Study on the Layout of the Small Dry Land Cemetery in Hetaozhuang

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Abstract: The Xiaohandi Cemetery in Hetao Village, is located on the east bank of the Milagou River, a tributary of the Huangshui River. It is a typical cemetery of the Xindian culture. The analysis of its spatial layout is of great significance for studying the origin and settlement form of the Xindian culture. This paper establishes the pottery period of the cemetery through 219 tombs with unearthed pottery, classifies each tomb into each period, and obtains the period division of the tomb. Then, the internal characteristics are analyzed, the overall spatial layout of the cemetery is summarized, and then the similarities and differences in groups and burial customs are studied. The study shows that the distribution of the Xiaohandi Cemetery has a gradual shift from west to east from early to late. During this period, the location selection preference and the number density of the cemetery have changed, indicating that the groups have converged in their views on the soul, and the two groups have merged into a new group.

Keywords: Xindian culture, Layout of small dry land cemeteries, Burial customs.

1. Introduction

The Xiaohandi Cemetery is located on a terrace east of Hetaozhuang Village. The tombs are distributed east-west along the southern edge of the terrace, with a range of about 160 meters from east to west and about 60 meters from north to south. It is a typical cemetery dominated by Xindian culture relics. Since 1978, the archaeological team of the Qinghai Provincial Cultural Relics Department has conducted a comprehensive excavation of the cemetery for three years. A total of 367 tombs were cleared, of which two tombs can be clearly identified as Shanjiangou culture, and the rest belong to Xindian culture. The tomb shapes are basically divided into four types: rounded rectangular, rectangular, elliptical and irregular, with rounded rectangular tombs and rectangular tombs being the main ones. The tomb structures include vertical pit tombs and side cave tombs, most of which are vertical pit tombs. Some of the vertical pit tombs are accompanied by head niches or head pits, foot niches or foot pits. In tombs with niches or pits, the burial objects are almost all placed in them; in other tombs, the burial objects are often placed at the head end or foot end. The direction of the tombs is relatively consistent, and most of them are north-east. Among the vertical pit tombs, 102 tombs used burial tools. The burial tools were mainly wooden coffins, which were mostly one-layer. All tombs that used burial tools had two-layer platforms. The vast majority of the tombs in the Xiaohandi cemetery were single burials, and most of the tombs had been disturbed, resulting in messy bones, irregular tomb planes, abnormal inclusions in the filling soil, and the destruction and loss of burial objects. This paper intends to establish a cemetery period division based on the spatial distribution characteristics of the cemetery in terms of ethnic groups and burial customs.

2. Burial Periods at the Small Dry Land Cemetery

The periodization of Xiaohandi tombs is based on the periodization of pottery, so pottery was unearthed in all 219 tombs selected in this article. The Xiaohandi cemetery basically uses belly-eared pots, double-eared jars, and basins as a fixed combination of burial objects, so these three types of pottery are the most numerous. Among them, there are 173 belly-eared pots, 157 of which are involved in the classification and standardization; 245 double-eared jars, 214 of which are involved in the classification and standardization; 115 basins, 113 of which are involved in the classification and standardization. The following is a classification of belly-eared pots, double-eared jars, and basins:

1) Pot with belly and ears: divided into 4 types based on the painted pottery patterns, and divided into 9 types based on the height, fatness and thinness of the body.

Type A uses bird patterns and variant bird patterns as typical patterns. The rim, neck and abdomen are decorated with complex wavy triangular patterns, and the lower abdomen is decorated with one or more groups of vertical lines.

There are 3 types of body types, depending on the change from short and fat to tall and thin.

I: short neck, straight shoulders, concave bottom, maximum diameter at the shoulder, short and fat body, with double belly ears and double neck ears. Specimen M93: 3 (Figure 1, 1).

II: long neck, sloping shoulders, flat or concave bottom, the largest diameter is in the middle and lower abdomen, the body is relatively slender, and there are only two abdominal ears. Specimen M202: 1 (Figure 1, 2).

III: long neck, sloping shoulders, mostly flat bottom, the largest diameter is in the lower abdomen, the body is slender, and there are only two abdominal ears. Specimen M249: 1 (Figure 1, 3).

