

# A BIOARCHAEOLOGY OF CAPTIVITY, SLAVERY, BONDAGE, AND TORTURE

Debra Martin and Anna Osterholtz

*Debra Martin is Professor of Bioarchaeology and Anna Osterholtz is a PhD Candidate and Osteological Collections Manager in the Department of Anthropology, University of Nevada, Las Vegas.*

**A**lthough we started our careers at very different times (Debra received her Ph.D. in 1983, Anna will likely complete hers in 2013), we have converged on a topic that has captured our imaginations as well as kept us up at night with images of people in pain and circumstances of untold horror. Our current research delves into the origins and evolution of culturally sanctioned violence used to subdue, capture, enslave, or torture humans.

As anthropologists, we use bioarchaeology as a means to *explain human behavior*. In this case, we want to understand the biological impacts of prolonged periods of abuse at the hands of others or what it means to be literally worked to the bone as a slave, captive, or indentured servant. We work with theories about the ways that nonlethal and lethal violence are used to subdue and exploit humans. Captivity, slavery, and torture are very old and ancient practices, going back as far as there are written records. Bioarchaeology can make important contributions to explaining how violence is used to create and reinforce particular kinds of social orders.

Bioarchaeology is the analysis of human remains in a richly detailed and nuanced context that integrates biological, cultural, and environmental data from a number of sources. Joanna Sofaer captures the essence of this kind of integrated research when she says “we cannot take an empiricist view and assume that osteological data speak for themselves . . . as the body is simultaneously biological, representational and material” (2006:11). Bioarchaeology is informed by the use of frameworks, models, and theories that aid in thinking through the different ways that bodies can reveal the effects of past behaviors. The work we do in studying violence is a form of archaeological witnessing of horrific past events that helps us sharpen our understanding of what motivates and drives the systems of power that use violence (see Scheper-Hughes and Bourgois 2004). Shining a light on these complex behaviors can reveal how violence is embedded in social structures.

How can bioarchaeologists differentiate violence on the body that is related to captivity, bondage, or slavery from other possible causes? One example is a series of studies we conducted on a group of women who lived among an Ancestral Pueblo community around 1,000 years ago (Martin et al. 2008). Integrating skeletal analysis, mortuary context, archaeological reconstruction, and neuropathology, we were able to use multiple lines of evidence that all pointed to captivity and enslavement. A subgroup of women showed injury recidivism, that is, repeated trauma and injury over the course of a lifetime (see Judd 2002 for one of the first studies linking injury recidivism to violence in ancient societies). Indicators included healed cranial depression fractures likely due to blunt force trauma obtained during raiding and abduction of females. These women also had a variety of healed fractures on the lower body, as well as localized trauma to the joints (e.g., dislocated hip joint). These may be the result of punishment or harsh treatment. These women also had indicators of poor health (infections, nutritional problems). Months or years of hard labor resulted in pronounced muscle markers, traumatic osteoarthritis, and trauma-induced pathologies in these women. They were recovered from burial contexts different from individuals who did not have bodies wracked with trauma and pathology. In this case, the women seem to have been placed without any intentionality or grave offerings and in abandoned pit structures.

Philip Walker (1989) found patterns of healed cranial depression fractures on men and women from a southern California group also from about 1,000 years ago. However, there was not a pattern of injury recidivism or differential burial context, and this led him to suggest that the head wounds were related to ritualized violence during periods of environmental stress. In this study, Walker was the first bioarchaeologist to show that blows to head severe enough to leave cranial depression fractures could have caused some brain injury. He made the initial connection between healed head wounds and long-term behavioral changes in the form of



Figure 1: Debra Martin working in her bioarch lab with undergraduate student, Kristin Halsey.

migraine headaches, dizziness, impaired judgment, and other side effects of traumatic brain injury.

We extended Walker's observations by working with a neuropathologist (Bradley Crenshaw) who examined the crania of the Ancestral Pueblo females with head wounds. We learned that brain injury results when external forces are applied to the outside of the skull and are transmitted to the brain. The damage occurs in two places: at the coup (where the blunt force is applied) and the contra-coup (where the brain slams into the opposite side of the skull from the force of hit). A multitude of side effects are possible, depending on which parts of the brain are most damaged. As an example, one female (age 30 at the time of death) had survived a crushing blow that affected a large area at the top of her head. Dr. Crenshaw analyzed the extent of her injuries and felt certain that she would have had life-long behavioral challenges. Given the size, location, and status of her injury, she may have had problems not only with migraines and dizziness, but also with motor control, balance, and general coordination. In addition to healed head wounds, this woman also had a dislocated hip that could have been from poor balance and problems with motor coordination, both of which are long-term side effects of traumatic brain injury.

Bioarchaeology of the Atlantic slave trade in the Americas was pioneered by Michael Blakey (1998) with his oversight of the African Burial Ground Project. He and his students documented the ways that the skeleton reveals the accumulative effects of subjugation and hard labor. Their findings show how pronounced musculoskeletal markers and traumatic pathologies leave signs that suggest excessive, grueling, and long hours of physical labor. The bones tell a story of individuals being worked beyond their physical capabilities.



Figure 2: Anna Osterholtz in the Sheilagh Brooks Osteology Research Lab at UNLV.

Dealing with the bioarchaeology of torture and executions has also revealed that there are key patterns revealed on the skeleton. The assemblage at Sacred Ridge, Colorado, for example, is made up of the remains of at least 33 people who were killed, dismembered, and placed in a pit structure around A.D. 800. Examination of the foot bones of these individuals shows a pattern of injury that is consistent with hobbling and torture, which would have been a tremendously performative aspect during the massacre. Individuals would have been forced to watch their kin being hobbled by blows and cuts to the sides of the feet and tortured by beating the soles and tops of the feet. Peeling of the bony tissue as well as cut marks, buckling of the bone, and other marks consistent with torture and hobbling are present on adult remains of both sexes. Hobbling would have made it impossible for the individual to physically move or flee; this has both physical and psychological effects. Hobbling is visible through the damage to the sides of the feet, caused by both blows and cutting of the ligaments that stabilize the foot for walking and running. Torture through beating the soles of the feet has a long and diverse history worldwide. Torture cements the social control of a captive by literally giving the aggressor power to inflict pain (or to stop the infliction of pain). These types of injury have absolutely no utility after death, and so must have been perpetrated prior to death.

### How Can These Data from the Bodies of Former Captives and Slaves Aid In Understanding Modern Day Slavery?

The current relevance of these types of behaviors cannot be overstated. Media images and descriptions provide daily references to the global trafficking of humans in an under-

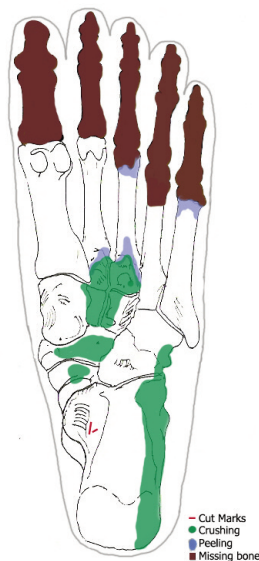


Figure 3: Diagram showing torture and disarticulation of the foot bones. The blue area represents places of bone crushing, green represents bone peeling, and brown is missing digits. Slash marks on the tops of the bones represent perimortem cut marks.

ground slavery movement that affects at least 27 million people worldwide. We also know that in war-torn regions and places defined by sectarian violence, people are kept captive and are at times tortured or ceremonially executed as a way of sending particular kinds of messages to the witnesses.

Using theories about the ways that violence permeates a social system, direct violence is the physical bodily harm done to individuals, and the bones of these people can reveal at least some of that. As important as this is to document, even more so is structural violence that includes laws, social programs, and political economic systems that utilize the by-products of violence: subordination and fear in the maintenance of inequality. It is culturally sanctioned violence that makes direct and structural violence look and feel normal.

Bioarchaeology is uniquely suited to provide data on direct, structural, and cultural violence because it has the potential to integrate evidence from many different levels of analysis. From the bones of those that suffered, to the manner that they were interred, to the larger community that they lived in, and finally to the regional context in which the political and economic events played out.

Still, there are many challenges in reconstructing captivity, slavery, bondage, and torture. Pain is notoriously difficult to

document and even more difficult to objectively score, since each individual will feel pain at differing intensities. Equally difficult for us as bioarchaeologists, and even more important for us when examining concepts such as torture in a performative light, is the impact that another person's pain has on a witness. In some ways, being forced to watch someone you care for in pain may be as powerful as being subjected to such pain yourself. Not only is someone you care for in distress, but you have no power to mitigate the situation. Pain is inherently relatable, so the examination of pain is a way to humanize work such as that seen at Sacred Ridge, where the scale of the massacre has a tendency to overwhelm individual observations. Through our collective studies of these kinds of violence, we can get an idea of what that individual felt and imagine ourselves and our families in a similar situation.

Bioarchaeology has only begun to scratch the surface of understanding the biological effects and social contexts of captivity, slavery, bondage and torture. These data from the bioarchaeological record show patterns in trauma and injury that provide important insights into the ways that violence is used to inflict pain and suffering in the service of larger political, social, and ideological agendas.

## References Cited

- Blakey, Michael L.  
 1998 The New York African Burial Ground Project: An Examination of Enslaved Lives, a Construction of Ancestral Ties. *Transforming Anthropology* 7:53–58.
- Judd, Margaret A.  
 2002 Ancient Injury Recidivism: An Example from the Kerma Period of Ancient Nubia. *International Journal of Osteoarchaeology* 12:89–106.
- Martin, Debra L., Nancy Akins, Bradley Crenshaw, and Pamela K. Stone  
 2008 Inscribed in the Body, Written on the Bones: The Consequences of Social Violence at La Plata. In *Social Violence in the Prehispanic American Southwest*, edited by Deborah L. Nichols and Patricia L. Crown, pp. 98–122. University of Arizona Press, Tucson.
- Scheper-Hughes, Nancy, and Phillipe Bourgois (editors)  
 2004 *Violence in War and Peace, An Anthology*. Blackwell Publishing, Malden.
- Sofaer, Joanna R.  
 2006 *The Body as Material Culture: A Theoretical Osteoarchaeology*. Cambridge University Press, Cambridge.
- Walker, Philip L.  
 1989 Cranial Injuries as Evidence of Violence in Prehistoric Southern California. *American Journal of Physical Anthropology* 80:313–323.