Bioarchaeology in the Roman World

by
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ABSTRACT
KRISTINA KILLGROVE: Bioarchaeology in the Roman World.
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On account of differences in the evolution of the field of anthropology in American and Italian scholarship, the role of bioarchaeology has been nearly non-existent in the latter. Numerous scholars over the past two decades have advocated a more holistic approach to Roman archaeology, namely fostering communication between the disciplines of anthropology and classics, yet little has been accomplished towards this goal. A change in the current perception of the Roman world is necessary in order to dismantle long-held assumptions about this culture. The purpose of this thesis is to demonstrate the utility of bioarchaeology as applied to the Roman world for framing and answering questions about the lifeways of people in this ancient society.

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Chapter 1 – Introduction

In a compact, ten-line poem, Catullus eloquently captures both his sentiments of loss and his fraternal duty of last rites following the death of his brother in a foreign land:

Multas per gentes et multa per aequora vectus
    Advenio has miseras, frater, ad inferias
Ut te postremo donarem munere mortis
    Et mutam nequiquam alloquerer cinerem.
Quandoquidem fortuna mihi tete abstulit ipsum,
    Heu miser indigne frater adempte mihi.
Nunc tamen interea haec, prisco quae more parentum
    Tradita sunt tristi munere ad inferias,
Accipe fraterno multum manantia fletu,
    Atque in perpetuum, frater, ave atque vale.[1]

Perhaps Catullus is employing a rhetorical trope in Poem 101, or possibly he penned this verse moved by the physical passing of someone quite close to him. Either way, we gain insight into the nature of funerals, grief, and post-mortem rites in Rome in the first century BC: Catullus' brother is cremated; he is upset and crying at his loss; and he has travelled very far, moved by an innate need to effect the last rites over his brother's ashes in the custom of their ancestors.

Until recently, death in the Roman world was only known through literary sources such as poems and histories. Even Jocelyn Toynbee's (1971) compendium *Death and*

[1]Driven through many lands and through many seas I have come, brother, for these miserable offerings, in order to present you with the final service of death and in order to talk to mute ash in vain, because fortune has taken you away from me, alas, poor brother, stolen from me unjustly. Now, however, receive these things, which, according to the ancient custom of our ancestors, have been passed down as a sad gift to the dead, these things which are wet because of brotherly weeping. And so, brother, for ever and always, hail and farewell.

Burial in the Roman World draws much evidence from funerary art and the epigrams on funeral markers, two realms beleaguered by the same problems as textual evidence: the identity of the author and the idealization of the deceased. Although Latin literary scholars have begun to deal with issues such as authorial intent and intended audience by appealing to literary theory, for the most part, there has been little in the way of an analogous movement in Roman archaeology to deconstruct textual truisms using the wealth of biocultural material from excavated sites. In particular, human skeletal remains, which can elucidate various past behaviors through careful scientific analysis, have largely been ignored as a credible source of information about the ancient Roman world of both the living and the dead.

Osteology, or the study of bones, has been a part of Roman archaeology since at least the nineteenth century. Cursory analysis of skeletons with the objective of culling demographic histories, however, was always subsumed by publication of grave goods in large site reports, sending biological material to languish in appendices. With sex of a skeleton determined based on associated artifacts as often as estimated by biological markers, osteological analysis in much of the Old World stagnated, especially when compared with the advances made in physical anthropology in the United States in the late 19th and 20th centuries thanks in part to the creation of four-field anthropology programs at universities around the country.

Yet human remains, not prone to the same biases in interpretation as literary evidence, can help answer questions about diet, disease, war, gender, social status, occupation, culture contact, and social organization. Through the practice of bioarchaeology, or the investigation of human skeletal materials from archaeological sites, skilled anthropol-

ogists can directly engage with biocultural data to answer pressing questions about past societies. Roman archaeology in particular can benefit greatly from a bioarchaeological approach because of the potential to integrate textual, artistic, and other material evidence with biological remains to create a more holistic picture of all levels of life and culture in the Roman world.

Classical archaeology was founded on an historical tradition in which material remains were mainly used to illustrate the vast body of Latin literature. In recent decades, though, Roman archaeologists have begun asking their own questions about what life was like in ancient times, in part to provide a history to those segments of society that did not merit inclusion in elite writing. The literary corpus, though, is not an archaeological bogeyman but can be marshalled to help us frame questions we can answer with biocultural material. Time and again, I come back to Catullus 101, not only because it is a beautiful poem about a depressing subject, but also because it allows us to formulate varying levels of inquiry into the Roman conception and practice of death and burial. We are not told how Catullus' brother died, but an analysis of trauma on his remains could resolve the issue. We are not told if his brother died in the same place he was born, but analysis of the chemical elements in his remains could pinpoint the location in which he was raised. We are told that his brother was cremated, but analysis of the ashes can yield temperature and duration of the pyre, two pieces of information unlikely to be found in literature. Although Catullus' words whet the appetite for more information, it must be remembered that he is eulogizing a brother, not a sister, and that he was wealthy, not poor. Literature may be a way of framing Roman death, but bioarchaeology is the only way to complete the picture.

The corpus of Latin literature varies from poetry to history, from graffiti at Pompeii to tomb inscriptions at Ostia. It is time to both question that textual data from an archaeological perspective and integrate the biocultural knowledge derived from studying skeletal remains with the wide range of information preserved for thousands of years about the Roman world. The purpose of this thesis will be both to assess the current state of bioarchaeological research in the Roman world and to suggest several research questions pertinent to today's archaeological perspective that can be answered by skeletal populations.

The remainder of this thesis will be organized into three methodological and theoretical chapters, plus one concluding chapter. Chapter 2 will provide an historical background for the foundation of anthropology as an academic discipline in Italy, particularly dealing with the divergent tradition that has led to the rise of bioarchaeology in the U.S. rather than in Italy. I will examine current research that uses human skeletal remains in both traditions, classical and American archaeology, and enumerate several reasons that bioarchaeological questions need to play a greater role in today's Roman archaeology.

In Chapter 3, I will discuss ancient cremations. Because cremations are found in the Roman world in several time periods, sometimes side-by-side with inhumations, their interpretation is important for understanding the funeral rites and differential treatment of the corpse. After presenting textual evidence of cremations from Latin authors, I will outline the kinds of questions we can ask of cremations and propose a brief research design for the excavation and analysis of a cremation cemetery.

In Chapter 4, I will address the problem of the subaltern in classical archaeology. A tradition of Marxist and Gramscian thought, coupled with a focus on textual evidence,

has resulted in the overly-simplistic dichotomy of elite versus non-elite. However, little is known about many groups of people in the middle, for example women and children at forts in the Roman provinces or small-holder farmers in the Italian peninsula. In these situations, bioarchaeology can elucidate daily chores, diet and disease, interpersonal conflict, and possibly even forced migration.

