INTRODUCTION

CREMATION AND SECONDARY DEPOSITION:

Cremation does not solely consist of the act of burning. In fact, funerary rites can start prior to death and continue for generations after an individual passed away (e.g., Paja, 2014). Secondary deposition, the placement or processing of human remains post-cremation, has immense potential for cross-cultural variation. Even though burial is often considered the customary mode of disposal, a wide array of practices can be used in systematic post-burial practices and rituals. For example, a practice seen in the archaeological record of various European populations is that of systematic anatomical body part disposal (Gimbutas, 1965; Parkowska, 2016; Golikop and Grams, 2004; Andre et al., 2013; Bajcsy et al., 2016, 2020). This practice represents material and cultural contexts in the past and is prevalent in various societies around the world, including in the funerary traditions of the present day. The systematic post-mortem disarticulation and repositioning of body parts could indicate an attempt to readjust the body to the cultural norms of the deceased, as seen in the case of the Cremation Urns from Southeast Hungary (eHRAF World Cultures database).

SITE INFORMATION AND CONTEXT:

Central Europe during the Bronze Age exemplifies an increase in social complexity, consequently followed by social stratification (Ehre et al., 2015; Gimbutas, 1965). The Bronze Age Körös Off-Tell Archaeology (BAKOTA) Project studies the site of Békés 103 in the Körös region of Hungary, which is the location of a cemetery where over 90% of burials are urn cremations (Paja et al., 2016). As of 2016, the BAKOTA Project has excavated 58 human burials in which the remains are located within ceramic urns (Paja, 2016). In a survey of the site, it was noted that almost every burial was accompanied by a ceramic urn, which has been interpreted as the practice of depositing human remains in urns (Gimbutas, 1964). These deposits were created to honor the deceased and to facilitate their transition to the afterlife, as evidenced by the remains found in ceramic vessels and the context in which they were placed (Paja, 2016).

RESULTS

BAKOTA BURIALS:

Only four burials (n = 25) showed statistically significant results (TABLE 1, FIGURE 2). The four significant results all indicated a positive correlation (TABLE 1, FIGURE 2). The non-significant results consisted of both positive and negative correlations, with seventeen positive correlations and four negative correlations (TABLE 1).

eHRAF CROSS-CULTURAL STUDY:

Evidence demonstrates that systematic practices regarding secondary deposition in numerous cultures and traditions are seen in the ethnographic accounts in the eHRAF World Cultures database. While systematic anatomical arrangement may not be practiced consistently, there are still systematic rituals in secondary deposition. Some Mongolian and Tibetan groups combine cremains with clay and water, sculpting the resulting mixture into small clay figures (Duran, 2016). In the Songhai region, people practice secondary deposition by placing the corpse within a vessel and then burning it (Berrah, 1999). These practices have been influenced by cultural norms, traditions, and beliefs.

SITE INFORMATION AND CONTEXT:

Central Europe during the Bronze Age exemplifies an increase in social complexity, consequently followed by social stratification (Ehre et al., 2015; Gimbutas, 1965). The Bronze Age Körös Off-Tell Archaeology (BOKOTA) Project studies the site of Békés 103 in the Körös region of Hungary, which is the location of a cemetery where over 90% of burials are urn cremations (Paja et al., 2016). As of 2016, the BOKOTA Project has excavated 58 human burials in which the remains are located within ceramic urns (Paja, 2016). In a survey of the site, it was noted that almost every burial was accompanied by a ceramic urn, which has been interpreted as the practice of depositing human remains in urns (Gimbutas, 1964). These deposits were created to honor the deceased and to facilitate their transition to the afterlife, as evidenced by the remains found in ceramic vessels and the context in which they were placed (Paja, 2016).

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FIGURE 1. Expected Results. If there was evidence for systematic anatomical arrangement, there would be an inverse relationship between cranial and postcranial weight.

BOKOTA BURIALS:

Of the 25 burial elements that were placed at the top of the urn and the postcranial elements were concentrated at the top of the urn, then there would have been a negative correlation where the levels are in numerical sequence (FIGURE 1). If the cranial elements were placed at the top of the urn and the postcranial elements were concentrated at the top of the urn, there then would have been a positive correlation with the levels in reverse numerical sequence (FIGURE 1). While there were burials with negative correlations, none were statistically significant (TABLE 1). HB 21 was the best example of a negative correlation with cranial elements concentrated at the top of the urn, but this was not a significant result. This result was the closest to representing our hypothesis. The significant correlations between cranial and postcranial weight across macroscopic levels were all positive correlations (TABLE 1).

