May 2012

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

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Recommended Citation
DOI: 10.7275/R5NP22CV
Available at: [https://scholarworks.umass.edu/lov/vol2/iss2/11](https://scholarworks.umass.edu/lov/vol2/iss2/11)
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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

This article is available in Landscapes of Violence: https://scholarworks.umass.edu/lov/vol2/iss2/11
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 biocultural complexity that results from how violence is defined. 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 of the Sonoran Desert, circa 2,000-4,000 ybp. A variable matrix was 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.

VIOLENCE

Numerous studies have documented violence, warfare (LeBlanc 1999, LeBlanc 2002, Rice and LeBlanc 2001), and perhaps even cannibalism (Tumey and Tumey 1999) throughout the pre-colonial Desert West. Traumatic injuries are common among skeletal samples from early farming communities of the Sonoran Desert (Fig. 1) and have the potential to document some of the earliest evidence for interpersonal violence in the region. However, the relationship of contextual information and an expanded approach to burial taphonomy has allowed us to document a number of instances of violence that do not include skeletal lesions. Instead we believe that these instances may represent “signaling” by the perpetrators using the victim’s body. Here we examine a suite of taphonomic variables within a skeletal sample of 100 individuals from the Early Agricultural period (1600 B.C.-A.D. 200) site of La Playa, Sonora, Mexico (SON F:10:3) to evaluate potential evidence for violence and signaling among early farmers in the Sonoran Desert.

LA PLAYA [SON F:10:3]

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 (1600-1000 B.C.-A.D. 200) site of La Playa, Sonora, Mexico (SON F:10:3) at 22°48’ N 111°19’ W with a surface area of 30,000 square meters. The La Playa burials represent the largest, earliest, 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.

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 PASW 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 include both healed and peri-mortem cranial and long bone fractures, a healed and severed forearm, and embedded projectile points (Fig. 3). Body 'disposals' are recognized as having most joints unarticulated, 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 articulation and limb placement between individuals exhibiting evidence of violence versus those lacking such evidence (x² = 4.038, df = 1, p = .04). 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 'disposals' 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 the perpetrators of the violence.

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

ACKNOWLEDGEMENTS: We are extremely grateful to the Instituto Nacional de Antropología e Historia (INAH Sonora), the Consejo Arqueológico Mexicano, Elisa Villalpando, and John Carpenter for permission, support and cooperation throughout.

REFERENCES


Figure 1. Examples of skeletal lesions from La Playa that represent violence.

Figure 2. Location of La Playa (left) and the distribution of burials within the site (right).

Figure 3. Body Disposal: lack of any formal burial treatment. Instead position and placement both lack final disposition of the body.

Table 1. Evidence for Violence from La Playa

<table>
<thead>
<tr>
<th>Trauma</th>
<th>M</th>
<th>F</th>
</tr>
</thead>
<tbody>
<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>
<tr>
<td>Body Treatment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body Disposals (n = 5)</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Figure 4. Flowchart for the excavation and analyses of La Playa.

Figure 5. Two forms of evidence for violence: trauma and body disposal (Table 1).