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Violence and Postmortem Signaling in Early Farming Communities of the Sonoran Desert: An Expanded Taphonomic Approach

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Violence and Postmortem Signaling in Early Farming Communities of the Sonoran Desert: An Expanded Taphonomic Approach

Abstract
Bioarchaeological analyses of violence largely fail to consider the bio-cultural complexity that result from hostility. Here, we utilize an expanded definition of burial taphonomy to test if individuals exhibiting evidence for violence differed in other identifiable ways in early farming communities from the Sonoran Desert, circa 2,000-4,000 ybp. A variable matrix is constructed to conduct a more inclusive analysis considering demographic variables, decomposition, taphonomy, health status, and mortuary treatment. We postulate that although numerous community members experienced violence during a time of known subsistence intensification, specific individuals were selected for differential treatment as a form of postmortem signaling.

Keywords
Bioarchaeology, Burial Taphonomy, Trauma, Violence

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Violence and Postmortem Signaling in Early Farming Communities of the Sonoran Desert: An Expanded Taphonomic Approach

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ABSTRACT

Bioarchaeological analyses of violence largely fail to consider the bio-cultural complexity that result from history. Here, we utilize an expanded definition of burial taphonomy to test if individuals exhibiting evidence for violence differed in other identifiable ways in early farming communities in the Sonoran Desert, circa 2,000-4,000 ybp. A variable matrix is conducted to conduct a more inclusive analysis considering demographic variables, decomposition, taphonomy, health status, and mortuary treatment. We postulate that although numerous community members experienced violence during a time of known substance intensification, specific individuals were selected for different treatment as a form of postmortem signaling.

VIOLANCE

Numerous studies have documented violence, warfare (LeBlanc 1999, Lekson 2002, Rice and LeBlanc 2001), and perhaps even cannibalism (Turner and Turner 1999) throughout the pre-colonial Desert West. Traumatic injuries are common among individuals in the sample from the Early Agricultural period (1800 B.C.-A.D. 200) site of La Playa, Sonora, Mexico (SON F103). The site is a large, early, and most comprehensive skeletal sample in the region and provide the ideal instrument to test the assumptions about the consequences of the adoption of agriculture in the region.

AN EXPANDED TAPHONOMY

Little attention has been paid to formally documenting the impact of taphonomy on human burials. One exception to this oversight is the work of Henrit Duday (2009), whose approach focuses on recording position and relationships of individual skeletal elements to reconstruct burial taphonomy, and how decomposition of soft tissue can help reconstitute body placement and grave construction by considering the affects of gravity, soil compaction, and weight, and the rate and course of decomposition in the burial feature. Decomposition creates space that soft tissues once occupied. So if decomposition is slow and largely matched by soil replacement then individual elements are more likely to remain in their original position (progressive filling). Fast decomposition and/or slow soil replacement is more likely to create active space or voids that skeletal elements can move by gravity or soil movement (delayed filling). The analysis presented here considers variables that reflect decomposition processes.

METHODS

Four sets of variables were recorded on a sample of 100 mortuary features from La Playa, demographic, mortuary, biological, and taphonomic. The data were compared using cross-tabulation tables and chi-square test for significance. Violence was the independent variable. Significance was set at the .05 level and all tests were run using PSW 18.0.

RESULTS

Two forms of evidence for violence were recorded in the La Playa sample: trauma and body disposal (Table 1). Skeletal lesions indicative of trauma included both healed and peri-mortem cranial and long bone fractures, a healed and severed forearm, and embedded projectile points (Fig. 3). Body ‘disposal’ are recognized as having most joints articulated, lacking paired limb placement, lacking body treatment such as the application of red ochre, and three had projectile points embedded in various elements (cranium and back). Results of the analyses demonstrate a significant difference in articulations and limb placement between individuals exhibiting evidence of violence versus those lacking such evidence ($\chi^2 = 4.038, df = 1, p = .046$). The pattern is strongest among those few individuals that represent body disposals, who also lack mortuary treatment found among other individuals in the sample.

DISCUSSION

• Approximately 20% of the individuals from the La Playa skeletal sample exhibit evidence for violence.

• The results indicate that many victims of violence experienced uncommon differences in body placement that resulted in post-mortem disarticulation of the joints.

• The presence of body ‘disposal’ within the site are additionally indicative of violent acts in which participants were not afforded burial rites by their community but were instead deposited by their perpetrators of the violence.

• We propose that these events represent episodes of post-mortem signaling (Sords and Alcorta, 2003) by those enacting the violence at La Playa.

La Playa is an expansive archaeological site located in northern Sonora, Mexico (see figure above). The most intensive occupation is associated with the Early Agricultural period (1800 B.C.-A.D. 200) site of La Playa, Sonora, Mexico (SON F103) to evaluate potential evidence for violence and signaling among early farmers in the Sonoran Desert.

Evidence of Violence

Cranial Orientation (N, E, S, & W)
Placement (right or left)

Body Treatment

• Body Disposals (n = 5) X

Table 1. Evidence for Violence from La Playa

<table>
<thead>
<tr>
<th>Evidence for Violence from La Playa</th>
<th>M</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trauma</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cranial Fractures (n = 16)</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Perimortem Fractures (n = 6)</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Healed Fractures (n = 27)</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Healed Severed Forearm (n = 1)</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Embedded Point (n = 3)</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Demographic Variables:
- Sex
- Archaeological Phase
- Age

Biological Variables:
- Infection
- Trauma
- Dental Pathology
- BIO

Taphonomic Variables:
- Bis (Collar)
- Common Angle of the Clavicles
- Reception of the Vertebrae
- Axial Articulation (of all major bony connections)
- Posture (of all major joints: acrom, St, skull)

LA PLAYA (SON F103)

Figure 3. Body Disposals: lacking any formal burial treatment. Instead position and placement indicate intentional disrespect for decoration of the body.

LA PLAYA (SON F103)

Figure 4. body Orientation: lacking any formal burial treatment. Instead position and placement indicate intentional disrespect for decoration of the body.

LA PLAYA (SON F103)

Figure 5. Body Disposals: lacking any formal burial treatment. Instead position and placement indicate intentional disrespect for decoration of the body.

Figure 6. Body Disposals: lacking any formal burial treatment. Instead position and placement indicate intentional disrespect for decoration of the body.

Figure 7. Body Disposals: lacking any formal burial treatment. Instead position and placement indicate intentional disrespect for decoration of the body.

Figure 8. Body Disposals: lacking any formal burial treatment. Instead position and placement indicate intentional disrespect for decoration of the body.

Figure 9. Body Disposals: lacking any formal burial treatment. Instead position and placement indicate intentional disrespect for decoration of the body.

Figure 10. Body Disposals: lacking any formal burial treatment. Instead position and placement indicate intentional disrespect for decoration of the body.

Figure 11. Body Disposals: lacking any formal burial treatment. Instead position and placement indicate intentional disrespect for decoration of the body.