Breathing New Life into the Evidence of Death

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Introduction

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This volume represents a collection of studies diverse in theoretical orientation and geographic focus yet united in emphasizing a fundamental principle of bioarchaeology: the contextual interpretation of human remains. Understanding the culture and society of interest is indispensable when considering human remains and mortuary contexts; conversely, the analysis of human remains is crucial to a holistic understanding of past societies. A contextualized bioarchaeology is far from a unified approach, however, and in fact encompasses myriad strategies for the study of mortuary remains from archaeological sites. It incorporates, even encourages, a variety of theoretical perspectives with recourse to a broad spectrum of archaeological, physical anthropological, and ethnographic methodologies. It is an effort to "breathe new life" into the evidence of death, human remains, and associated finds from archaeological sites, to "resurrect" ancient societies—their social worlds and personae—and to give them a more complete present reality and relevance.

The aims of bioarchaeology emerge from those of archaeological research as a whole, which are marked by two disparate trends. The first is a movement toward increasingly specialized research methods, utilizing

the latest scientific techniques to recover and analyze archaeological materials, both organic (for example, faunal, botanical, and human remains) and inorganic (ceramic, metal). The second trend is a heightened effort at holistic interpretations that combine different types of specialized information into a coherent narrative about the past (see Huffman 2004; Skibo, Graves, and Stark 2007). This endeavor involves interpreting material findings using contemporary theoretical approaches, with careful attention both to cultural and historical contexts and to the realities of the current production of archaeological knowledge (Johnson 1999). Although most archaeological projects attempt to follow both prevailing trends, the task of reconciling the goals and results of each poses problems, great and small, for even the most carefully planned research. The difficulties in connecting specialized information to larger theoretical paradigms are significant and sometimes navigated by a two-tier system of reporting. Specialized data appear in the so-called "gray literature," with limited circulation or in academic venues limited to small groups of specialist readers. More general interpretations have a wider impact, but these tend to overwhelm data with theoretical discourse. In light of the remarkable advances made in recovery strategies and increasingly sophisticated analyses of archaeological materials, it seems that more, not less, attention to specialized data is crucial to current archaeological interpretations. The need for integrating methodologically specialized with generalizing theory is perhaps nowhere more apparent than in the field of bioarchaeology, which now engages a variety of technically sophisticated analyses of human remains and yet also aspires to contribute to a theoretically sophisticated understanding of culture and society.

Mortuary studies have long been at the forefront of archaeological developments, both material and theoretical. Bioarchaeology is poised, perhaps as well as any archaeological endeavor, to lead a research effort that is both specialized and holistic. It is well positioned to reconcile the individual and the social collective. Individual human bodies remain the basic units of study, and yet, under the precepts of bioarchaeology, the body does not exist as an independent entity, since many of its physical features are the result of a complex interaction between biological and social biographies and can be interpreted only within a larger social context. Physical measurements have little relevance outside of a comparative perspective, and interpretation of even the most basic skeletal observations requires recourse to information about the relevant collective. Such contextualization is even more apparent when attempting to interpret social impositions on human remains, such as the treatment, dressing, and

placement of the corpse, as well as when situating the funerary process within a larger setting of community experience.

BIOARCHAEOLOGY AS CONTEXTUAL ARCHAEOLOGY: A HISTORICAL PERSPECTIVE

"A human burial contains more anthropological information per cubic meter of deposit than any other type of archaeological feature" (Peebles 1977:124). This epigram, posed during the height of the processual paradigm's influence upon funerary archaeology in the United States, argues compellingly for the richness of data sets from mortuary contexts—grave structure and tomb contents, including human remains. Even so, in ensuing years, as before, there has been a persistent tendency for scholars to study and report interment contexts separate from human remains, using different methodologies. If considering remains at all, archaeologists have focused primarily upon age-at-death and sex, with other skeletal data pertaining to health, diet, ancestry, and behavior commonly relegated to appendices of site reports rather than situated within interpretative models. Osteologists, by contrast, in the interest of population-based comparisons, tend to aggregate large data sets that are heavily biased by failure to carefully consider social, archaeological, and historical contexts. Compounding the situation in the United States since 1990 has been the Native American Graves Protection and Repatriation Act (NAGPRA), whereby efforts to "document" collections of human remains have had the unintended consequence of stimulating massive data collection initiatives wherein the subtleties of context are largely ignored.

Although Bruce Trigger (1989b:7) correctly asserts that a "remarkable antiquity can be demonstrated for some ideas that are commonly believed to be modern," the approach taken in this volume is noticeably different from that of prior bioarchaeologies, even though many explicitly emphasized context in the study of archaeologically recovered human remains (for example, Buikstra and Beck 2006). In this volume, the richness of contemporary social theory has enriched the initiative well beyond earlier examples, wherein bioarchaeology was indeed informed theoretically but with emphasis upon social evolutionary theory (Buikstra 1976). These authors do not merely pay lip service to contemporary theoretical perspectives, however, but illustrate their practical applications to a wide range of data sets. Together, they illustrate how mortuary evidence is particularly amenable to novel applications of social theory.

To fully explore the manner in which our current approach has

developed, the historical development for "the bioarchaeologies" must be considered, especially as they have evolved over time. The following sections focus on the United States and the United Kingdom, with emphasis upon the former, owing to the longer history of investigations that are considered bioarchaeological there, along with theoretical and methodological predecessors.

Early Precursors to Bioarchaeology

Although digging into prehistoric cemeteries "to see what was there" predates the eighteenth-century excavations by Thomas Jefferson of a burial mound on his Virginia property (Jefferson 1853), Jefferson's project is widely recognized as the first systematic American archaeological excavation, remarkable for its quality and problem-orientation (Willey and Sabloff 1993). Jefferson excavated systematically to discern whether the tumulus contained those who died in battle, reflected a single community cemetery, or represented a sequential ossuary. Combining demographic and contextual data, Jefferson concluded that the latter explanation was correct, although he had previously anticipated accepting the second, based upon oral traditions of local Indians.