This demonstrates that cranial skeletal weight increased, both cranial and postcranial weight increased. A positive correlation provides evidence for non-systematic anatomical arrangement in secondary deposition (FIGURE 1).

eHRAF CROSS-CULTURAL STUDY:

Bioarchaeological evidence for systematic anatomical arrangement in secondary deposition exists, but is mostly noted in recent studies focusing on European regis and populations (Gimbutas, 1965; Parkowska, 2016; Golikop and Grams, 2004; Andre et al., 2013). The site of Békés 103 demonstrates that cranial and postcranial weight did not increase in a systematic manner across macroscopic levels. Instead, there was a significant positive correlation between cranial and postcranial weight (TABLE 1).

Evidence demonstrating systematic practices regarding secondary deposition in numerous cultures and traditions are seen in the ethnographic accounts in the eHRAF World Cultures database. While systematic anatomical arrangement may not be practiced consistently, there are still systematic rituals in secondary deposition. These rituals reflect societal values and behaviors such as social class, kinship, and religion, among others. In the context of funerary tradition, there are different beliefs and practices that reflect factors such as social class and inequality, which has the potential to be reflected in the Békés 103 culture.

DISTRIBUTION OF CRANIAL AND POSTCRANIAL ELEMENTS IN BRONZE AGE CREMATION URNS FROM SOUTHEAST HUNGARY

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ABSTRACT

In this study, we investigated the correlation between cranial and postcranial weight throughout the funerary urn’s microanatomical levels in order to characterize skeletal distribution. It was hypothesized that a significant, negative correlation between cranial and postcranial weight would indicate systematic anatomical arrangement within the urn (FIGURE 1). In order to further understand a variety of secondary deposition rituals, as well as couple the practices at Békés 103, an examination of the Human Relations Area Files (eHRAF) Archaeology and World Cultures databases was performed.

MATERIALS AND METHODS

SAMPLE INFORMATION:

A total of 25 burials were weighed, each containing at least three levels of bone and one adult individual. Four burials included a second, younger individual (HB 27, HB 54, HB 62, and HB 66). Following microexcavation, diagnostic elements as well as cranial and postcranial fragments greater than 5 cm were separated from the assemblage. Using a sampling technique derived from Bontonier & Nawrocki (2000), 20% of the remaining unidentified fragments were randomly collected. Skeletal elements were weighed using an Ohaus Precision Balance (n = 129 grams). Then, a sum cranial weight and sum postcranial weight were created for each level.

Human remains weighed:

• Diagnostic elements
• Postcranial fragments < 5 cm
• Cranial and postcranial fragments from the random 20% sample

STATISTICAL TESTS:

Pearson correlation and regression analysis were performed for each burial using the bonedig program for the Social Sciences (SPSS).

eHRAF DATABASES:

The electronic Human Relations Area Files (eHRAF) databases are a compilation of various archaeological and ethnographic documents. These documents (books, articles, and ethnographic narratives) are categorized by culture and tradition, with phases within the documents coded by subject matter. In this study, we searched for the keywords “cremation,” “cremations,” “crema,” and “cremains” in the context of archaeology. Here, we present four of these results, as they best exemplified the importance of studying secondary deposition in a cultural context.

DISCUSSION

Cross-culturally we find that a variety of practices involving remains after cremation occur and can reflect the values and behaviors of a group (social class). Our results show that none of the 25 urn cremation burials from Békés 103 analyzed in this study demonstrate an inverse relationship between cranial and postcranial weight. This indicates that the remains found within the urns were not systematically arranged. However, this does not necessarily indicate that less effort or care was taken in burning the cremains. For example, there is no evidence of ash. The lack of ash suggests that each fragment was carefully packed into the pyre and placed in the urn, therefore still demonstrating potential for systematic rituals in secondary deposition. As seen in ethnographic accounts, it is also possible that cranial and postcranial remains were intentionally mixed together before being placed in the urns. Overall, this study provides an innovative technique for quantifying anatomical arrangement in secondary deposition and demonstrates the potential for studying secondary deposition in bioarchaeology.

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REFERENCES

A full list of references is available upon request.