Finally, in Chapter 5, I will conclude by summarizing the contributions that bioarchaeology can make to the classical world and by addressing taphonomic concerns identified in anthropology that classical archaeology might remedy.

Chapter 2 – Bioarchaeology in Italy

Tantae molis erat Romanam condere gentem. (Vergil, *Aeneid* 1.33)

It is difficult for anthropologists in the United States to imagine practicing their research in anything other than a four-field manner that promotes a holistic approach to academic inquiry through incorporation of linguistics, culture, archaeology, and biology. Yet anthropology developed separately from the Anglo-American tradition in other areas of the world. Italian anthropology is not currently as coherent a discipline as American anthropology; archaeology can be found in either history or classics departments, physical anthropology is often found in biology departments, and cultural anthropology is split among four different subfields comprising cultural anthropology, British social anthropology, ethnology, and folklore. By tracing the development of Italian anthropology as it parallels and diverges from American anthropology, I will show that the response to differing subjects of inquiry and the contingencies of political history served to create bioarchaeology as a legitimate field of inquiry more in American archaeology than in Roman archaeology.

The practice of bioarchaeology is in one sense a purely American development. The word itself was first coined by a Brit in reference to zooarchaeology, or the study of animal remains from archaeological contexts (Clark 1972). In the late 1970s, the term was redefined by an American anthropologist, Jane Buikstra (1977), as relating specifically

to human skeletal remains from archaeological sites. Today, bioarchaeology in Britain still includes non-human skeletal remains, although in the rest of the world the use of the term to mean exclusively human remains is more widespread (Wright and Yoder 2003). It is not surprising then that the majority of bioarchaeological research today is done by American scholars.

American Anthropology

Modern anthropology in the Boasian (American) tradition has been characterized as "a bond between subject matters... part history, part literature, part natural science, part social science" (Wolf 1964). Boas was very much concerned with history, especially with providing a written story for cultures with no tradition of literacy (Boas 1908). In addition to an interest in history, the four fields of American anthropology largely developed in response to a need to understand the Native American within a framework of Darwinian and Spencerian evolutionary theory (Adams 1998, Borofsky 2002, Willey and Sabloff 1993, Caspari 2003). It was believed at the time that the Native could be understood by "the study of the physical types of the people, their archaeological remains, their languages, and their customs—the four fields of anthropology" (Bourguignon 1996:7). The first of these four fields, exemplified by the physical types of the Natives, is what led to American physical anthropology, a subdiscipline that saw its beginnings in racist typology and socio-biological evolution that plagued it until well into the 20th century (Gould 1981).

One of the earliest references to bioarchaeology comes from W.M. Krogman's 1935

American Anthropologist article entitled "Life Histories Recorded in Skeletons." In this paper, Krogman states:

> The archaeologist and the physical anthropologist are more and more looking to one another for aid. The responsibility for the excavation of skeletal material does not fall upon either—it belongs to both. In a sense, however, the physical anthropologist is the more dependent: he must rely upon the skill and completeness of the technique of the archaeologist. Especially is he dependent that *all* skeletal material, no matter how incomplete or fragmentary, be sent to him in... good condition (Krogman 1935:92).

It was not for another four decades after Krogman's prescient advocacy for careful excavation of human remains that bioarchaeology arose from the melee of skeletal biology as a newly-created specialty using physical anthropological methods resulting from the modern synthesis and asking archaeological questions resulting from the New Archaeology. This approach uses processual methods to test hypotheses about the interaction between culture and biology, often called a biocultural approach. But bioarchaeology has not been without its own problems. In his chapter in the 2000 volume *Biological Anthropology of the Human Skeleton*, Phil Walker notes that the sources of skeletal collections, the value of human skeletal remains, and the ethical responsibilities of the bioarchaeologist are still being worked out. Skeletal collections were first amassed in natural history museums in the United States in the middle of the 19th century. These collections usually consisted of isolated Native American crania with little to no provenience from old excavations; no permission was secured from surviving family members or tribes for the curation and display of these remains. In the United States today, it is important to note that many Native Americans want to gain control over their ancestral remains in order to reassert their cultural identities (Walker 2000:16-7). However, it is equally important

that some Native American remains be retained for scientific analysis, especially for comparison with the collections of non-Native Americans in European and Asian museums. Although American bioarchaeology rejects typological thinking and specifically undertakes studies that disavow biological classification based solely on historical or material information (e.g., Killgrove 2002, Kakaliouras 2003), issues resulting from our colonial past are still being addressed in contemporary literature.

Part of the problem bioarchaeology faces in becoming a larger component of anthropological analysis in the United States has to do with post-colonial and native revitalization issues, and part results from the periodic call to split anthropology into two or more autonomous academic units, whether in different departments or different schools of thought. Anthropology today is sometimes divided into two instead of four subdisciplines: humanistic and critical theory versus natural sciences and positivism, returning in part to an older conception of anthropology as dealing with cultural and biological arenas. Yet biology is extremely important to an integrated anthropology because, "ignoring biology is tantamount to invoking a creationist perspective on humanity, believing that at some point during our evolutionary history, our evolutionary history no longer mattered" (Calgano 2003:8). Anthropology, to quote the old adage by Eric Wolf, "is the most humanistic of the sciences and the most scientific of the humanities" (Wolf 1964:88). The value in the four-field approach is that differing ways of viewing the world are always considered, be they evolutionary, postmodern, humanistic, or scientific, potentially incorporated into a synthetic framework.

The history of American anthropology began with British and German scholars who emigrated in the 19th century. A four-field approach was established early with the rise of

anthropology as an academic discipline whose object of study was the Native American. Colonialism and slavery left lasting legacies of racism to which physical anthropology was inextricably bound for several decades. Following the Holocaust in 1930s Europe, the modern synthesis in the 1940s, and school desegregation and fights for civil rights in the 1960s, the role of physical anthropology as a scientific-humanistic basis for discrimination finally ended, ushering in the rise of bioarchaeology as a way to understand from bones how humans interacted in their ecological and cultural world. I will now turn to the history of Italian anthropology, which paralleled, at times, the American trajectory, but which did not embrace as holistic a tradition as their colleagues across the pond.