Type B has double hook patterns as its typical pattern, with wide black flat stripes or solid triangle patterns on the rim, circular geometric patterns on the neck, a complete set of large sheep horns on the upper abdomen, and hook patterns often on the lower abdomen.
It is drawn with double hooks, single and double lines, and is divided into two subtypes depending on whether the lower abdomen has patterns or not.

Ba: Double hook patterns are drawn with a single line, and the lower abdomen is often decorated with one or more continuous hook patterns. It is divided into 3 types according to the body shape from short and fat to tall and thin.

I: short and thick neck, concave round bottom, short and fat body. Specimen M98: 5 (Figure 1, 4).

II: slightly narrow neck, flat or concave bottom, tall and thin body. Specimen M333: 2 (Figure 1, 5).

Type III: long and thin neck, flat or concave bottom, tall and thin body. Specimen M80: 1 (Figure 1, 6).

Type Bb: The double hook pattern is drawn with double lines, and the lower abdomen is basically without decoration. Specimen M105: 2 (Figure 1, 7).

Type C features pseudo-frog patterns as its typical decoration, with wide black stripes on the rim, circular geometric patterns on the neck, and pseudo-frog patterns and vertical lines on the abdomen.

There are 3 types of body types, depending on the change from short and fat to tall and thin.

Type I: short and thick neck, concave round bottom, short and fat body. Specimen M95: 7 (Figure 1, 8).

Type II: slightly narrow neck, flat or concave bottom, tall and thin body. Specimen M211: 2 (Figure 1, 9).

Type III: long and thin neck, flat or concave bottom, tall and thin body. Specimen M312: 1 (Figure 1, 10).

Type D is plain, with a short neck, the largest diameter in the mid-abdomen, and a slender body. Specimen M289:1 (Figure 1, 11).

2) Two-eared jars: divided into 4 types based on painted pottery patterns, and divided into 15 styles based on height, weight and shape.

Type A features geometric band patterns as typical decoration, with the rim and abdomen decorated with complex wavy triangular patterns, the neck with multiple horizontal lines, and the lower abdomen with multiple vertical lines extending to the bottom.

It is divided into two subtypes based on the presence or absence of an additional horizontal row of black "S" lines on the shoulders.

Aa: A horizontal black "S" pattern is added to the shoulders. It is divided into 3 types according to the body shape from short and fat to tall and thin.

I: short and thick neck, concave bottom, short and fat body.

Specimen M111: 2 (Figure 1, 12).

II: slightly long neck, concave bottom, long and thin body. Specimen M35:1 (Figure 1, 13).

III: slender neck, flat or concave bottom, and elongated body. Specimen M344: 1 (Figure 1, 14).

Ab type: no additional horizontal black "S" pattern on the shoulders. There are 3 types of body shapes from short and fat to tall and thin.

Type I: short and thick neck, concave bottom, short and fat body. Specimen M31:3 (Figure 1, 15).

Type II: slightly long neck, flat or concave bottom, and slender body. Specimen M119: 3 (Figure 1, 16).

Type III: slender neck, flat bottom, and elongated body. Specimen M333: 3 (Figure 1, 17).

Type B features double hook patterns as a typical decoration, with the rim decorated with complex wavy triangular patterns, the neck with multiple horizontal lines, the abdomen with double hook patterns, and the lower abdomen with multiple vertical lines extending to the bottom.

There are 3 types of body types, depending on the change from short and fat to tall and thin.

Type I: slightly thick neck, sloping shoulders, concave bottom, short and fat body. Specimen M120: 2 (Figure 1, 18).

Type II: slightly thick neck, sloping shoulders, flat or concave bottom, and slender body. Specimen M359: 1 (Figure 1, 19).

Type III: Neck is inward, shoulders are sloping, the bottom is flat, and the body is long and thin. Specimen M303: 1 (Figure 1, 20).

Type C features a single-color horizontal and vertical stripe pattern, with wide, flat black stripes along the rim, multiple horizontal lines along the neck, and multiple vertical lines extending to the bottom of the lower abdomen.

There are 3 types of body types, depending on the change from short and fat to tall and thin.

Type I: sloping shoulders, short and fat body. Specimen M36:1 (Figure 1, 21).

