sherds that could not be reconstructed. From the limited area of the distribution, and the appearance of the site and the remains, it can be assumed that the site was an ordinary settlement. The pottery vessels were hand-made, and some of the rims showed evidence of modification using a slow wheel. The representative types include cooking vessels such as sand tempered *guan* pots and *gang* basins (basins are distinguished by a more vertical body and larger volume), containers such as clay tempered drum bellied *guan* pot, mortars with internal indentation (commonly called *kecaopen*), and grey clay pointed bottom jars with flared mouths, which may have been used to store water or wine (surface decorated in basket-marks, and the bottom slightly rounded). Examples of *pen*, *bo*, *pan* and *dou* containers were also found. The types of pottery found are similar to the ones found in both the upper layer in the Xiwangcun Site in Ruicheng county and in Layer IV in western Dongxiafeng Site in Xiaxian County: they are typical of the remains of the transitional period from Yangshao Culture to Longshan Culture on the border of Shanxi, Shaanxi and Henan provinces-designated as Early Miaodigou II Culture or the Beginning Period of the Longshan culture by the excavators. The discovery at Taosi site provided valuable and reliable data for the understanding of this period. Three calibrated radiocarbon dates put the Miaodigou II culture to about 2800 BC. The culture can be separated into Early and Late phases, based on analyzing the differences in pottery and the superposition of the remains. However, Miaodigou II Phase is not directly connected with the Taosi culture.

Taosi culture belongs to the late Longshan period, and is situated mainly in the Linfen basin in Southwest Shanxi. It was named after the excavation at Taosi. The dig between 1978 and 1985 provided rudimentary data for understanding its features, cultural characteristics, development, lineage and chronology. Through analysis of the typical pottery, jade and decorations on ceramics, we believe that Taosi is a unique branch of prehistoric culture that was formed by a mix of the Late Miaodigou II and the Dawenkou culture to the east, and was influenced over time by the Liangzhu, Hongshan and neighboring cultures contemporary to the Longshan period, thereby displaying multifaceted traits. We estimate Taosi to date around 2450–1900 BC, based on 24 reliable calibrated radiocarbon dates. Taosi's 500 years of development can be divided into Early, Middle, and Late phases, and each can be further split into part one and two, which are connected in time.

The following is a summary of the excavation of Taosi culture residential remains and burials.

Taosi residential remains

Four locations with a total area of around 2100m² were excavated. 17 house foundations were discovered. Three types of housing include caves, semi-subterranean houses and ground earthen houses. The

structures discovered were small in size and scattered, and were unable to display any form of nucleated settlement pattern. Some pieces of rammed-earth were found in the house foundations and ash pits; lime wall plaster with geometric designs were found in Early ash pit H330 gave evidence to large-scale rammed-earth buildings. Additionally, five wells were discovered (four were excavated), each with a depth of more than 13m; sherds of flat pottery pots for taking water were found at the bottom of the wells. Wooden structures shaped like the Chinese character “*jing*” (井 or water well) were also found near the bottom of the well—possibly to prevent the collapse of the walls—they were evidence that the “*jing*” character in oracle bone inscriptions is a pictograph of the structures. 11 kilns were found, some located near wells, and some were clustered in groups of three, hinting at the existence of professional pottery manufacturing sites. The first known example of a kiln for making lime in Chinese prehistory was discovered at Taosi in 1979. 133 ash pits of various shapes were found; some were cylindrical or oval. They were used for a variety of functions, but generally for storage and as waste landfills later on. Additionally, 33 small burials have been found in certain areas. The 28 burials in Unit III were made after settlements came into disuse, and exhibited similar mortuary tradition and form as the small burials in the cemetery in the Late phase.

More than 1560 pieces of artifacts were found at the residential area, with pottery vessels being the most common; 583 pottery containers for daily use (including complete, reconstructed, and incomplete ones that are distinguishable by shape), 181 pottery tools, which include musical instruments, accessories and toys, 432 stone tools, 307 bone tools, and 17 shell tools were found. The majority of the stone, bone and shell items were tools for different functions and arrowheads for hunting animals and killing people. Additionally, there were 31 oracle bones and more than 10 unmodified natural objects. Among the rich variety of objects found, the flat pottery pot for taking water (*taobianhu*) is a diagnostic artifact of Taosi culture with strong symbolic significance. Red ink inscriptions of the character, “*wen*” (文) was found on a Late phase broken flat pottery pot discovered at H3404. The inscriptions are structurally similar to oracle bone ones, but date between 2000–1900 BC, which predated oracle bones by six to seven centuries. They are very special to our understanding of the development of early Chinese written language.

Taosi burials

Burials are located to the southeast of the occupations, and cover an area of more than 40,000 m², of which 4,900 m² was excavated. 1,379 burials were discovered, and 1,309 among them were excavated (70 were located outside of the excavation area, and therefore remain untouched). By studying the stratigraphy, radiocarbon data, and by comparing burial goods with materials found at the occupations, we have proof that the burial grounds were used for adults from the Early to Late Taosi phases. In the physical anthropological study of 985 human remains, there was not a single case of toddlers under the age of seven, and only eight cases of minors between the ages 7–15, which accounted for less than 1% of the remains. Among 944 remains where gender was identifiable, male and those displaying male traits numbered 529, and females numbered 415; the male to female ratio was 1.27 : 1. Most of the 794 remains were adults who lived to be young and mid-age; the number of the remains that lived to be older than 55 was 59, or 7.43% of the

whole.