Italian Anthropology

Some would argue that the roots of Mediterranean anthropology can be found in ancient authors. Homer knew about the Scythians in the north and the Ethiopians in the south, and by the 8th century BC, Greek colonizing efforts expanded the *oikoumene* in all directions (Kluckhohn 1961). In the mid 5th century BC, Herodotus, reporting on the aftermath of a battle in the Persian Wars, writes (*Histories* 3.12.2-3):

> The skulls of the Persians are so brittle that if you throw no more than a pebble it will pierce them, but the Egyptian skulls are so strong that a blow of a stone will hardly break them. And this, the people said (which for my own part I readily believed), is the reason of it: the Egyptians shave their heads from childhood, and the bone thickens by exposure to the sun (Godley 1982).

Herodotus noticed a difference in the thickness of the skulls of two populations of warriors lying dead after a skirmish, which he attributed to the sun. Although he did

foreshadow discussions in physical anthropology of the effects of the environment on the human skeleton, we know today that his explanation of bone thickness relating to thermal temperature is not correct.

For examples of early ethnographies, we can look to Roman authors from the first century BC. Julius Caesar was both a consummate military general and a thorough recorder of the peoples with whom he came into contact in his conquering expeditions. His observations about the ancient Gauls in the first lines of *De Bello Gallico* include geographic dispersal and linguistic differences: "Gallia est omnis divisa in partes tres, quarum unam incolunt Belgae, aliam Aquitani, tertiam qui ipsorum lingua Celtae nostra Galli appelantur."[1] Lucretius wrote *De Rerum Natura* in the first century BC as well, which included a more sophisticated idea of biological evolution than would be seen for thousands of years, and in the first century AD, Tacitus wrote an early tribal ethnography of the Germani, touted by some as "the finest tribal monograph prior to the 19th century" (Grottanelli 1977:593).

Although this written tradition of investigating the cultural Other was largely continuous for two thousand years, the academic tradition of anthropology in Italy was surprisingly slow to develop. Pre-anthropological literature was largely comparative in nature, intent on describing variations and similarities among cultures. Philosophically-minded Italians such as Giambattista Vico and F.A. Grimaldi denied in the mid-to-late 18th century that there was a linear progression to culture and that there was such a concept as Rousseau's *l'homme naturel* or noble savage.

[1]All Gaul is divided into three parts; the Belgae live in one part, the Aquitani in another, and the Gauls (who are called Celtae in their own language) occupy the third.

In spite of the legacy of the Renaissance to questions about natural history, art, and literature in Italy between the 16th and 18th centuries, anthropology did not exist until the middle of the 19th century. Even in this century, however, Italy's fight for political independence and unity between 1860 and 1870 absorbed much of the energy of the country (Grottanelli 1977:594). The first actual university position in anthropology was created in 1869 and was taken by Paolo Mantegazza, a follower of Darwin, who filled the post as a physical anthropologist. In 1870, the Società Italiana di Antropologia e di Etnologia, which concerned itself with "the study of the ancient and modern peoples of Italy" (Grottanelli 1977:594) according to the invitation they sent to prominent Italian scholars, was formed in Florence for the study of ethnology and anthropology. The Società began the journal *Archivio per l'Antropologia e la Etnologia* in 1871, the first anthropologically-minded journal to exist in Italy. Numerous societies and journals soon followed: the *Bullettino di Paletnologia Italiana* in 1875 and the Società Romana di Antropologia by Giuseppe Sergi in 1893, which later changed its name to the Istituto Italiano di Antropologia and published the *Rivista di Antropologia*. This latter serial became the foremost Italian journal for physical anthropology and arguably remains so to this day.

It should probably be noted at this point in the history of Italian anthropology that nomenclature for subfields and areas of anthropological concentration are not the same in Italy as in the U.S. The term *antropologia* was originally used to mean the English equivalent of physical anthropology, "the natural history of the human family" (Grottanelli 1977:597). What we call cultural anthropology is known in Italian as *etnologia*, which is distinct from folklore studies (*demologia* or *storia delle tradizioni popolari* in Italian) and,

to a lesser extent today, distinct from a theoretical, sociocultural anthropology sometimes called *antropologia culturale* in Italian (Saunders 1984). Historical archaeology, of course, has always been under the purview of the academic tradition of classics, and prehistoric archaeology, called *paletnologia* in Italian, is variously included under a humanities or sciences department (Bernardini 1976). Grottanelli (1977:597) explains that "as a rule, ethnology and folklore are classed with the humanities, anthropology with the sciences (mathematical, physical, and natural), and palaeoethnology with either faculty according to the setup of the various universities." This separation largely resulted from the German academic model of *Naturwissenschaften* versus *Geisteswissenschaften* that remains today in Italian academia and, as noted earlier, to a lesser extent in American anthropology as the dichotomy between humanistic and scientific approaches.

Returning to Italian anthropology, by the 1870s anthropological inquiries were dramatically increasing, and until World War I, explorers and early ethnographers travelled to such diverse places as the Sudan, New Guinea, Malaya, and little-explored islands to bring back stories and sometimes inhabitants. Yet, as with all early ethnography, the studies were largely descriptive and tended to treat the peoples as something to be classified, another chapter in natural, not cultural, history. In the early 1900s, Lamberto Loria visited Turkestan, Eritrea, and even the Trobriand Islands before founding the Società Italiana di Etnografia in 1910 because "one cannot study the ethnography of Italy without being familiar with that of other peoples, whether they be civilized, semicivilized, or savages" (Grottanelli 1977:596). Thus, immediately before World War I, Italy had established a tradition of physical anthropology, which will be further detailed below, and had begun to create fields of folklore and ethnology.

The history of Italian anthropology is rather muddled for the period between the two world wars. A hiatus appears to have occurred between Loria's and others' ethnographic embryos and the 1948 publication of Antonio Gramsci's *Prison Notebooks* in which he commented on class struggle, history, philosophy, and literature, among other topics. This lacuna of scholarship, however, could be deceptive, as very few English-language works exist tracing the development of Italian anthropology. Since its inception, anthropology in Italy has always been extremely politically active (Saunders 1984); however, the rise of Mussolini and the dominance of Fascism are often omitted from articles like Grottanelli's 1977 retrospective because the inter-war period was not pleasant for many scholars asked to take a political stance. After decades of cultural introspection, it seems that Italian anthropologists, or at least those who write for an anglophone audience, are glossing over this period because, in the words of Lanternari, "Fascism negatively influenced the free development of anthropological studies, because its racist ideology shaped a sizable section of public opinion and even the views of some of the scholars involved in ethnological research" (Lanternari 1977:604). Nevertheless, following World War II, cultural anthropology took off in Italy bolstered by the writings of Gramsci and his interpretation of Marxism. Anthropologists were free to ask questions about hegemony, the subaltern, and class struggle. By the 1980s, Italian anthropologists had become at least as reflexive as their American counterparts, interested in their own distinctions among ethnology, sociocultural anthropology, and folklore, their own history, and their conception of The Other (Saunders 1984). The first Italian university to integrate the subfields of anthropology in the American tradition is the Università degli Studi di Torino, whose Dipartimento di Scienze Antropologiche, Archeologiche e Storico Territoriali was created

in the mid-1980s.