Type II: sloping shoulders, slender body. Specimen M210: 3 (Figure 1, 22).

Type III: oblique shoulders, slender body. Specimen M92: 3 (Figure 1, 23).

D-type plain face. There are 3 types of body shapes, from short and fat to tall and thin.

Type I: flat or concave bottom, short and fat. Specimen M364: 1 (Figure 1, 24).

Type II: flat or concave bottom, elongated shape. Specimen
M74: 1 (Figure 1, 25).
Type III: flat bottom, slender body. Specimen M149: 1 (Figure 1, 26).

3) Basin: divided into 2 types based on painted pottery patterns, and divided into 6 types based on height, weight and body shape.

Type A features complex wavy triangular patterns as typical decorations. The rim and abdomen are decorated with complex wavy triangular patterns, the neck is decorated with multiple horizontal lines, and the lower abdomen is decorated with multiple vertical lines to the bottom.

There are 3 types of body types, depending on the change from short and fat to tall and thin.

Type I: short neck, shallow belly, concave bottom, short body. Specimen M303: 3 (Figure 1, 27).

Type II: Neck is inward-tightened, abdomen is deep, bottom is flat or concave, body is tall and thin. Specimen M112: 2 (Figure 1, 28).

Type III: elongated neck, deep abdomen, mostly flat bottom, tall and thin body. Specimen M29: 2 (Figure 1, 29).

Type B is typically decorated with solid black color, with wide flat black stripes on the rim, wavy triangular patterns on the abdomen, multiple horizontal lines on the neck, and multiple vertical lines on the lower abdomen extending to the bottom.

Type I: short neck, bulging belly, shorter body. Specimen M26: 1 (Figure 1, 30).

Type II: Neck is inward-tightened, belly is bulging, and body is tall and thin. Specimen M27: 3 (Figure 1, 31).

Type III: elongated neck, deep abdomen, tall and thin body. Specimen M24: 2 (Figure 1, 32).

From the previous classification patterns, we can see that belly-earred pots A, Ba, C, double-earred jars Aa, Ab, B, C, D, and basins A, B can all be divided by morphological changes, and the changes are continuous. At the same time, by analyzing the coexistence relationship between a large number of belly-earred pots and double-earred jars, we can derive the type combination relationship between the two, and then substitute the evolution sequence of the basin into the coexistence relationship between belly-earred pots and double-earred jars, we can derive a fixed combination of burial objects. Therefore, we believe that these corresponding changes are differences with temporal significance, and their corresponding relationship is the combination of objects in different time stages. According to their type changes and combination coexistence relationships, they can be divided into three periods. (Table 1)

<table>
<thead>
<tr>
<th>Device type</th>
<th>Mode</th>
<th>I</th>
<th>II</th>
<th>III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belly Ear Pot A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ba</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Belly Ear Pot B</td>
<td></td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Bb</td>
<td></td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Belly Ear Pot C</td>
<td></td>
<td>8</td>
<td>9</td>
<td>10</td>
</tr>
</tbody>
</table>
By analyzing the relationship between the types of pots with belly handles, two-handled jars and basins and the changes in the characteristics of the objects in each period, we can establish the pottery period of the Xiaohandi Cemetery. By classifying each tomb to which these objects belong into each period, we can obtain a period table for the entire cemetery. (Table 2)

Table 2: Stages of Hetaozhuang Small Dry Land Cemetery

<table>
<thead>
<tr>
<th>Expect</th>
<th>Tomb</th>
<th>total</th>
</tr>
</thead>
<tbody>
<tr>
<td>one</td>
<td></td>
<td>54</td>
</tr>
<tr>
<td>two</td>
<td></td>
<td>105</td>
</tr>
<tr>
<td>three</td>
<td></td>
<td>60</td>
</tr>
</tbody>
</table>

