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Thesis Title: Isotopic analysis of dietary patterns in northern China from the Proto-Shang Period to the Qin Dynasty

Propositions Thesis

1. The $\delta^{13}C$ values of human and animal bone collagen can be used to identify the consumption and spread of millet in Chinese archaeological populations.

2. Chinese historical texts (e.g. Liji: Book of Rites, The Works of Mencius, Guoyu: History of Zhou Dynasty States) mention dietary differences related to status and gender, but these statements have not been thoroughly validated with archaeological science techniques.

3. Stable isotope ratios of sulfur ($\delta^{34}S$) can detect human mobility patterns, but in order for this technique to be effective a large baseline of plant, fish and animals remains are needed for comparison.

4. While Western crops such as wheat and barley were introduced to China during the terminal Neolithic, many North Chinese populations did not quickly adopt these cultigens and continued to mainly consume millet until the Han Dynasty.

Propositions Discipline

5. Isotopic studies should always be combined with other archaeological evidence (e.g. archaeobotanical, zooarchaeology, historical sources, physical anthropology, etc.) to better understand human dietary patterns in the archaeological record.

6. Isotopic studies of bone collagen should be combined with tooth dentine serial sections from the same individual (where possible) to create individual dietary life histories.

7. Isotopic analysis of crops such as millet, wheat, barley and rice would complement the isotopic analysis of human and bone collagen.

8. A greater number of archaeological excavations should preserve smaller faunal and fish species for future research rather than mainly focus attention on the larger species.

Propositions My Selection:
9. Classes and topics of study related to Chinese archaeology should be offered at more Western Universities.

10. More review papers and textbooks related to archaeology and archaeological science need to be translated into Chinese so that students in China can keep up with the latest advances and findings in these fields.