Although a four-field department of anthropology was being created around the end of the era of positivism in Italian anthropology, a concomitant development of bioarchaeology did not occur. The main reasons for this failure can be found in the divaricated origins of physical anthropology and archaeology in Italy, particularly in regard to politics and strong ties to the historical approach.

Physical Anthropology

Early physical anthropology in Italy was concerned with one of two questions: 1) the origin of the Italians and the problem of integrating the Etruscans; and 2) political issues that split the peninsula into North and South. Because of written history, it was always known that the ancestors of the Italians dated back at least to the Roman world. The shared Greco-Roman creation myths hypothesized an autochthonous origin in which Zeus or Jupiter created five races of man, from which there was a degeneration of humankind through the ages. By the late 19th century, Italians no longer took myths to heart but clung to the search for the origin of the Italic people. One of the earliest researchers in this regard was Giuseppe Sergi who, as noted above, founded the Società Romana di Antropologia in 1893. Sergi did not believe in Retzius' cephalic index nor in skin color as valid bases for human taxonomy; instead, he favored cranial morphology, which he believed held the key to persistence of primitive biological traits in some populations (D'Agostino 2002). Thus, Sergi departed from other physical anthropologists at the time who were computing cephalic indices and claimed that, based on his analysis, the origin of Europeans was in Africa (Sergi 1901, Gillette 2002). This proto-race migrated from

Africa through the Mediterranean to Scandinavia, Russia, and England but developed into three more traditional races: African, Mediterranean, and Nordic, differing in skin color and body type on account of geographical variations. In Sergi's model, Europe and the Mediterranean were invaded by Eurasian peoples, a separate species that would later give rise to the Celts, Germans, and Slavs. He called these inferior people Aryan and proceeded in later works to show the supremacy of the Italics over the Aryans.[2]

Sergi was a student of Cesare Lombroso, a medical doctor and professor of criminal anthropology at the end of the 19th century. Along with Lombroso, Niceforo, and Ferri, Sergi translated his ideas about the origin of the Italians to contemporary social problems, namely the troubles between the North and the South. The political history of the South is complicated; during the 12th century, it was under the control of the Normans, then the French Angevins until the mid-15th century, when it was conquered by the the Spanish, resulting in a subsequent three centuries of rule. In the 19th century, the French regained control under Napoleon. By 1860, South Italy was emancipated by Garibaldi. Known as the Mezzogiorno based on a nautical term, the South remained largely undeveloped until the middle of the 20th century when socioeconomic reforms were finally instituted to stimulate development. Because of rampant illiteracy and mob control by the mafia, the South was looked down upon by people in the North. In scientific circles, Cesare Lombroso became well-known for his views on criminality and penology resulting from investigations into anatomy, behavior, and the environment that he applied to criminals from the South. Lombroso argued that it was necessary to consider a criminal within his

[2]The Germans have long been an object of hatred and scorn among Italians, dating back as early as the Roman conquest of Germania by Julius Caesar in the first century BC.

social and biological circumstances when meting out punishment (Gould 1981). This view was different from Enlightenment thinking that a criminal could freely choose whether or not to commit a crime and was hailed as a progressive force (D'Agostino 2002). In terms of anatomy, Lombroso postulated "atavistic anomalies" and, to this end, collected information from crania as well as post-cranial elements that he felt distinguished the "born criminal" (D'Agostino 2002:322). Environmental factors, Lombroso thought, could further influence the born criminal. Sergi agreed with his mentor and suggested that the inhabitants of the Mezzogiorno had degenerated in their social and cultural development from their Italic predecessors. Alfredo Niceforo also argued that race was the key to the criminality of the South, using Sergi's ideas to claim that the North and the South represented two physically and psychologically different races (Niceforo 1898). He firmly believed that Italy would never be unified because of the primitive nature of the South, which could neither govern itself nor be governed. Enrico Ferri, a lawyer, also supported Lombrosian ideas and linked the idea of the born criminal to the race of the South. Ferri viewed the South as an immutable race, unable to evolve through a series of cultural steps to become civilized (D'Agostino 2002). Although idealist thinkers like Giovanni Gentile and Benedetto Croce rejected Lombrosian thinking, it took hold in criminology, making its way even to the United States, where the great influx of European immigrants was causing different political issues.

Although there is an absence of English literature on the history of this subdiscipline, a recent book by Aaron Gillette entitled *Racial Theories in Fascist Italy* brings our journey up to the end of World War II. Italian physical anthropology is sketchy after Lombroso, but in the 1920s and 1930s, ironically under the Fascists, Lombrosian thought

was eliminated. Mussolini apparently did not like German accusations of the mongrelization of his people and thus concentrated on eliminating the racial bias against the South (D'Agostino 2002, Gillette 2002). The concept of race was used to explain the seemingly different culture of the Mezzogiorno, and Italian thinkers further applied this notion to their forays into the colonies. Italy was late getting into the European colonization game on account of the problems with internal unification. The first colony, known today as Eritrea, was occupied in 1885. In 1889, Italy colonized Somalia and in 1911, Libya. These two colonies were not primitive in the general sense of the term; there were traditions of literacy, and many people were either Moslem or Christian. It was not until the colonization of Ethiopia in 1935 that Italian anthropologists could literally chart unexplored territories and societies. However, these early investigations were largely geographical and biological in nature. By the time cultural anthropologists became interested in this area of the world and planned field expeditions in the late 1930s, World War II broke out and dashed all plans. Anthropology became connected to colonization in the mind of the general public and was looked upon with suspicion for years (Grottanelli 1977).

Archaeology

Although archaeology in Italy is largely separate from cultural anthropology, its historical development is key to understanding the lack of integration of human skeletal remains in explanations about the past. Classical archaeology began very much in a German tradition of aesthetic connoisseurship, predicated on a centuries-old pan-European passion for collecting and owning great works of art. Many ancient temples were still visible on the Mediterranean landscape in the 18th century, but new ones were discovered

at Agrigentum in 1732 by Pancrazi and at Paestum by Soufflot in 1764. Johannes Winckelmann, who visited these temples, has been cited as perhaps the earliest theoretician of classical archaeology for his perceptive analysis of ancient Greek art in his 1764 book *Geschichte der Kunst des Altertums*. Because of Winckelmann, art and other artifacts became of interest to scholars in their own right, not just because they brought history books to life (Renfrew 1980). The end of the 18th century saw Greek and Roman antiquities becoming valued commodities of the upper class, and by the early 19th century the disrobing of architecture began to occur when Lord Elgin acquired the Parthenon marbles (Pedley 1993). It was Winckelmann (as well as the classical tradition of antiquities and literature) who was the inspiration for Heinrich Schliemann's excavations at Troy and Mycenae in the late 19th century and for Arthur Evans' excavations at Knossos at the turn of the 20th century.