Following Jefferson's late eighteenth-century avocational landmark study, three nineteenth-century medical doctors should be recognized as bioarchaeological pioneers: Samuel George Morton, Joseph Jones, and Washington Matthews. Both Jones and Matthews excavated cemetery sites, and Morton amassed a large collection of remains, primarily human skulls that he carefully measured, observed, and reported in his 1839 publication, *Crania Americana*. Although he associated crania from North American mounds (and hence their creators) with the monument builders from Mexico and Peru, contrasting them with skulls from non-mounded contexts, he persistently underscored the fundamental unity of the "American Race." The archaeologists Ephraim Squier and Edwin Davis (1848) attacked this conclusion on contextual grounds, and without firm locational data for the remains he studied, Morton (1852) reversed his argument in a posthumous publication. This debate underscores the importance of considering *both* context and contents in interpreting funerary contexts.

In excavating a variety of Tennessee grave contexts, Joseph Jones joined his medical training with archaeology. As had Morton (1841) before him, Jones (1876) emphasized that the so-called "pygmy" race recovered from archaeological contexts had been a mistaken interpretation of juvenile remains. Turning to obviously pathological skeletal material and following careful, detailed study, including the observation of cross-sectioned long

bones, Jones (1876) proposed a diagnosis of syphilis. In a later publication (Jones 1878), he argued for a syphilis that originated in the New World but could be transmitted both venereally *and* non-venereally, the latter conclusion being prescient indeed.

Washington Matthews, in his analysis of human remains from the site of Los Muertos near Tempe, Arizona, combined information from archaeology, ethnohistory, ethnology, and oral traditions (Buikstra 2006a; Matthews, Wortman, and Billings 1893; Merbs 2002). One of his collaborators was ethnologist-archaeologist Frank Hamilton Cushing, who had spent five years among the Zuni and now wished to address their history through archaeological discovery. In the final report, a number of Cushing's hypotheses were tested, including the possible association between those who lived and died at Los Muertos and ancient Peruvians. This link was confirmed by Matthews and colleagues through observations of the *os inca*, a developmental anomaly of the skull (Hauser and De Stefano 1989). Although more recent developments in human population genetics would cause Matthews and colleagues' conclusion to be questioned today, this example of combined human biological and archaeological hypothesis testing was exemplary for its time. Behavioral interpretations of platycnemia (tibial medio-lateral flattening) and septal apertures of the humerus were also creative and well grounded in anatomical knowledge.

By the end of the nineteenth century, medical doctors, anatomists, and other scientists were successfully melding archaeological and human biological data. Questions concerning biological relationships, health, disease, and behavior were being addressed. Social subjects also were considered, as when Cushing proposed that intact remains at Los Muertos were those of priests who were sufficiently powerful not to require the soul release ceremonies necessary for the cremated commoners (Matthews, Wortman, and Billings 1893). These reports did not overtly engage theory concerns, instead following the cultural evolutionary paradigm that was common in American archaeology at that time (Trigger 1989a).

Early Twentieth-Century Bioarchaeology

Both of the two major forces in early twentieth-century physical anthropology, Aleš Hrdlička and Earnest A. Hooton, excavated and interpreted human remains from archaeological sites. As Hrdlička amassed the vast skeletal collections that anchored the Smithsonian Institution's physical anthropology program, his goals included documenting the range of variation in the human skeleton, preserving ancient American skeletal remains, and resolving the controversy surrounding the antiquity of "Early

Man" in the New World (Stewart 1940). Hrdlička's most contextually sensitive fieldwork addressed the last question (Buikstra 2006a), whereas his fieldwork directed toward more recent materials, such as those recovered in Alaska, was much less tightly controlled (Buikstra 2006a; Harper and Laughlin 1982; Schultz 1945; Speaker 1994).

Earnest A. Hooton's problem-oriented approach, dedication to field research, collaborative propensity, and interpretative rigor were clearly evident from the days of his initial field expedition to the Canary Islands in 1915 (Hooton 1925). His subsequent collaboration with prominent Southwest archaeologist Alfred V. Kidder led to his landmark volume *The Indians of Pecos Pueblo* (Hooton 1930). Recognizing the power of bioarchaeological analyses, especially those focusing upon demography and heritage, Kidder became an advocate for physical anthropology. He also expressed interest in related attributes such as the impact of disease, length of life, and rates of infant mortality (Kidder 1924).

One of Hooton's students, J. Lawrence Angel, coined the first label for an explicitly linked archaeological-human osteological approach to the past. Working in the Mediterranean and initially focused upon testing Hooton's theory that biocultural success was associated with hybrid vigor, Angel quickly extended his research to explore pathology and other lines of skeletal evidence. His "social biology" was also firmly rooted in multiple contextual lines of evidence: archaeological, environmental, ecological, and historical (Angel 1946). He emphasized both the study of the individual and population-based perspectives on the past.

The Mid-Twentieth Century: Come the Revolutions?

With the advent of the "New Physical Anthropology" propounded by Sherwood Washburn (1951, 1953) during the middle of the twentieth century, the fate of those trained to study human remains from archaeological sites became less secure. Promoting a laboratory-based, hypothesis-testing physical anthropology, Washburn and others characterized the "Old Physical Anthropology" as primarily descriptive and unscientific. As this revolution was building, another was erupting in American archaeology (Binford 1962; Caldwell 1959; Taylor 1948), whose previous culture-historical perspective had been dominated by issues of chronology and frequently explained culture change in terms of migrations (Trigger 1989a). By contrast, Walter Taylor's conjunctive approach advocated complete site recovery and an emphasis upon defining site function, with the site in question usually being residential rather than mortuary. Lewis

Binford's "New Archaeology" focused upon developing theories of human behavior at the technomic, sociotechnic, and ideotechnic levels, although his focus was primarily upon the first two of the series (Binford 1962). One of the New Archaeology's initiatives briefly sparked a resurgence of interest in mortuary sites and their contents. Binford (1971) led the way by developing an ethnographic cross-cultural model linking grave elaboration to social complexity, using subsistence strategy as a proxy for social complexity. He argued that the complexity of mortuary rituals was a direct reflection of social complexity, a theory that attracted considerable scholarship then and in ensuing years (for example, Brown 1971a; Chapman, Kinnes, and Randsborg 1981; Randsborg 1974, 1981; Saxe 1970; Tainter 1975, 1977a, 1977b, 1980). However, this approach very rarely considered human remains beyond sex and age-at-death parameters.