3. Spatial Layout of Small Dryland Cemeteries

The formation of a cemetery is that a group of people with internal connections buried their dead in a certain area over a continuous period of time, thus leaving behind a cemetery. As for why a certain dead person in the cemetery is buried here rather than in other places, it is determined by the time of death of the dead person and his relationship with the crowd, that is, the time of death and social relations determine the layout of the cemetery. [2][26] Therefore, the tombs of people of different periods and different identities and status have different spatial distribution characteristics, and the spatial layout analysis of the cemetery is carried out under this premise. On the basis of periodization, the excavation report briefly summarizes the distribution characteristics and differences in spatial distribution of the tombs in the Xiaohandi cemetery, but does not strictly combine periodization with zoning. By selecting 219 tombs with unearthed pottery, the pottery periodization of the Xiaohandi cemetery was established, and each tomb to which these artifacts belonged was classified into each period. Finally, the spatial distribution of the corresponding tombs was used to determine whether the cemetery had a burial plan, and the relationship between the tombs could be further analyzed. (Table 3)

Table 3: Phased zoning table of Hetaozhuang small dry land cemetery

<table>
<thead>
<tr>
<th>Period</th>
<th>West District</th>
<th>Eastern District</th>
<th>total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>M151 163 166 190 194</td>
<td>203 240 250 264 268 270 314 338</td>
<td>54</td>
</tr>
</tbody>
</table>

By looking at the division of the cemetery into zones and groups through the periodization of tombs, we can examine how the entire cemetery was gradually formed, that is, the differences between the tomb groups, the number of tombs in different periods within the tomb groups, the similarities and differences in tomb forms and burial objects, and the development direction of tomb distribution. [36] Because there is a large gap between the east and west areas, the boundary between the east and west areas is obvious. Referring to the previous periodization of tombs, the tombs belonging to each period are marked on their location maps, and the characteristics of the cemetery's time layout can be seen: the first-phase tombs in the west area increase from northwest to southeast, the second-phase tombs decrease from the center to the north and south, and the third-phase tombs surround the...
western area from the west, south, and east of the cemetery. The number of first-phase tombs is the largest in the west area, and the distance between the first-phase tombs decreases from northwest to southeast, and the overall number of tombs also increases from northwest to southeast. From the overall trend, there is a gradual shift from west to east in distribution from early to late. Combined with the terrain of the small dry land, which is low in the northwest and high in the southeast, it shows that as time goes by, early people prefer to choose high places for cemeteries.

There are only a few tombs in the first phase of the eastern area, and they are scattered. There are more tombs in the middle of the second phase, and fewer on the east and west sides. The number of tombs in the third phase gradually increases from west to east. The number of tombs in the second phase is the largest in the western area. The distance between tombs in the second phase increases from the middle to the east and west, and the overall number of tombs also decreases from the middle to the east and west. Combined with the overall trend, there is a gradual shift from west to east in distribution from morning to night. There was a period of increase in the number of deaths in the middle period. It may be a population surge during this period, or it may be a sudden natural disaster or plague, or even a conflict with other tribes during this period. Various reasons led to a surge in the number of deaths during this period. Combined with the terrain of the small dry land, which is low in the northwest and high in the southeast, it shows that as time goes by, people in the middle period no longer have special preferences for the height of the tomb location. There are 41 tombs in the first phase of the western area and 37 tombs in the second phase. The difference in the number of tombs in the two phases is small. From the distribution point of view, the tombs in the second phase are evenly distributed, which further shows that the tomb location was not selected according to the height of the terrain in the middle period. The number of tombs in the third phase of the eastern area gradually increases from west to east, with more tombs in the north and fewer in the south, indicating that people in the late period began to choose low-lying locations for burial. (Figure 2)

In summary, the Hetao Village Small Dry Land Cemetery has been used to bury two ethnic groups since the beginning, and the two groups differ in the choice of burial locations, burial forms, and burial customs. The number of tombs in the early western area far exceeded that in the eastern area, indicating that there was a large gap between the strength of the eastern and western ethnic groups. In the middle period, the eastern tribe became stronger due to natural disasters, plagues, and conflicts with other tribes, but the western ethnic group was still strong. The two ethnic groups had a peaceful transfer of power, so the eastern ethnic group did not encroach on the cemetery space of the early western ethnic group in the later period. Finally, the later tombs were concentrated in the eastern area, and the western area was scattered, indicating that the two ethnic groups were highly integrated with the eastern ethnic group as the core.