In Italy at this time, Giacomo Boni was the director of the Forum Romanum and Palatine excavations, and Paolo Orsi produced serious work at Syracuse and on Sicily (d'Agostino 1991). For some scholars, the turn of the 20th century signaled the end to classical archaeology's brief stint as a holistic discipline. Idealism filtered through the Hegelian tradition manifested itself in Benedetto Croce, who believed that history was the basis of true knowledge (d'Agostino 1991:53). This belief, pervasive in many aspects of Italian academic thought of the time, was detrimental to archaeology, but mainly to prehistoric archaeology both in terms of empirical methodology and in terms of the subject of inquiry (Guidi 1996). Stripped of method, devoid of history, and unconcerned with famous literary personages, prehistoric archaeology was forced to take a different path. While prehistory went to join the natural sciences, classical archaeology allied itself

with the acontextual study of ancient art.

In the 1920s and 1930s, the archaeology of ancient Rome brought forth portraits, regalia, and architecture that proclaimed the supremacy of the ancient empire. This material culture was easily co-opted into modern propaganda by way of imperial eagles and the fasces. Ranuccio Bianchi Bandinelli, an art historian, became disenchanted with Fascism and, after WWII, was made director of the new government's Antichità e Belle Arti in the mid-1940s. From this vantage point, Bianchi Bandinelli managed to take issue with reductionist perspectives on ancient art, buying into neither a nationalist perspective nor the rusticity of Roman art. In the 1950s and 1960s, Italian archaeologists discovered Marxist thought and began to focus on material culture as evidence of economic processes, not just as a history of ancient art (d'Agostino 1991). Finally, in the 1970s, Italian archaeologists began to think about theory again, focusing on methodological advances such as introduction of the open area method from Great Britain. Nevertheless, theoretical advances being made in American archaeology, as well as in Greek archaeology, were not taken up in Italy; both the historical approach and the lack of comparative studies are to blame for this.

Classical archaeology is steeped in the historic approach on account of the wealth of literary evidence from two thousand years of past culture. Modern scholars, however, are now questioning the primacy of the literary record, or what Steve Dyson calls the "Socrates sat here and Alexander fought here agenda" (Dyson 1993:201) and what Colin Renfrew calls the legacy of the "Great Tradition" (Renfrew 1980:288). The problem that prehistoric archaeology suffered following Crocean idealism has lasted to the present day, with classicists often assuming a priori the uniqueness and importance of their

geographical area and culture (Bietti Sestieri et al. 2002, Terrenato 2002, Terrenato n.d.). As mentioned earlier, however, even the often theoretically conservative discipline of classical literary scholarship is beginning to question textual evidence. No longer is Thucydides, to use his own words against him, an everlasting possession; classical archaeology cannot predicate its importance merely on the longue durée of its history.

The educational background of classical archaeologists is quite different from that of other archaeologists, especially American archaeologists. Four or more foreign languages (usually Latin, Greek, German, and French or Italian) are veritable prerequisites to the gauntlet of undergraduate or graduate study, which includes courses in ancient art, literature, and history, as well as archaeology. This thorough cultural training is seen as necessary for the archaeologist to manage a complex material corpus as well as to get a job after graduation (Dyson 1981). To some extent, though, the paradox of too much data prevents classical archaeologists from asking questions, as the tradition of classics as a discipline brings with it a tradition of competitiveness and correctness in academia (Dyson 1993, Redfield 1991). The lack of both practice and theory are further problems in classical archaeology. In the past, students were not encouraged to question archaeological methods but rather to apprentice at the knee of an excavation director, who himself was academically pedigreed. Excavation was formerly based on the idea of the Big Dig, where students were encouraged to join an excavation with the hope, after a decade of digging, to become a trench supervisor at a site like the Agora or the Forum Romanum. According to Dyson and Renfrew, this type of practical training of archaeologists, which worked well in the historiographic tradition of Blegen and Evans, only serves to further compartmentalize classical archaeology, with pottery specialists and

architecture specialists and grave marker specialists not directly contributing to synthesis of large sites but rather publishing their findings in appendices largely devoid of context (Renfrew 1980, Dyson 1981, 1993). To redefine Michael Schiffer's (1985) concept with respect to the Mediterranean world, the "Pompeii premise" in classical archaeology is that only a large, historically-recorded site is important to investigate.

Because of the tradition of historically-based archaeology and the assumed uniqueness of ancient material culture, classical archaeology has barely participated in a comparative approach to world culture. For the most part, Roman archaeology is rooted in the EBA—the Early Binford Age. The New Archaeology confused many classical archaeologists in the 1970s with its insistence on quantifying and qualifying assumptions in archaeological thought. G.E. Daniel, a Brit, explained the creation of New Archaeology thus: "American archaeologists, dismayed by their archaeological record, have sought refuge in theory and methodology, and spend their time talking about 'the elucidation of cultural process' and the production of 'laws of cultural dynamics' " (Daniel 1975:371-2). This antipathy between classics and anthropological thought, in Redfield's (1991) opinion, resulted from the former's realization that taking a comparative approach to ancient remains would cause classical culture to fall from its pedestal as the progenitor of Western society. Culture is not an unchanging state or a closed system; as such, classical archaeology does not benefit from a purely historical approach (Redfield 1991). Classicists do not often quote anthropologists, believing themselves autonomous, and anthropologists often neglect classical interpretations because of the language barrier and a prejudice against the ethno-historical tradition (Kluckhohn 1961).