The Bioarchaeologies

It was in this theoretical milieu that the late twentieth-century American "bioarchaeologies" were nurtured. The term *bioarchaeology* had first been proposed by the UK archaeologist Grahame Clark (1972) in the title of a site report, *Starr Carr: A Case Study in Bioarchaeology*. Clark's "bioarchaeology," however, focused upon faunal remains. The independently derived American "bioarchaeology" was proposed in 1976 at the annual meeting of the Southern Anthropological Society and published the next year (Blakely 1977; Buikstra 1977). Jane Buikstra (1977) defined a multidisciplinary, bioarchaeological research program that integrated human osteologists with other scholars in addressing a series of topics. These topics included (1) burial programs and social organization; (2) daily activities and division of labor; (3) paleodemography, including estimates of population size and density; (4) population movement and genetic relationships; and (5) diet and disease (Buikstra 2006b:xviii).

During ensuing years, the range of definitions for the term *bioarchaeology* expanded and diversified. For example, Clark Larsen (1981, 1987, 1997, 2002; Larsen, Ruff, and Kelly 1995; Larsen et al. 1992) adopted the term with a slightly different emphasis. Frequently focused upon prehistoric and historical contexts in the southeastern United States, his work emphasizes questions of quality of life, behavior and lifestyle, biological relatedness, and population history, with contextual and theoretical issues receiving less emphasis (Goldstein 2006). Buikstra's bioarchaeology has increasingly focused upon social theory across a broad range of situations, including archaeological, historical, and ethnohistorical contexts. For

example, Buikstra and Nystrom (2003), Buikstra, Nystrom, and Gullien (2003), and Rakita and Buikstra (2005a) explore the concept of liminality, and the power that arrested liminality may attain in mummified and cremated ancestors.

The Osteobiographies

Osteobiography is a term proposed by Harvard graduate Frank Saul in 1972. Developed from a forensic perspective that focuses upon the individual before moving to an aggregated population perspective, Frank and Julie Saul's osteobiographical approach resembles other contextually sensitive research programs for studying the past. Explicitly problem oriented, they recognize a broad range of possible analytical methods that may be used in individual and population reconstruction. Although the individual is emphasized upon occasion, especially when encountered in unusual archaeological contexts (for example, Saul and Saul 1989:291), ultimate goals center upon using data from the ancient Maya to answer questions ranging from health to the status of women. More recently, John Robb (2002:155) has developed an "osteobiographical" perspective that does not focus upon specific individuals and their life courses, but rather on "a cultural idea of what a human life should be. A first approximation of this is the succession of statuses an individual passes through during his or her lifetime." Robb's osteobiographical approach is similar to life course models discussed further below.

Turning to the United Kingdom: Revolution Rebuffed, Revolution Reformed

Developed in the United Kingdom, with especially vocal advocates at Cambridge University, the post-processual critique of the 1980s took issue with many aspects of processual archaeology. Important for the purposes of this overview is the critique leveled by Ian Hodder (1982b), Mike Parker Pearson (1982), and others against the processual approach to defining the social dimensions of mortuary behavior. The critique is largely leveled at Binford, challenging his use of subsistence strategies as surrogates for social complexity in his cross-cultural survey, which anchors inferences about the manner in which we might identify social complexity in the past.

A more widely cited criticism, however, was Hodder's (1982a) argument against any direct relationship between the complexities of grave structure and social organization. Burial ritual may be used as part of an ideology that faithfully represents and mirrors aspects of a living society, but it is equally possible that the ideology may be concerned with distorting, obscuring,

hiding, or inverting particular forms of social relationships. Interestingly, Hodder goes on to emphasize a richly contextual approach, explaining that the patterning of material remains in graves must be understood as specific to a burial and ritual context whereas the relationship between patterns in life and patterns in death must be seen as specific to a wider cultural context (Hodder 1982a:152). However, in this formulation, the corpse itself is all but invisible, and the important connections between context and deceased are left unexplored. The influence of Hodder's approach to mortuary archaeology and his failure to fully integrate data from the mortal remains of ancient people have doubtless served as forces constraining the development of bioarchaeology, especially in the United Kingdom.

As Alexis Boutin (2008:32) emphasizes, "old habits die hard." In Hodder's more recent research at Çatalhöyük in Turkey, the mortuary component has been extensively excavated, but the human remains—extensively and exquisitely analyzed—are published as separate chapters in site reports (Andrews, Molleson, and Boz 2005; Hamilton 2005; Hodder 2005; Molleson and Andrews 1996; Molleson, Andrews, and Boz 2005; Richards et al. 2003). Once more, the opportunity for a truly integrated bioarchaeology has yet to be realized in Hodder's archaeological investigations.

The Development of Osteoarchaeology as Bioarchaeology in the United Kingdom (after Roberts 2006)

Although there is now a terminological shift toward the term *bioarchaeology*, in the UK *osteoarchaeology* is frequently used as a synonym. Osteoarchaeology was coined by the influential Danish medical doctor and archaeologist Vilhem Møller-Christensen in the context of his preferred excavation methods, which emphasized the engagement of osteologically trained excavators in funerary contexts and also an excavation methodology involving the isolation of remains upon a pedestal (Møller-Christensen 1973). His studies of leprosy set the standard for the skeletal recognition of this disease in the past (Bennike 2002).

The development of bioarchaeology in the United Kingdom dates to the 1950s and 1960s. Two pioneers must be recognized. The first of these was a medical doctor, Calvin Wells, who was a remarkably prolific writer of books and articles on archaeologically recovered human remains. His approach was richly contextualized in the archaeological record and supported by a wide-ranging intellect, which stepped well beyond paleopathological analyses to considerations of heritage and the environment.