4. The Changes of Burial Customs in Xiaohandi Cemetery

The cemetery can directly reflect the burial customs. By analyzing the burial customs, we can understand the social situation at that time. Among all funeral rituals, burial customs can best reflect the religious concepts, religious
feelings and religious activities of primitive people, and the concept of soul is the most important religious thinking. Studying the complex soul concept expressed in various forms of burial customs can give us a deeper understanding of the social organization form, social and economic activities, religious thoughts and techniques of Xindian culture. The ethnic groups in the western and eastern districts are different in the choice of burial locations, burial forms and burial customs. According to the most burials in the first phase of the western district of the Xiaohandi cemetery, the most burials in the third phase of the eastern district, indicating that the ethnic groups in the western district should have a dominant position in the early burial customs, while the burial customs of the ethnic groups in the eastern district were dominant in the late period. From the overall trend, there are relatively more single burials in the western district, and more common secondary disturbed burials in the eastern district. The burial customs have undergone a transformation from single burials to secondary disturbed burials from early to late, indicating that the concept of life and death of the tribes behind the Xiaohandi cemetery has changed.

Most of the secondary burials common in the Yangshao culture were relocation burials, and there were also a small number of relocation burials. Both of them were forms of transferring bones to other places for burial. The secondary disturbed burial was carried out in the original tomb, so it was a secondary burial in the original pit. Its main characteristics are messy bones, irregular tomb planes, and abnormal inclusions in the filling soil. In the first burial in the western area, food and cooking utensils were placed on both sides of the skull, and storage containers were placed at the foot end. It was obvious that the attitude of "regarding death as life" was taken into consideration for the diet and daily life of the deceased. This stage should be the continuation of the secular life of the deceased. The secondary disturbed burial in the eastern area was to disturb the order of the bones, mix the bones with each other, and even break and discard the bones. From the perspective that the body and soul need to be buried separately, the first funeral is regarded as a transition from death to the final transition to reincarnation or eternal life. The second funeral is when the body is decomposed and the soul is purified, and the soul of the deceased is restored to its previous state. From this perspective, it can be explained why the cemeteries in the West District were not occupied even when the number of deaths increased in the later period. The East District tribe believed that the souls of the West District tribe in the West District cemetery lived in the West District. If people were buried in the West District, it would prevent the reincarnation or immortality of the soul. From an economic perspective, secondary burial is a symbol of high status. In a society where secondary burial is widely practiced, the time and space scale of the entire funeral process and the complexity of the procedures are directly related to the socioeconomic ability of the deceased's relatives. The first funeral is sudden and unprepared, while the second funeral can prepare sufficient manpower, material resources and financial resources. It is a formal farewell to the deceased, declaring that the living have accepted the death event, recovered from the accident, and sent the deceased to another world, such as the resting place of ancestors, the underworld, etc., so that the deceased can be with their dead ancestors or wait for reincarnation. A grand farewell ceremony can help the deceased reach the resting place of ancestors, the underworld, etc. more smoothly. The economically strong funeral households can prepare the people and objects needed for the funeral in a relatively short time. Due to the short time, the body of the deceased may not have been completely decomposed, so only a small part can be disturbed. Otherwise, more bones can be disturbed, which can also explain why there is no standardized form of disturbance in secondary disturbance burials. As time goes by, people accumulate more wealth and gradually begin to pursue higher-level funerals, which can also explain why there are more single burials in the western region in the early period and more secondary disturbance burials in the eastern region in the late period.