All is not lost, however. Good fences are said to make good neighbors, but friendly

relations, not barriers, between classics and anthropology are necessary to move classical archaeology beyond the EBA. As Redfield says, classical archaeology and anthropology are "united in discord by their affinity. They are, in fact, two contrasting and complementary ways of looking at the same thing" (Redfield 1991:11). Some classical scholars have attempted to interact with anthropology. Ian Morris' work in Greece (Morris 1987, 1992, 1994) on social structure and death ritual demonstrates that he is quite aware of contemporary anthropological theory, including methods in bioarchaeology. Bietti Sestieri and colleagues (2002:413) critique classical archaeology for borrowing theory wholesale from other disciplines without concomitantly modifying their methodological approach. Wiseman and Woolf advocate comparative approaches in classical archaeology that include both knowledge of the literary and material corpus and command of anthropological theories (Wiseman 1983, Woolf 2004). In return, anthropology can also learn from classical archaeology. One can trace the history of anthropology through literary evidence and, by understanding the way the ancient Greeks and Romans thought, make sense of this tradition of curiosity about The Other (Kluckhohn 1961). Anthropology can gain from the tradition of discipline and exactitude in classical analysis of culture, as well as the information that prehistoric archaeology of the Mediterranean can provide in terms of domestication of plants and animals and human adaptation to diverse environments (Renfrew 1980). There is a place, writes Renfrew, "for anyone who can command the data and the scholarship of the Great Tradition while employing the problem-orientation and the research methods of current anthropological archaeology" (Renfrew 1980:297). The current place of Roman archaeology as viewed by such anglophone scholars as Dyson, Renfrew, and Morris, is in a more integrated discipline, whether in an American or Italian

anthropological tradition. One particularly easy way to bridge the gap between classical archaeology and anthropology is in the use of bioarchaeology as an approach to recovering biocultural information about the past.

The Utility of Bioarchaeology

Although human skeletal remains have been collected from archaeological sites for hundreds of years, until the past few decades, archaeologists, especially in the classical world, were primarily interested in associated material remains. Undisturbed burial places such as the shaft graves at Mycenae and Etruscan house tombs were veritable treasure-troves of elite material culture and inscriptions. Skeletons were bagged as just another artifact to be classified and stored, and the humans they represented in life might have been given sexes and ages, although often to bolster conclusions already drawn from analysis of the collection of grave goods.

Bioarchaeology was defined in the early 1970s with the rise of processual archaeology, but it was not until the mid to late 1980s that, in the United States, scholars began to realize the potential of human bone for answering questions about diet, disease, and behavior. Manuals on the identification of human bone came out in the late 1980s and early 1990s: William Bass's (1987) *Human Osteology: A Laboratory and Field Manual* and Tim White's (1991) *Human Osteology*. Yet these books covered skeletal anatomy, not questions that could be answered through the study of the skeleton. One of the earliest books to do both was Douglas Ubelaker's (1989) *Human Skeletal Remains: Excavation, Analysis, Interpretation*. Until the late 1990s, though, no books existed on the

importance of bioarchaeology. Clark Larsen's 1997 book *Bioarchaeology: Interpreting Behavior from the Human Skeleton* and the 2000 volume *Biological Anthropology of the Human Skeleton* edited by Katzenberg and Saunders finally codified and explained to the public and interested students what bioarchaeologists have been doing since the 1970s. In the past thirty-odd years, a lot of questions have been asked of skeletal material. These questions can be broadly classified into five categories: diet and nutrition; health and disease; behavior; population dynamics; and taphonomy.

The skeleton, as much as any other part of the human body, requires nourishment in the form of food and drink to acquire the necessary vitamins and minerals to function properly. Many foods that humans ingest can be observed in human bone, either directly or indirectly. Analysis of the levels of chemical isotopes, such as carbon and nitrogen, in bone can indicate that a person's diet was predominantly based on terrestrial or marine elements. Predominance of cavities in the teeth (called carious lesions) often indirectly indicates a diet high in sugars, such as that obtained from eating too much corn. Analysis of dietary signatures from isotopes can aid in questions about gender and economic differences if skeletons from both groups are isolated and compared. If we wanted to know whether women were eating more corn than men, if farmers ate different food than sailors, or if children were obtaining enough vitamins to survive, dietary analysis from human bone would be useful.

Healthy humans can inform on dietary practices, but so can unhealthy people. In addition to the dietary signatures mentioned above, skeletons can be examined for evidence of certain vitamin deficiencies that leave evidence of bone response. Rickets, a disease caused by the lack of Vitamin D in the diet, occurs when the osteoid fails to calcify in a

growing person and often results in leg bones that are bent outward. Scurvy, a disease caused by Vitamin C deficiency, prevents proper collagen synthesis and can be seen in the dentine and osteoid of children. Some communicable diseases also leave pathognomic lesions on human bone. Congenital syphilis can manifest itself in the teeth of children; leprosy sometimes induces bone resorption in the nose and facial bones and deformation in hand and foot bones; tuberculosis can cause significant deformative changes in the spine and joints (Grmek 1989, Aufderheide and Rodríguez-Martin 1998). If we wanted to know whether syphilis was brought to the New World or endemic before Columbus, or if women were kept in isolation inside dark houses, or if lepers were given burial outside the standard rites, investigation of disease in a population would be useful.

Humans use their bodies in day-to-day interaction with their culture and environment; some of these interactions can have direct effects on the skeleton. Traumatic injuries such as broken bones are, in ancient skeletons, obvious because of the lack of modern medicine to set bones properly and the necessity to continue using the affected body part. Trauma can result from accidents such as a fall or from purposeful force such as would be sustained in war or other interpersonal conflicts. Humans also tend to change their skeletons on purpose, usually for cultural reasons. Many populations file their teeth to different shapes, and the practice of cranial deformation occurs throughout the world and in various time periods. The practice of trepanation, which involves cutting a hole in the skull, is also prevalent in several parts of the world and is thought to represent the earliest form of brain surgery to relieve such diseases as hydrocephaly. There are cases of individuals who survived trepanation, and some even show evidence of multiple surgeries. Because muscles and cartilage interact directly with bone, any excessive use can cause

the skeleton to remodel to accommodate it. Musculoskeletal markers (MSM) have been defined in the osteological literature as sites on bone that indicate heavy use of one or a group of muscles. Evidence of MSMs can lead to conclusions about the repetitive actions past people were performing on a routine basis, such as throwing a spear or running long distances. Degenerative diseases such as osteoarthritis can also be seen on bone, especially in the spine and joints, caused by both old age and overuse of the skeleton. Thus, if we wanted to know the level of internecine warfare in a population, or if there was a cultural tradition of wife-beating, or what kinds of repetitive activities men and women were performing, investigation of behavioral markers on the skeleton would be useful.