Don Brothwell earned degrees in anthropology and archaeology (with geology and zoology) from University College London in 1956. His

publications have been globally influential on a full range of human bioarchaeological topics, for instance, *Digging Up Bones* (1963a), *Dental Anthropology* (1963b), and the *Handbook of Archaeological Sciences* (Brothwell and Pollard 2001). Importantly, Brothwell has also focused and published upon zoonotic infections from a bioarchaeological perspective (Baker and Brothwell 1980).

Charlotte Roberts (2003) emphasizes that in contrast to the anthropological training of bioarchaeologists in the United States, developments in the United Kingdom have been slower and more recent. Roberts attributes this pattern in great part to the lack of training programs prior to 1990. A further reason may be the lack of common interests between bioarchaeologists and post-processual archaeologists. The former frequently focused upon paleopathology, especially case studies of specific conditions (Mays 1997), whereas the latter's emphasis upon context and materiality would have rendered such topics peripheral to their scholarly interests.

Both US and UK bioarchaeologists and their intellectual contributions are relatively invisible within histories of archaeology, commemorative volumes, and theoretical compendia (such as Bawden [2003], Feinman and Price [2001], Johnson [1999], Pinsky and Wylie [1989], Trigger [1989a], and Willey and Sabloff [1993]). Burials are mentioned with various degrees of emphasis, but the corpse is not in attendance. This omission seems especially odd for US scholarship, as common interests and rapport obviously existed prior to the middle of the twentieth century. Perhaps this is still fallout from the "New Physical Anthropology" and its effect across generations of archaeologists who were not encouraged to engage with those who study bones. Certainly, the ecological perspectives of the "New Archaeology" should have been a natural partner for studies of health, disease, and behavior. Yet, as Della Cook (2007) points out, the first classic compendium dealing with health and disease during agricultural intensification appeared only in 1984 (Cohen and Armelagos 1984), and by then the "New Archaeology was getting old" (Cook 2007:18).

VOLUME THEMES

This volume is the culmination of a process begun at a short seminar, hosted by the School for Advanced Research (SAR), that was convened to address the following issue: as the field of bioarchaeology matures, it continues to be challenged by the need to give equal, measured interpretive weight to human remains as individual and collective osteobiographies *and* to the social, historical, and archaeological contexts in which they were embedded. The contributors to this volume recognize that recent theoretical developments in anthropological archaeology are still too seldom

incorporated into bioarchaeologists' research designs and interpretations (see Goldstein 2006). To address this problem, they showcase contemporary methodological and theoretical perspectives together, for the purpose of advancing a thoroughly contextualized understanding and interpretation of mortuary evidence. They demonstrate that bioarchaeological approaches may be applied to a variety of data sources, including those from recent excavations (Boutin, Lozada, Scott) or long-curated museum collections (Baadsgaard, Stodder). Multiple lines of evidence are integrated in the interpretation of human remains: in addition to perspectives traditionally employed by bioarchaeologists drawn from archaeology, osteology, and taphonomy (Geller, Pollock), this volume highlights the value of clinical (Knüsel) and ethnographic (Torres-Rouff) insights.

These contributions encompass diverse data sets, in varying states of preservation and from locations across the globe, united in providing meaningful interpretations by drawing upon context and nuanced theoretical models. In Santa Fe, we collectively identified several major themes, as outlined below, including embodied identity and the life course, materiality and contextuality, and the modern social and political impacts of bioarchaeology. Using different approaches to explore these themes, the authors demonstrate the breadth and depth of current bioarchaeological approaches and their general relevance across the spectrum of anthropological research. They show that bioarchaeology should not be defined by the methods its practitioners use—to do so puts undue emphasis on human remains as objects of study. Rather, bioarchaeologists should be better recognized by the queries and issues that drive their research, namely, to reconstruct the lives and deaths of past persons and their communities by means of human remains that are inextricably linked to their mortuary contexts.

Embodiment throughout and beyond the Life Course

As discussed above, with the advent of post-processual theory in archaeology, dead bodies and their bones were understood primarily as sources of symbolism and signification able to negotiate and legitimate existing social orders (Shanks and Tilley 1982; Thomas and Tilley 1993; Treherne 1995). However, as the twentieth century drew to a close, frameworks of experience, emotion, and memory began to reorient archaeological interest in the body (for instance, Kus 1992; Montserrat 1998; Tarlow 1999), resulting in a new focus on individual and social embodiment. This movement was also inspired by renewed attention to M. Merleau-Ponty's (1962[1945]) phenomenological theory, with its focus on the materiality of the human body as perceiving, inhabiting, and communicating with the world.

Consequently, apprehending the "lived experiences" (Csordas 1994:10) or "lifeworlds" (Jackson 1996:7) of past embodied individuals became a new priority for archaeologists. Yannis Hamilakis, Mark Pluciennik, and Sarah Tarlow (2002:2–4) attribute this theoretical shift to greater academic interest in the experiential aspects of the human past, to a shift away from high-level systemic explanations, and to an emphasis on agency and the role of representation in producing cultural meanings.

The most prolific advocates for an archaeology of embodiment have been Rosemary Joyce and Lynn Meskell, both of whom have articulated relevant theoretical frameworks and applied them productively to archaeological data (Joyce 2000a, 2001, 2004, 2005, 2006, 2008; Meskell 1996, 1998b, 1999, 2000b). Their research espouses an "experientially grounded view of human embodiment as the existential basis of the individual's being-in-the-world" (Meskell and Joyce 2003:17). They pursue this approach by drawing upon diverse epigraphic, ethnohistoric, iconographic, and archaeological evidence in ancient Egyptian and Mesoamerican cultures, respectively. Meskell and Joyce are also notable for acknowledging that bodies are materialized and experienced in culturally specific ways *throughout* the span of each human life, not simply in the isolated "moments" most easily discerned from archaeological contexts (Joyce 2000b, 2002; Meskell 2000a, 2001b, 2004). Social scientists employ life course analysis to study how individuals' lives unfold in a framework of temporal experience that is developmentally, historically, and culturally constructed (for example, Hareven 2001; Harlow and Laurence 2002; Moen 2001). Roberta Gilchrist (1994, 1999, 2000a, 2000b, 2004) has been the foremost proponent of the life course model in archaeology, describing it as "a 'longitudinal' approach that examines trajectory and transition across the continuum of the human life, and which situates the human life span within social measures of time" (Gilchrist 2004:156).

Until recently, remnant bodies of past individuals were treated only sporadically in archaeological investigations of embodiment and the life course. Given the direct, fine-grained information that both mummified and skeletal human remains can provide about embodied lives in the past, as well as their commonplace recovery from archaeological contexts, this oversight is surprising. The relevance of human remains to an archaeology of embodiment was incipient in some early publications (for example, Boyd 2002; Hollimon 1997, 2000a, 2000b, 2001; Rega 1997; Sofaer Derevenski 1997), but only more recently have scholars begun to expand this line of inquiry, in terms of body modification and adornment, sex and gender, and age (see Boutin, chapter 5 in this volume, for references). On the rare

occasions that the life course model has been explicitly applied to human remains, it has proven effective in bridging the interpretive divide between the cultural construction of categories of personhood and osteological methods that necessitate assigning skeletons to age classes (Gowland 2006; Robb 2002). Yet, calls continue to be issued for bioarchaeologists to implement a fully developed, integrated approach to embodiment and the life course (Joyce 2005:142). Joanna Sofaer's (2006a) response is directed toward osteoarchaeologists in the United Kingdom (discussed above): she argues that if archaeologists consider the skeletal body as a type of material culture, it will allow them "to explore experiences of life through an appreciation of the physicality of the body" (Sofaer 2006a:88). This volume can also be considered a response, yet with a more explicit reliance on bioarchaeological methods and data, insofar as it explores how embodiment is a process that crystallizes in the skeletal body over the life course, through a complex interaction of biological and contextual factors.

This volume also explores how the concepts of life and death are contingent and constructed. Within and between cultures, biological and social understandings of life and death may or may not be in agreement. For example, does life begin at conception or at birth? Does death occur with the cessation of brain activity or of respiration? As political debates in our own twenty-first-century American society attest, these are questions without clear-cut answers. Moreover, the point where life ends and death begins may not be one and the same. In some cultures, social life ends with the primary burial of an enfleshed person. In other cultures, death proceeds through stages of the corpse's exposure, skeletal disarticulation, display, and permanent burial, with concomitant movement through stages of ancestorhood (Buikstra and Scott 2009). By focusing on the actual bodies that traverse the life course, the bioarchaeological studies in this volume provide a unique perspective on how life and death blend into each other in contextually specific ways.

Several authors in this volume ask what and—perhaps more important—*when* is the physical anchor for "the body" in archaeological theories of embodiment? As discussed above, archaeologists have recently placed much emphasis on the lived experiences of embodied persons. But can embodiment be studied meaningfully without adequate consideration of disembodiment (Hallam, Hockey, and Howarth 1999:ix)? Must a body be alive—biologically and / or socially—for a person to exist? Meskell (2004:81) considers how embodiment continues in the absence of a physical body, by drawing on the ancient Egyptian "notion of distributed personhood, that biographical and narrative quality of individual lives that might be

dispersed materially through objects, tombs, texts, and traces." On the other hand, certain body parts may possess more embodied agency than others, whether they command ritual adoration (for example, a saint's bone as religious relic) or morbid curiosity (such as Napoleon's penis) (Manseau 2009).

Writing from a sociological perspective, Elizabeth Hallam, Jenny Hockey, and Glynnys Howarth (1999) have challenged the conceptual linearity of life course analysis by destabilizing the life :: death dichotomy. They argue that recent approaches to embodiment and agency fail to address how cultural meanings and social identities are assigned to "those members of society who have a profoundly vital and influential social presence, yet who lack a living body—be they ancestors, martyrs or dead children; a reference in an archive, a corpse in preparation for disposal; or a 'voice' brought into being by a clairvoyant" (Hallam, Hockey, and Howarth 1999:8–9). Sofaer (2006a) has ushered Hallam and colleagues' insights into the bioarchaeological dialogue; she points out that because the skeletal body preserves a record of its experiences during life, human remains facilitate investigation "between the two sides of the death event horizon, creating the link between life and death" (Sofaer 2006a:45). Given this perspective, the terminology employed by archaeologies of embodiment and the life course, with their emphasis on *life* to the exclusion of *death*, is less than satisfying. The life course is better understood as encompassing not just life / death but as extending from conception to post-death memorialization and remembering. These latter stages of the life course are not new topics of archaeological inquiry (Chesson 2001a, 2001b, 2007; Gillespie 2001; Hamilakis 1998; Williams 2003), but this volume is one of the first to explicitly interrogate the dichotomous relationship between life and death (see also Buikstra and Scott 2009).

Materiality and Contextuality

According to the precepts of bioarchaeology, the study of human remains requires placing archaeological bodies within a larger body of archaeological data, which provide context—spatial, historical, and social—for more holistic interpretation. Contextual elements of important consideration include the construction and layout of graves, the numbers and types of grave offerings, the treatment of the corpse, and larger and cultural information provided through written records, visual depictions, ethnographic analogy, and other archaeological contexts. The dilemma for the bioarchaeologist is how to best make use of a myriad of contextualized information in appropriate ways, enhancing the contribution of the human skeletal data.

One approach to incorporating other evidence with human skeletal analysis has been recently undertaken under the precepts of materiality, a perspective that encourages a joint consideration of the human and material worlds and considers how each creates and shapes the other. While not ascribing biological processes (nor humanity) to material objects, this approach conceives that both human bodies and the materials of the physical world around them have tangible, malleable features that impact and affect their interactions and form the substance of their creation into social entities. Humans have distinct physical forms, ranges of plasticity and sensitivity (Sofaer 2006a; Tarlow 2001; Williams 2004), and physical qualities (colors, textures, shapes) that create and inspire connections with the realm of humanity.

This approach to studying body and material artifacts conjointly interrogates the subject/object divide and investigates the social and cultural conditions, conventions, and interventions that result in the creation of knowable entities of the world (such as the human body) and the boundaries that make them distinct (Boivin 2008; Buchli 2002; Latour 1999; Meskell 2005; Miller 2005b). This integration blurs traditional academic divisions of labor between archaeologist and osteologist as it interrogates established boundaries between people and things. A joint consideration shows that both human and material worlds create and shape each other, that both body and material artifacts have active and affective "social lives." The focus of study is reoriented away from the material object and toward the process of materialization, or the means through which entities may appear, exit, and work in the world (Hurcombe 2007). It is the cultural recognition of objects and beings and how such recognitions develop and change that merit study, along with the differential ability of individuals to participate in, control, and apprehend this process (Buchli 2002:19). This perspective involves a mediating between philosophy and practice, of understanding how objects and entities are perceived and granted with the ability to act and impact the world, to shape and construct human experience (Gell 1998:19). Engaging with materiality thus requires a rethinking of normally unquestioned boundaries between peoples and things (Boivin 2004), subjects and objects, physical and social entities, and a conceding of their "co-presence" and "co-mingling" (Meskell 2005:4).

The perspective of materiality demonstrates that it is not productive or appropriate in mortuary research to disassociate people from things. This realization does not reduce one to the other; it merely acknowledges that both exist in a knowable state only through their interaction with each other. Contextualized approaches to mortuary analysis thus require an

active consideration of both archaeological bodies and the materials that were part of their social worlds. Only then can archaeological bodies be investigated in holistic terms, not as isolated entities but as active social beings, emergent in the world by means of their relationships with both the human and material worlds.

Social and Political Impacts of Bioarchaeology

Since human remains bear a connection to humanity—to real, lived human lives—like no other evidence of the past, they require a special, particular, and delicate treatment. Many have direct connections to living communities (whether biological, geographical, or cultural), and thus their analysis requires engagement and communication with all those who have claim, relation, or other legitimate interest in them (Castañeda and Matthews 2008; Colwell-Chanthaphonh and Ferguson 2008; Moser et al. 2002). Sometimes the interests of the different stakeholders can be brought together under collaborative research programs, and sometimes they collide and result in conflict, disenfranchisement, and mistrust (Green, Green, and Neves 2003). The dispute over the nine-thousand-year-old skeletal remains known as "Kennewick Man" in North America is the most widely publicized example of conflicting interests between native groups and scientific researchers, raising the question of whose perspective should ultimately take priority when collaboration and a reconciliation among parties seem impossible (see Chatters 2002; Downey 2000; Thomas 2000).

Decisions in cases of dispute are usually rooted in modern politics based on current methods for distinguishing and making sense of human difference, sometimes couched in terms of race, genetics, ethnicity, kinship, or cultural history. In the case of Kennewick Man, the ultimate privileging of scientific views was but the latest battle over which parties have the power to reconstruct the American Past (Thomas 2000): Euro-Americans through scientific means or Native Americans through cultural tradition and oral history. The problem is that neither perspective, on its own, provides a full account. Privileging one definition of difference over another often creates artificial boundaries and leads to unproductive conversations. The challenge, then, is to redefine and to reformulate definitions of difference, to recognize that variation occurs both within and between human populations across time and space, and to acknowledge that group identities are not monolithic and static entities, but ever forming, changing, and becoming. Recent collaborative efforts between archaeologists and Native Americans suggest that such reformulations of

difference can be productive and lead to the construction of a shared past (see Echo-Hawk 2000; Stapp and Longenecker 1999; Zimmerman 2007).

One way forward has been to include local communities in bioarchaeological investigations (see Marshall 2002:216; Lozada, chapter 6 in this volume). Such communities may include those who live in close proximity to archaeological sites where human remains have been recovered, those whose ancestors once lived on or near these locations, or those who otherwise have connections (cultural, religious, and so forth) with archaeological evidences and places. This involvement requires local engagement in all aspects of archaeological research, from the development of research questions and field strategies to data gathering and analysis, scientific documentation, storage, and publication and museum display (see Moser et al. 2002). Such community-oriented projects have been best developed in countries with colonial pasts, such as the United States, Canada, and Australia, although they are being implemented in increasingly wide-ranging locations, including Europe, Mesoamerica, and the Middle East (Moser et al. 2002:221; see Boutin, chapter 5 in this volume). Fundamental to community-oriented pursuits is the acknowledgment of the inherently subjective nature of all archaeological interpretation, as well as the inevitable ties between Western claims to objective knowledge constructions and past and current colonial ambitions, both territorial and intellectual (Moshenska 2008; contra Tully 2007). Looking to these and many other examples, the way forward relies upon embracing the ideals of engagement and open communication, of promoting responsible and respectful dialogue, and accepting—even advancing—different methods of knowledge production and reporting (Sabloff 2008), many of which are promoted by contributors to this volume.

CONTRIBUTIONS TO THIS VOLUME

The contributors to this volume consider themes of difference, contextuality, embodied identity, materiality, and the social and political aspects of studying human remains in unique ways, each applying different methodological and theoretical models to specific case studies from around the globe. Their contributions diverge in important ways, some focusing primarily on skeletal data and others on contextual aspects of the mortuary treatment. Individual chapters employ different approaches to methodology, to theoretical perspective, and to the integration of data sources (skeletal, historical, ethnographic, archaeological). Rather than detract from the volume themes, these differences illustrate the diversity of thought in current bioarchaeological studies, the various materials of study,

and the training of scholars across the fields of anthropology, archaeology, and physical anthropology. By relying on a case study, each chapter is grounded firmly in a particular culture and society of interest, through which it explores the different approaches and perspectives to the field. The chapters are divided into three parts. Part I includes three chapters that represent fresh theoretical, historical, and methodological explorations of bioarchaeological questions. In part II, two chapters stretch the boundaries of bioarchaeological investigation by applying innovative or underdeveloped techniques such as osteobiography and an unorthodox understanding of descent and ancestry. In part III, four chapters employ novel approaches to the archaeological case study, using materials from around the globe.

Theoretical, Historical, and Methodological Explorations

In the second chapter, Susan Pollock explores variation in mortuary practices and the treatment of the dead in Halaf-period Syro-Mesopotamia. She explains why traditional methods for classifying differences may be inadequate for connecting mortuary treatments and cultural understandings of death, burial, and expectations for life beyond the grave. In so doing, she levies a judicious warning to bioarchaeologists who uncritically equate sociocultural elements of burial practices with physical indices of skeletal identity. She also argues that the wide range of Halaf burial treatments is indicative of improvisation in mortuary ritual and suggests a cultural emphasis on future expectations (for the corpse and survivors) rather than on relationships and identities during the decedent's life. Investigating idiosyncrasies in burials allows a greater awareness of the complexity and richness of Halaf culture, revealing perhaps new insights into their attitude toward the future in relation to the past, their modes of transmitting ritual knowledge, and their understanding of life after death. Pollock's conclusions are informed not just by osteological considerations (such as the condition, health, or age of the skeletal material) or by archaeological details (grave location, contents, orientation, and so forth), but also by drawing from current anthropological understandings of the body and its development through the life course.

In contrast to Pollock's focus on difference, Rachel Scott's study (chapter 3) of an early medieval cemetery on Omey Island, Ireland, concentrates on large-scale similarities in burial practices to highlight the importance of religion in mortuary ritual. In her analysis of the sole type of grave good (white quartz stones) in early Christian burials, she demonstrates how

Christian beliefs might have been ascribed to objects with a long, pre-Christian association with mortuary practices and places of ritual significance. Although not a devotional practice for early Christians in the British Isles, the association of the stones with the deceased in Ireland might be considered a manifestation of Christian faith in local Irish daily life and tradition. Scott further argues that burial treatments relate more to cultural expec-tations for the deceased's future according to Christian notions of the afterlife than to social position or relationships. Her conclusions are grounded in references to the cultural and historical details of early medieval Ireland, which reveal that the striking uniformity in mortuary practices does not reflect the marked stratification of Irish society. Rather, in the aftermath of biological death, religion superseded all other aspects of social identity. The funerary rituals celebrated by the living reinforced their membership in the community of Christians, whereas a proper Christian burial ensured the decedent's eternal residence in the kingdom of God. The centrality of religion in this case calls for a reevaluation of its importance, especially in archaeological approaches to social identity within the mortuary setting.

In chapter 4, Pamela Geller interprets bioarchaeological evidence for child sacrifice by the Maya within a broader context of pre-Columbian Mesoamerican cultures. She demonstrates how studying human remains might require challenging accepted Western wisdom, as well as a new openness to cultural practices considered repugnant from one's own perspective. She shows that child sacrifice among the ancient Maya was not a violent act, but rather the means through which children, often those who occupied a low station in life, were accorded value. A related practice involving the sacrifice of body parts by adults for children was a way to honor and to thus give meaning and purpose to a child's existence, even if cut short before reaching adulthood. The Maya concept of life-death-regeneration legitimated child sacrifice and sacrifices for children, insofar as this sacred form of tribute transformed human subadults (with liminal social status) into baby jaguars (divine creatures of the underworld). On the other hand, the unexpected loss of a child triggered a mourning process that sometimes had bodily manifestations. Caches of isolated finger bones in Maya mortuary contexts are consistent with ethnohistoric evidence that "the removal of the little finger by mourners…may have symbolically stood for the removal of the child from an earthly sphere" (chapter 4 in this volume). Thus, the emotional turmoil associated with mourning crystallized in an experience of pain, resulting in the permanent severing of physical integrity.

Stretching the Boundaries of Bioarchaeological Investigation

In an examination of Bronze Age burials from Alalakh in ancient Syria (chapter 5), Alexis Boutin utilizes an osteobiographical approach, constructing fictive narratives to present multiple possible reasons for distinctions in burial treatment, including life histories, kinship ties, social commemorations, and expectations for life beyond the grave. These stories give equal interpretive weight to archaeological and osteological data, which are contextualized with sociohistoric evidence from the Bronze Age Near East. In so doing, she offers a unique way for reconstructing the fluid identities and manifold experiences that constituted embodied persons in the past. Her narratives highlight how the biological processes of the life course become culturally nuanced, from growth and development during childhood, to sexual maturity, to treatment of a corpse in various stages of decomposition, to ritualized remembering of the ancestors. Through her approach, Boutin also successfully confronts the standard production of bioarchaeological knowledge, questioning its success, in terms of both style and accessibility. Rather than couch her findings in strictly scientific terms and academic language, she integrates her findings into fictive narrative accounts of the life and burial of individuals, drawing upon multiple historical and contextual sources and employing multiple voices and perspectives that play across the life–death continuum. Her approach recognizes the multivocality that characterizes the creation of archaeological knowledge and highlights the plurality of past experiences.

María Cecilia Lozada's work on human remains in the Andes (chapter 6) confronts the dilemma of how best to resolve possible differences in local modern definitions of ancestry and ancient ways of assessing kinship and affinity. She advocates an approach that incorporates multiple lines of insights, including newer technologies that allow for tracing genetic footprints combined with archaeological assessments of material culture, epigenetic and isotopic studies of human skeletal remains, and ethnohistoric studies. In her research, she discovers that several pre-Hispanic societies employed cranial modification to represent group affiliation at local, regional, and ethnic levels. This time- and labor-intensive procedure, performed during infancy, was an embodied "means by which ancestry was codified across generations" (chapter 6). Among the Chiribaya of southern Peru, cranial deformation styles and material culture correlated strongly with cemetery groupings. Contrary to expectation, analysis of epigenetic traits and ancient DNA revealed no detectable differences between the cemetery populations. Thus, she concludes that expressions of ancestral group affiliation in life and death reflect sociocultural more than biological factors. Her

research also showcases the success that comes from engaging with local communities and how respecting their reactions to the excavation and study of "their ancestors" can aid rather than inhibit research, even when their understandings of descent, ancestry, and kinship differ from the results of scientific and genetic tests.

Novel Approaches to the Bioarchaeological Case Study

Christina Torres-Rouff (chapter 7) employs perspectives of embodiment and materiality in her discussion of labret use—the wearing of ornaments pierced through the lip—in the El Molle cultural complex of Chile. She considers the labret as an object of adornment and also as an important part of the archaeological body, specifically for mature males, for whom these served as distinguishers of rank, physical ability, and age. Labrets were essential for embodying the ideals of masculinity and acting out social roles across the life course, as indicated by their meaningful inclusion as funerary dress for particular males. Differences in the size and style of labrets, together with similarities in overall form and material type, drew distinctions between individuals but also related them to a class of middle-adult males with high frequencies of injury, demonstrating their participation in interpersonal violence and conflict. Given this association, the experience of receiving a lip incision for labret wear was likely related to a change in status or group membership. The interface of bodily transformation with this socially significant jewelry, displayed prominently on the face, embodied the masculine ideal of enduring pain. Wearing a labret over the long term also left its mark on the skeleton, specifically pathologies and remodeling of the mandibular dentition. Based on her findings, Torres-Rouff concludes that labrets should be considered as both physical and social entities, leaving distinct physical marks on the body but also actively participating in social distinctions and relationships.

Aubrey Baadsgaard (chapter 8) invokes the perspectives of materiality to investigate mortuary evidence using museum collections from the Royal Cemetery of Ur from Early Dynastic Mesopotamia. Her analysis focuses on mortuary dress, which, based on insights from modern conceptions of the body, is an inseparable part of the social body. According to Baadsgaard, the mortuary body and its accompanying dress exist together as social and physical entities, each acting as a participant in and the product of unique social and historical contexts and both bearing malleable material properties with tangible, social affects. She demonstrates how the distinctive physical features of mortuary dress—its colors, shapes, size, and intentional associations with particular body parts—had clear social connections and

implications. The physical and alterable characteristics of mortuary dress were the basis for these connections and essential to creating social personae—such as female queen and musician and male soldier—and to forming and displaying changing social divisions and hierarchies. She also highlights the practical aspects of transcending the living/dead divide, by emphasizing that dressing deceased persons for their funerary rituals was a performative act carried out by the living, one with real implications for the (re)creation of social fashions, behaviors, and relationships. Wearing dress with particular affective attributes to the grave also enabled individuals to perpetuate parallel civic, religious, and familial identities in the world of the dead.

Ann Stodder (chapter 9) also relies on museum-curated human remains, investigating the Field Museum's collection of decorated skulls from the Sepik coast of New Guinea. Her exploration of the social history and value of human skulls within a particular cultural context demonstrates how alterations and decorations served as a form of social memory, a method of group identity formation, and an activation of social ceremony. In considering the interplay between bodies and things, Stodder recognizes that decorated skulls from New Guinea might exist as both at once throughout their social histories. She focuses on the latter stages of the life course, tracing how personhoods transformed across multiple phases of extended mortuary treatment, including exposure of the decedent's body, removal of the skull, curation in a cult house, and sale to Anglo-American collectors. The performative act of carving and painting Sepik skulls activated the social efficacy of ancestral spirits, whereas those skulls whose paint had been intentionally removed appear to have been desanctified, their spirits relegated to communal ancestorhood. The physical qualities of the skulls and their incised decorations later became the basis of their material value when sold as a commodity to private museum collectors. She concludes that in their current state, the skulls might best be considered as ancestors, reservoirs of tribal memory, agential beings with cosmological significance, and museum artifacts, each a creation of interacting material and social worlds.

Christopher Knüsel (chapter 10) situates embodied behaviors within the life courses of individuals by drawing on a small, but very well contextualized, skeletal sample from the late medieval period of England. He looks specifically at a distinctive traumatic elbow injury, perceiving patterns in such injuries and attributing them to the lifestyle of individuals, particularly the performance of specific activities. This paleopathology is comparable to injuries documented clinically in modern male baseball players

and arm wrestlers. Knüsel attributes its occurrence in medieval Englishmen to an active lifestyle and training in weaponry and the military arts, suggesting that achieving military ability was a crucial part of establishing a masculine identity. Because this skeletal signature provides an indication of time-depth, it also shows how personal identities might have changed throughout the life course, especially during transitions between age-grades or status groups. Burial location and body position of males with this distinctive injury are also considered and appear to correlate with warrior conduct and inherited social status.

NEW LIFE AND NEW DIRECTIONS IN BIOARCHAEOLOGY

Taking cues from current theoretical perspectives and capitalizing on the strengths of new and sophisticated methods of analysis, this volume showcases the vibrancy of bioarchaeological research and its potential for bringing "new life" to the field of mortuary archaeology and the study of human remains. These new trajectories challenge old stereotypes, redefine the way research on human remains should be accomplished, and erase the divide that once separated osteologists from archaeologists. Bioarchaeology, through its emphasis on social and historical context, is championing the use of social theory for the study of archaeological bodies and calling for an integration of archaeological and historical data. Rather than lagging behind the holistic approaches of archaeology as a whole, bioarchaeology is helping to lead the way, even interrogating the very nature of archaeological research, reporting and increasing its relevance to modern communities.

Although contextual strategies open new avenues and forge new connections among scholars, practitioners of bioarchaeology recognize and do not minimize the challenges inherent in studying and interpreting human remains. Rather, many efforts are made, such as those championed by Lozada in chapter 6 of this volume, to address these challenges and to see the cultural sensitivities that accompany the study of human remains as opportunities for outreach and communication, rather than as obstacles to pursuing research. Thanks to efforts at reconciliation, communication, and cooperation between scholars and communities, bioarchaeology is flourishing, not floundering. New publications are forthcoming at an ever-increasing speed, and their contributions are more advanced and improved (Brickley and Ives 2008; Buikstra and Beck 2006; Gowland and Knüsel 2006; Knudson and Stojanowski 2009; Lewis 2007; Rakita and Buikstra 2005a). The contextualized approaches to bioarchaeology that

follow showcase such innovations, and they also contribute significantly to this effort. They push the ambitions of contextualized approaches a step further by utilizing a new and diverse set of theoretical perspectives while advancing the holistic interpretation of human remains.