The earthen tombs were rectangular and perpendicular to the surface of the ground. Evidence of wooden coffins was found in around 60 tombs. Materials used for wrapping corpses, such as thread, linen textiles, woven grass and woven stems were found in 89 tombs. 10 tombs had secondary burials, and the rest were primary. The bodies were in extended and supine positions with the heads generally facing southeast, with more than half of them between 120° – 140° . Further analysis of the environment showed that many tomb positions were planned in advance. Early phase tombs are generally neatly placed in horizontal rows, with each tomb in the same rows dating to the same period and in similar sizes. Late phase tombs contained some that were in horizontal rows, but there were also clustered burials of up to 20 tombs. The clustered tombs should be patriarchal family burials or extended family burial grounds, and some were double burials of husband and wife. From the point of view of the layout of the burials, the presence of family burial grounds and double burials signified the end of burial traditions from clan-based traditions, and the establishment of monogamous marriage and family-oriented lifestyles. The patriarchal family unit has become the structural foundation of clan-based social hierarchy.

The depth of the tombs signified social stratification. By comparing data from 770 tombs (58.8% of excavated total), the tombs can be classified into six types (Type 1 and 2 are only found in the Early phase), which signify large differences between the social class of the buried: Five Type 1A tombs, where the buried may have been leaders or rulers of the community, who held ritualistic, militaristic or political power in Early Taosi; One Type 1B tomb, which contained a member of the ruling family; 30 Type 2 tombs; 149 Type 3 tombs, where the buried were members of the elite families who held different degrees of power in society; 29 Type 4 tombs, where the buried were between the elite and peasantry—either lower-class prestigious families or wealthy peasantry; 254 Type 5 tombs and 302 Type 6 tombs, where the buried were peasants with no social privileges or powers—Type 6, especially, contained the poorest peasantry in the lowest class in society. There were also more than 530 heavily damaged tombs that were unable to be classified, of which around 500 were small in scale, and should have belonged to Type 5 or Type 6 tombs. The addition of these damaged tombs meant that Type 5 and Type 6 tombs accounted for more than 80% of the total. The excavation data gave strong evidence of a pyramidal social structure that existed in this period.

In the burials of the elite and a small number of persons of prestige, burial goods such as pottery vessels, wooden tools, jade tools and animal-shaped vessels were found in abundance. Pottery and wooden items often had patterns painted in ink or pigment. The variety, quantity and exquisiteness of the goods differ according to the social rank of the buried person. We can see that burial goods, by this time, had gained the function of sacrificial vessels that signified the social class and prestige of the buried, and thereby beginning a ritual-based tradition that lasted for more than 2000 years.

2,218 sets of burial goods were discovered in 357 tombs (27.3% of the total excavated). If we calculate the pieces of jade, bone, shell and teeth items individually, there were around 5,800 items in total. Many of the items discovered hold significant amount of historical importance; The painted pottery plates

with coiled dragon patterns are clearly an ancestral form of the coiled dragon plates of the Shang and Zhou dynasties. Alligator *tuo* drums (covered in alligator hides) and large-scale *teqing* chime stones discovered at Type 1A tombs in Taosi Early phase precede similar musical instruments discovered in Late Shang royal tombs by more than 1000 years, and are currently the earliest examples of such items. Alligator drums and chime stones were important ritual items used by the Shang and Zhou royalty and elite. Additionally, we were able to learn about “Earthen drums”, a long lost instrument used by prehistoric peoples in ceremonial activities, by their presence in the Taosi elite burials alongside the alligator drums and chime stones. Hundreds of wooden tools with red ink or pigments of more than 10 types were found in Type 1 and Type 2 tombs of the Early phase, and formed a significant characteristic of the Taosi culture. From their form, craftsmanship and surface decorations, we see a direct connection between these Longshan period vessels and the lacquerware of the Shang and Zhou dynasties, giving important evidence to the analysis of ancient Chinese lacquerware. A small copper bell, discovered at Late phase tomb M3296, was the first discovery of a full-shaped bronze object in China. It signified the existence of bronze metallurgy in the Chinese central plains in as early as the Late Longshan culture, which formed a technological foundation for ceremonial bronze vessels that came later. It was also the first example of a metal musical instrument in Chinese prehistory, and set a precedent for more mature bronze bells in the Erlitou culture and later bronze musical instruments.

The excavation between 1978–1985 formed a foundational analysis of the origin of Taosi culture and its position within Longshan culture and within the prehistory of southwestern Shanxi. A periodical classification of pottery objects into six parts within Early, Middle and Late phases and radiocarbon dating was also created, which gave us a holistic overview of the traits and distribution of Taosi culture. The discovery of alligator *tuo* drums and *teqing* chime stones within the “king” tombs and large number of tombs of various sizes gave proof that the area was once the capital city of an early prehistoric state around 2400 BC, which not only was a regional center of religion, politics and culture, but an agglomeration of multiple regional material and spiritual cultures in the Longshan period. Taosi site has been classified as one of National key cultural relics protection units in 1988 due to the academic importance of these early findings. The excavation of walled enclosures and large rammed-earth structures after the year 2000 added to the site’s significance.