From a symbolic perspective, when a person is alive, the soul is the concentrated embodiment of his social identity, and the body is only a "container" of the soul and spirit. After death, the roles of the soul and the body are reversed and exchanged, the soul loses its social nature, and the bones of the deceased become the eternal symbol of the social identity of the deceased during his lifetime. This is to replace the social image of the deceased during his lifetime by extracting partial bones of the deceased. The primary burial in the West District is to place the deceased in the cemetery to continue the secular life, while the secondary disturbed burial in the East District is to hope that the deceased will transfer the soul to the partial bones of the deceased and accompany the living to continue the secular life, so most of the bones in the secondary disturbance burials are missing. The phenomenon of disturbing the order of bones, mixing bones with bones, and even breaking and abandoning bones in the secondary disturbed burial is because the soul has been transferred, and the lack of relevant knowledge such as the order of bones is random. From the perspective of cultural exchange, the prevalence of secondary disturbed burial in the East District may be influenced by the surrounding culture in political, economic and cultural exchanges. During the Majiayao period, no secondary disturbance burials were found in Gansu, while in Qinghai, secondary disturbance burials were more than primary burials, but the overall number of burials was relatively small. During the Banshan-Machang period, the distribution of secondary disturbance burial sites was very regular, with the largest number concentrated in the Yellow River Basin in Qinghai, the larger number between Lanzhou and Linxia in the Yellow River Basin and its tributary Tao River Basin in Gansu, the smaller number between Xining and Minhe in the middle reaches of the Huangshui River, and the smaller number between the lower reaches of the Huangshui River and the eastern section of the Hexi Corridor. This distribution feature is basically consistent with the distribution of pottery from Banshan to Machang. During the Qijia culture period, secondary disturbance burials did not appear to be very concentrated in distribution, but the high proportion of Qin and Weijia indicated that this was still the center of secondary disturbance burials, and the number around Xining seemed to have begun to increase, and the Hexi Corridor had also appeared. In the Bronze Age, the Kayue culture in Qinghai and the Xindian culture at the junction of Gansu and Qinghai both used secondary disturbance burials as the main burial style, with a proportion of more than 70%. There is no data on the proportion of the Siwa culture in Gansu, but it is estimated to be around half. The Siba culture in the western section of the Hexi Corridor may account for

From this perspective, it can be explained why...
more than half, while the Shajing culture in the eastern section only accounts for half. During this period, the Yellow River, Tao River, and Huangshui River basins still accounted for the most, and the rest of the areas were slightly less. As time went on, the distribution range of secondary disturbance burials gradually expanded, so the early impact in the western area was small, and the late impact in the eastern area was large.

Whether it is a single burial or a double disturbed burial, it is a way of expressing the concept of soul. Their concept of life and death is that the soul is immortal, and it is a ceremony held for another way of life. In the early days of the Western District, the soul was placed in a fixed place, and in the late days of the Eastern District, the soul was sent into reincarnation or purified to become eternal through various means. Regardless of the method, the root is ancestor worship. The Western District is mainly single burial, and the Eastern District is mainly double disturbed burial. The transition from single burial in the early Western District to double disturbed burial in the late Eastern District is distributed in both the Eastern and Western Districts in the middle period. The number of tombs gradually increases from west to east from early to late, which shows that the difference in the concept of soul between the Western District and Eastern District ethnic groups has gradually disappeared, and the two have merged into a new and larger ethnic group.

5. Summary

Through 219 tombs with unearthed pottery, the pottery period of the cemetery was established. By classifying each tomb to which these artifacts belonged into each period, the period characteristics of the spatial distribution of the east and west areas of the tombs can be obtained. By analyzing the internal characteristics of the east and west areas, it is found that the east and west areas represent different ethnic groups, and they have begun to bury in different areas in the early days. According to the fact that the number of early tombs in the western area is much larger than that in the eastern area, it is concluded that the ethnic group in the western area was much stronger than that in the eastern area in the early days. In the middle period, the number of tombs in the eastern area increased sharply for a period of time. It may be due to natural disasters, plagues, conflicts with other tribes, etc., which led to the gradual strengthening of the ethnic group in the eastern area in the later period. The number of tombs in the later period is the largest in the eastern area, and the overall number of tombs in the eastern area is also more than that in the western area, indicating that the focus of development in the middle and late periods is on the ethnic group in the eastern area. The ethnic group in the western area chose the cemetery in high terrain. There was no obvious preference between the east and west areas in the middle period. In the late period, people in the eastern area chose low terrain. The number of tombs increased from east to west and from early to late, indicating that the location of the cemetery changed from choosing high terrain to low terrain. At the same time, the western area mainly practiced single burials, while the eastern area mainly practiced double disturbed burials. The burial customs also changed from single burials in the early western area to double disturbed burials in the late eastern area. The changes in the preferences for cemetery location and burial customs indicate that the western and eastern ethnic groups have converged in their views on the soul, and the two ethnic groups have merged into a new ethnic group.

References


Appendix

The various opinions on burial customs listed in this article are mainly found in: