

# A Study of Human Skulls from the Cemetery at Ahatla Hill in Xunhua, Qinghai

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**Key Words:** Ahatla Hill Qinghai human bones Bronze Age

The paper reported observations and measurements of the human bones from the Kayao 卡约 Culture cemetery at Ahatla 阿哈特拉 Hill in Xunhua 循化, Qinghai 青海 Province. 165 individual bones were identified to their sexual and age features, 37 skulls were examined morphologically and 33 intact skulls (including 23 males and 10 females) were measured and analyzed statistically. The author mainly discussed their comprehensive morphological characters, racial affinities and relationship of morphological distance with modern and ancient racial groups in surrounding area.

## I. Distribution of Sex and Age

Among 165 individual bones, 145 were identified to the sex. The proportion of male and female is 1.23:1. Twenty individuals could not be examined.

About the statistics of death age, the death height is in the prime of life and middle age (60%). Mortality of youth and under age is also quite high (20.8% and 13.4%), only 5.4% died at old age. The death proportion of female youth (33.3%) is higher than that of male (27.4%). Average death age (including under age) is 32.34% for male (73 examples) and 30.13% for female (47 examples).

## II. Morphologic Characters

Based on the taxonomy of morphological measurement, synthetic characters of skull of Ahatla Hill group are: Dolicho-mesocrany, Hypsi-orthocrany, Acro-metriocrany and Stenometop. Absolute value of skull height is high-middle mostly and Lept-meseny is quite common. Vertical cranio-facial proportion is large-middle. Facial flatness is large but sagittal project is middle. Mostly alveo-

lar prognathous, Nasal project is low-middle. Meso-leptorrhiny and Meso-hypsiconchy as well as Branchystaphyling are common.

## III. Racial Analyses

Compared with the groups of modern Mongoloid area, it is very clear that Ahatla Hill group is close to East Asian one and evidently different from that of North, Northeast and South Asia. It is similar to the groups of North China, Tibetan B and Lijiashan 李家山. The results of principal component and cluster analyses showed that Ahatla Hill group is closer to the groups of modern and ancient East Asian, especially to the groups of Yin Dynasty, Huoshaogou 火烧沟 and Bronze Age of Gansu 甘肃 Province as well as modern North China than that of Lijiashan and Tibetan B. It is clearly far from the groups of modern and ancient North and Northeast Asia (Figures 1-3).

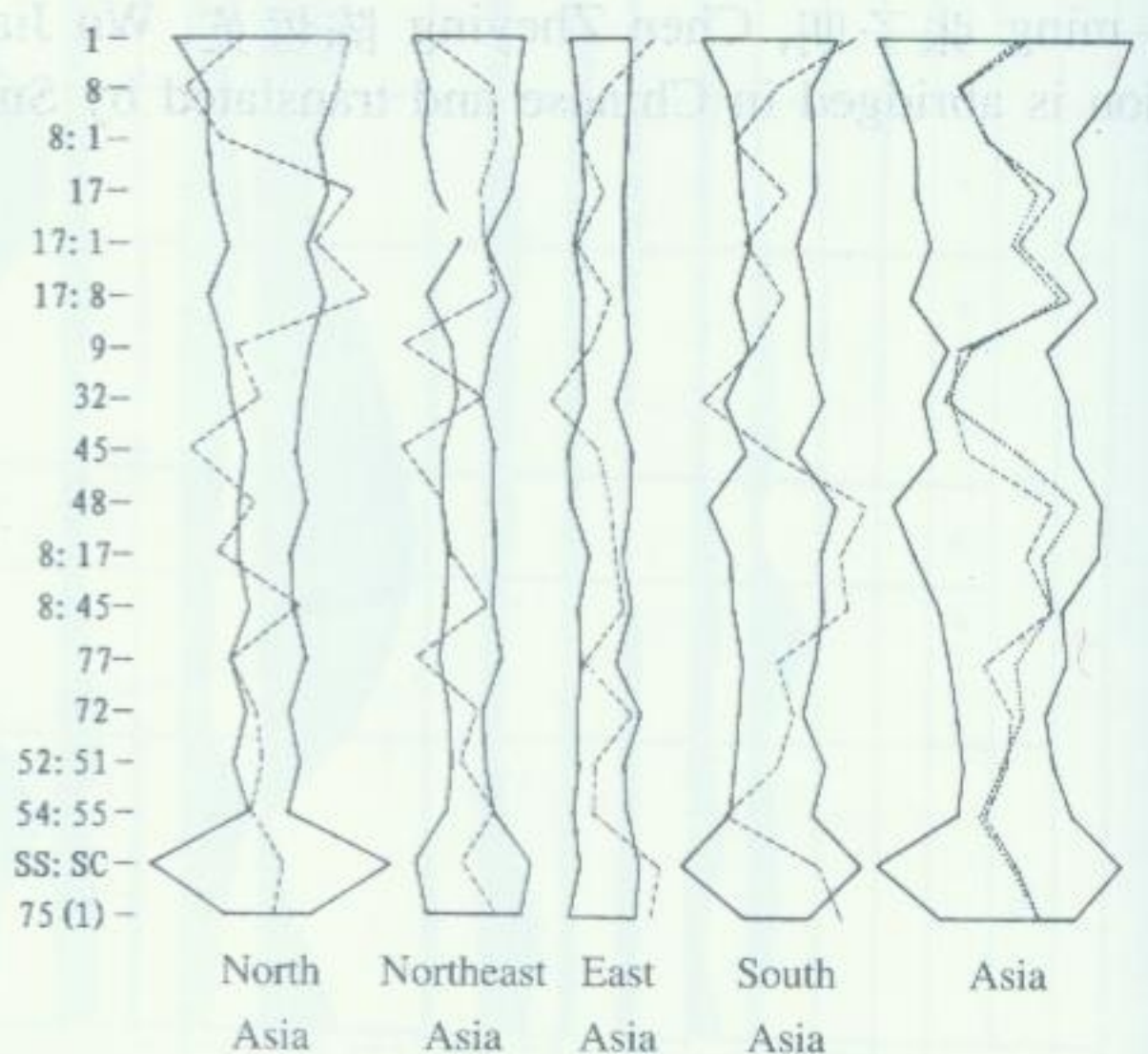


Figure 1. Comparison of Ahatla Hill and modern Mongoloid regional types

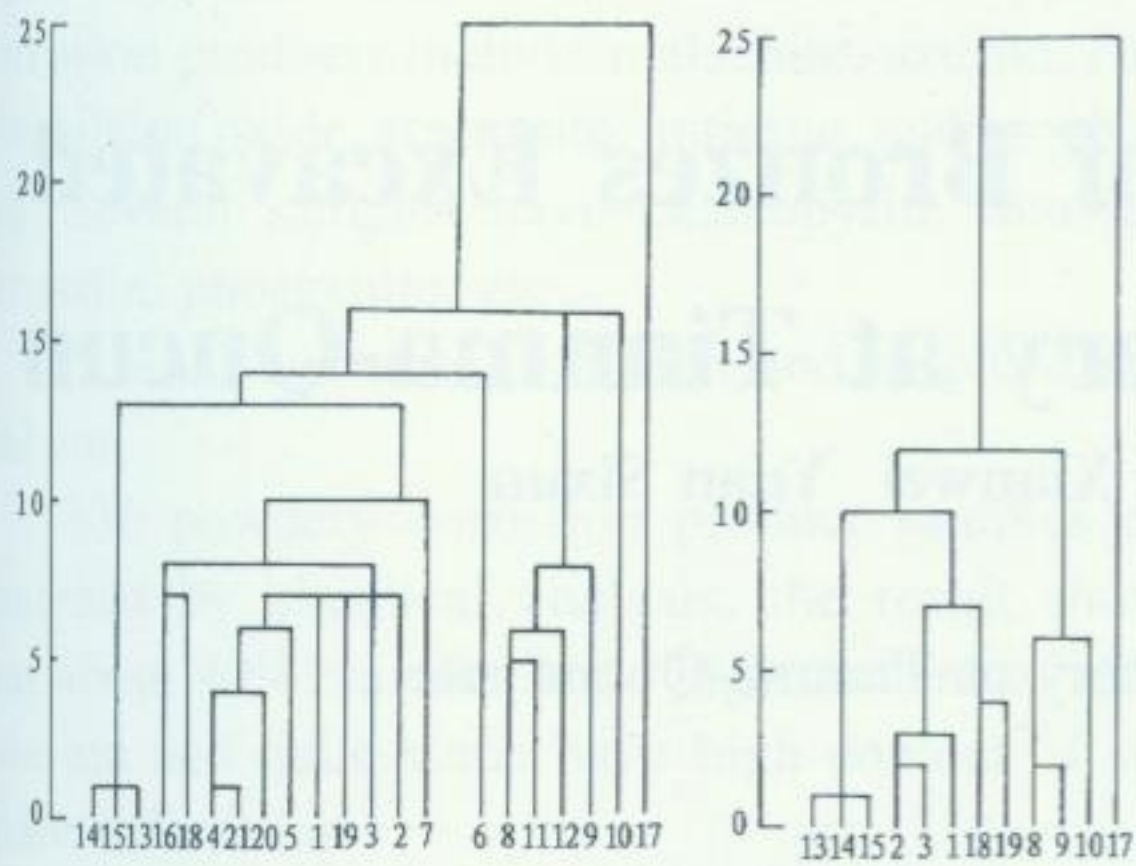


Figure 2. Cluster map of Ahatla Hill group and ancient and modern groups around neighboring area

- |                             |  |
|-----------------------------|--|
| 1 Modern North China group  | 12 Zhalainguoer group of Inner Mongolia                |
| 2 Modern Northeast group    |  |
| 3 Modern Korea group        | 13 Eskimos group                                       |
| 4 Huoshaogou group of Gansu | 14 Chukchi coastal group                               |
| 5 Bronze-stone age group    | 15 Chukchi reindeer group                              |
| 6 Yangshan group of Qinghai | 16 Hami M group  |
| 7 Liuwan group of Qinghai   | 17 Tibetan A group                                     |
| 8 Modern Mongolia group     | 18 Tibetan B group                                     |
| 9 Buriats group             | 19 Lijiashan group of Qinghai                          |
| 10 Ewenks group             | 20 Ahatla Hill group                                   |
| 11 Pengbao group            | 21 Middle and small cemetery-group of Yin Ruin, Anyang |

As compared with Lijiashan group, Ahatla Hill group is stronger in Hypsicrany, facial shape is longer and narrower and zygomatic bones are distinctly small and weak. These differences indicated that the Mongoloid character of Ahatla Hill group is weaker than that of Lijiashan group. The former is closer to Mongoloid group with Hypsicrany and Lept-meseny of East Asia. So although Ahatla Hill group and Lijiashan group all belong to the same culture, the former is less close to Tibetan B than the latter. By contrast, it is showed that Ahatla Hill group is closer to ancient and modern North Chinese group.

#### IV. Race, Nationality Attribution and Relationship with Archaeological Culture

It is commonly believed that the Kayao cul-

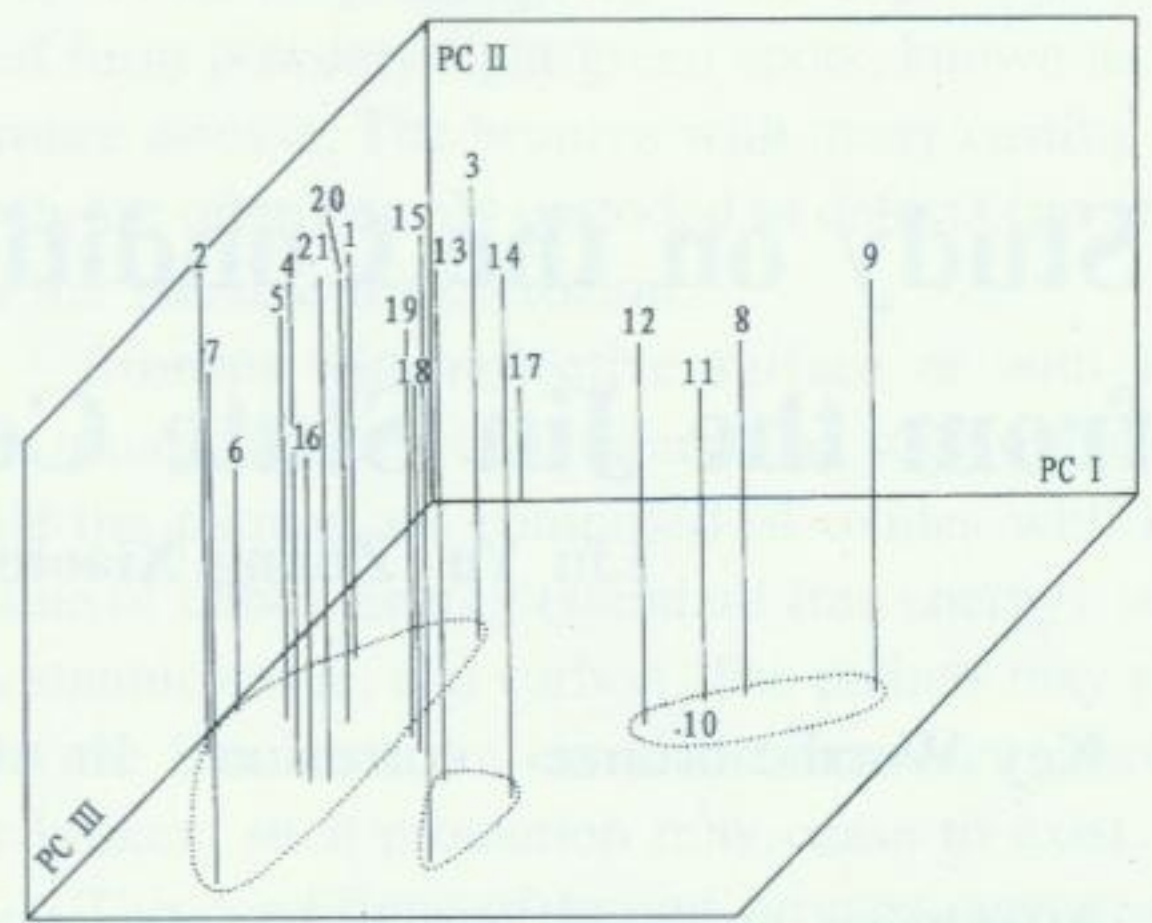


Figure 3. Three dimensional coordinate map of principal component analysis between Ahatla Hill and other groups (group number is same with Figure 2)

ture in Northwest region was created by Qiang 羌 people. The Kayao culture inhabitants include two regional groups: one represented by Ahatla Hill distributes along the bank of Yellow River 黄河. Another represented by Shangsunjiazhai 上孙家寨 in the Huangshui River 湟水 valley. As mentioned above, there is some morphological distance between Ahatla Hill and Lijiashan groups in human bones. Therefore, it seems that there is corresponding relationship between some morphological differences existed in human bones and archaeological cultures of different regions. Perhaps this suggested that the cultural remains and inhabitants represented by Ahatla Hill cemetery had closer relationship with the racial groups to their eastern region. But the group represented by Lijiashan probably had more influence in modern Tibetan culture and nationality. Some scholars thought that Ahatla Hill group made a great impact to Shangsunjiazhai group. It is expressed in dramatic increase of painted pottery and sudden change of grave direction in the latter. It is worth paying attention to whether such cultural changes emerged with genetic exchanges of human groups.

Note: The original paper was published in *Acta Archaeologica Sinica* 《考古学报》 2000.3: 395-420, with 3 figures, 1 page of plates, 2 tables, 1 appendix of table, signed by Han Kangxin 韩康信. The English version is abridged in Chinese and translated by Han Kangxin, revised by Gao Xing 高星.