Bioarchaeology is usually concerned with the aggregate of a population, whereas forensic archaeology or forensic palaeopathology is concerned with the individual. Populations are constantly pushing their geographic boundaries and coming into contact with other people who might be culturally or linguistically different from them. In the past, archaeological questions about population contact were often answered by historical information, both in the New World and in the Old World. Today, however, scientific and statistical techniques can help question or support literary evidence to model origin and interaction. The main methods of explicating population interaction are evidence of warfare and disease as mentioned above, strontium isotope analysis, and biological distance, which entails using genetically-linked skeletal and dental markers to statistically model gene flow between populations. Population origins, a key issue in Italian archaeology even today, can now be investigated using DNA and other molecular and isotopic methods to pinpoint the geographical location of the genesis of a population. Population dynamics

are key issues for researchers who want to understand the effects of colonization, the direction of gene flow between neighboring populations, or the geographical origin of a population.

Finally, bioarchaeology can contribute to the generation of theory, particularly in terms of taphonomy. No one is more concerned with the problems of using a skeletal population as indicative of a living population as bioarchaeologists (Wood et al. 1992, Wright and Yoder 2003). There are biases with which we have to work in interpreting what we discover from skeletons. Namely, a skeleton represents the death of an individual, which could have come from a swift sword blow or a long, drawn-out disease process. While a sword blow is usually more obvious in contributing to death, whether or not we can determine the effects of disease from the skeleton rests on whether a disease process was of long enough duration to be pathognomic and whether that disease was the proximate cause of death. This gets more complicated in looking at the remains of children, which are often first to disintegrate in an archaeological situation, and in setting up demographic profiles and life tables based on a skeletal population that may or may not accurately reflect the larger community. Bioarchaeology is, as mentioned, a young approach and as such bioarchaeologists are still formulating techniques and theory for the recovery and analysis of bone. Nevertheless, scientific advances have contributed immensely to these issues, and bioarchaeologists are currently engaged in fascinating discussions regarding these problems. Cremations are also becoming a focus of research for bioarchaeologists today. In the past, cremations were thought to provide little evidence of biocultural processes, but researchers working in areas of the world in which cremation was prevalent have begun to look to chemical and morphological

analyses of bones to uncover more information than the burial urn alone can provide. If we want to understand the creation of the osteological record in a cemetery or the utility of cremations, bioarchaeologists are beginning to contribute significantly to a body of theory about taphonomy.

The field of bioarchaeology in the classical world is not completely devoid of scholarship. In Greece, because of the support of the Wiener Laboratory at the American School of Classical Studies in Athens, bioarchaeology has become more integrated into the discipline. But with no similar arrangement in Italy, it is more difficult for an American to undertake a large-scale research project on human remains. Most of the current bioarchaeology in the Roman world published in English has been from British scholars such as John Robb and Simon Mays (e.g., Robb 1997, 1998, Mays 1998, 1999, 2001, Robb et al. 2001), while many Italian scholars such as Brunello Chiarelli have concerned themselves with scientific analyses of DNA in an attempt to isolate population origins (Barbujani et al. 1995, Vernesi et al. 2004). Probably the best synthesis of burial data and human remains in reconstructing ancient Roman life from a cemetery comes from Anna Maria Bietti Sestieri, an Italian whose 1992 *Osteria dell'Osa* traces the development of the city-state in central Italy during the Iron Age. In addition, scholars working on the periphery of the Roman world have contributed stable isotope and palaeopathological studies (e.g., Dupras et al. 2001, Schweissing and Grupe 2003, Šlaus et al. 2004). The most significant contributions from North American researchers to Roman osteology have been in the areas of disease origins and palaeodiet. Nearly four decades ago, J.L. Angel published his seminal article on porotic hyperostosis, anemia, and malaria in the Mediterranean (Angel 1966). Since then, such Roman archaeologists as David Soren

have been publishing studies of malaria along with physical anthropologists (e.g., Soren et al. 1995). Likely the most recognizable name of all Americans doing bioarchaeology in the Roman world is Marshall Becker. His 2002 article on the people of Sicily (Becker 2002) both summarizes the state of current scholarship in this geographical area and suggests several potential fields of bioarchaeological research that still need to be completed. Finally, in Canada, Tracy Prowse has currently been working on isotopic palaeodietary studies on a population from Isola Sacra in Rome (Prowse et al. 2004).

Classical archaeology as a whole and Roman archaeology specifically can benefit from increased bioarchaeological analyses both in ongoing excavations and of skeletal collections that have been gathering dust in museums for hundreds of years. It is no secret that classical archaeology has been slow to adopt anthropological theory; the series of articles written by Steve Dyson (1981, 1989b, 1989a, 1993) over the span of a decade indicate that some classical archaeologists were attempting to bring the new wave of processual archaeology to archaeologists who were concerned with historical accuracy. Italian archaeologists as well have written retrospectives about their lack of adoption of theory in classical archaeology as a whole (Cazzella 1996, Guidi 1996). Yet even as classical literary scholarship today becomes more in tune with contemporary postmodern theory adopted from comparative literature and linguistics, classical archaeologists often view post-processualism as a way to return to a culture-history perspective (Terrenato n.d.). Ignoring processualism is not the best way to address issues of past archaeological thought. If we want to question the primacy of elite texts for our understanding about the ancient Roman past, we need to address our assumptions and biases in archaeology as well. Processualism does more than support "common sense" hypotheses: it can help

provide a baseline from which to question and compare textual and biocultural evidence. Phil Walker (2000:14) puts this best when he says, "By using a series of data sources that, standing alone, would be open to many different interpretations, it is in this way possible to triangulate on what really happened in the past." Human skeletal remains, subject to different taphonomic processes and issues of interpretation than linguistic and material evidence, can aid classical archaeology in establishing a base from which we can formulate hypotheses and answer questions about the past, rather than merely addressing issues of chronology.

Conclusions

The early history of American and Italian anthropology was thematically similar until the middle of the 19th century. Explorers discovering new lands and new peoples wrote about their findings in proto-ethnographies, and an interest in antiquities spurred the practice of archaeological excavation. The ends to which these new discoveries were put, however, differed on account of the political vagaries in the two countries.

The prevailing hypothesis in 18th century academia was that cultures progressed from simple to complex in unilinear evolution. It was assumed that, in Europe, cultural "survivals" could shed light on the lives and cultures of prehistoric humans, and that, in America, little cultural evolution had occurred over the course of Native human occupation (Trigger 1989). Whereas the goal in American anthropology became to preserve information about the dying race of Natives and to explain why some cultures were more advanced than others, in Europe much anthropology was still based on historical records.

In the circum-Mediterranean, these texts were largely the classical histories written by such greats as Homer, Herodotus, Pausanias, Thucydides, Sallust, Pliny, Tacitus, and Caesar.

Based on the culture-history concept, both American and Italian anthropologists of the first half of the 20th century attempted to look at skeletons, especially the skull, for evidence of diffusionary traits. Coupled with such pseudo-scientific tools as Retzius' cephalic index, Italian anthropology became heavily interested in discovering the true race of the Italians and explaining the Mezzogiorno, and American anthropology in finding a biological basis to support the practices of slavery, racism, and forced removal of Natives. Skeletal measurements, when twisted to fit preconceived notions of racial superiority, represented both nationalist movements in Europe and America and a reliance on early empiricism. The legacy of Retzius, Morton, and Broca survived through the early 20th century and, unfortunately, can sometimes be seen today in major site publications in classical archaeology by authors afraid to question those who came before them and apply new methodologies in asking new questions.

It is not enough, though, to rely on the data and methodologies of your predecessors. American archaeologists realized this in the discipline-wide changes that processualism and post-processualism brought about, but many classical archaeologists are still lagging behind in terms of anthropological theory, as they belong to a discipline created from historical, textual analysis of classical literature. The time of cranial indices and -cephalic suffixes are past. Only by directly addressing the follies of our pseudo-scientific, nationalist predecessors can we be confident that past mistakes will not resurface in a new generation of archaeologists. To this end, the introduction of bioarchaeology, a rela-

tively new methodology largely underutilized in Roman archaeology, needs to be effected. Bioarchaeology has the potential to address a multitude of broad-reaching questions while addressing textual and material evidence and integrating anthropological theory. The remainder of this paper will illustrate specific ways of integrating bioarchaeology into the milieu of the classical world.

Chapter 3 – Evidence from Ancient Cremations

Pulvis et umbra sumus. (Horace, *Carmina* IV.7.16)

Inhumation and cremation are often considered the main methods of disposing of a corpse. This dichotomy of dirt and fire is a bit too simplistic, however. Throughout history, people have devised numerous ways of ridding themselves of a dead body: throwing it into a river, cutting it up, putting it in a tree, burying it in the ground, consuming it in a fire, and even eating it. All of these methods signal that the body is being used in purposeful, ritual communication in a society. Of course, the two traditional practices that are identified on archaeological sites are inhumation and cremation because these were practiced on a large scale throughout time and by different cultures around the world. Inhumation is the purposeful burial of a corpse in the ground. Primary inhumation occurs when the deceased is interred within a short time after death, and secondary inhumation refers to a practice in which the remains of the deceased are allowed to decompose either in the ground or elsewhere and then collected and buried in a single grave or ossuary. Cremation, however, refers only to the practice of burning a corpse, or the process of consuming a body by fire. Primary cremation deposition occurs when a corpse is cremated in the spot in which the remains are to be buried, and secondary cremation deposition involves burying of the remains at a location removed from the place of cremation.

At the end of Chapter 2, I presented five categories of questions that we can ask of human skeletal remains, to include diet and nutrition, health and disease, behavior, population dynamics, and taphonomy. Some researchers prefer to perform bioarchaeological studies on complete skeletons, which usually result from primary inhumations with good preservation conditions. These skeletal remains can be analyzed for their chemical content, visually examined for morphological changes that indicate disease processes, and delimited or aggregated based on demographic profiles. However, cremated remains are more fragmented, and because of the chemical and morphological changes that take place when bone is heated to high temperatures, analysis of cremated remains is not usually as straightforward as analysis of intact bone.

In the ancient Roman world, cremation was the dominant practice in several time periods, often co-occurring with inhumation. The practice of cremation has been studied by American and European scholars with processual goals of reconstruction of temperature and method of cremation, but the treatment of cremation in the classical world is severely lacking. Urns from elite cremations found in archaeological investigation in the last couple of centuries often found their way into private antiquities collections, their human contents never examined by a trained physical anthropologist. The intent of this chapter is to detail the geographical and temporal extent of cremation in the ancient Roman world, as well as to explain the importance of cremated human remains for answering bioarchaeological questions. In order to illustrate the latter, I will conclude the chapter with a brief research plan for a large cremation/inhumation cemetery outside of Rome, the necropolis of Isola Sacra.

Disposal of the Dead

Purposeful burial of the dead has been a behavioral trait of *Homo sapiens* for its entire existence as a species. The evidence for earlier hominids is still being hotly debated, but it seems that at least *Homo neanderthalensis* buried its dead at sites such as Shanidar, La Ferassie, and Teshik-Tash (Campbell and Loy 2000). Before Neandertals, hominids likely did not have the mental faculties necessary to think abstractly and symbolically, perhaps leaving their dead where they lay or moving them away from the habitation site lest predators find them.

The practice of inhumation thus dates back at least 60,000 years, perhaps earlier. At Shanidar Cave in northern Iraq, researchers found several skeletons of Neandertals who suffered numerous injuries before their deaths (Trinkaus and Zimmerman 1982). This fact, as well as a possible example of purposeful cranial deformation and the discovery of foreign pollen on one of the bodies in the cave, have led scholars to conclude that Neandertals had a complex social life including symbolic treatment of the dead. By the time of the development of agriculture and the rise of state-level society dozens of millennia later, inhumation became a complex burial practice with variations on number of individuals, method and appearance of the grave, inclusion of material artifacts, and belief systems to support it.

Cremation is a younger practice than inhumation. The first instance of this method of disposing of a corpse comes from ancient Australia. First reported in 1970, a skeleton found near Lake Mungo shows burning, cracking, and shrinking of bone indicative of cremation. The Lake Mungo cremation dates to about 40,000 years ago (Bowler et al.

2003), at least 20,000 years later than the Neandertal inhumations. Given the time and location, this cremation was performed by *Homo sapiens*, not an earlier hominid. Unfortunately, there is no evidence of human cremation between the Lake Mungo skeleton and the Mesolithic period, a 30,000-year gap. At least two cremations have been uncovered at Franchthi Cave in the Greek Argolid that date to the Mesolithic, and further evidence exists from France in this time period (Scarre 2002). It was not until the Neolithic, however, that cremation gained popularity, particularly in Greece, Palestine, Syria, Great Britain, and various sites along the Danube River (Childe 1945). By the Bronze Age, cremation was the most common practice in Europe and Asia Minor, and during the early Roman Empire, cremation continued to gain in popularity. Just as inhumation as a practice likely developed in various places at various times, cremation is also seen as a series of independent inventions across the world (Childe 1945); and, just like inhumation, the variation in cremation practices is immense. Individuals can be burned directly on the ground, on top of a built pyre, and in or on a permanent cremation structure; their remains can rest in situ once the fire burns out, or they can be collected by other people and buried or scattered elsewhere. There is no indication that fewer grave goods or less care goes into cremation than inhumation; in the classical world, for example, equal time would have been spent during the *prothesis* in preparation for inhumation as during the period leading up to cremation, when a significant amount of wood or other fuel would have been gathered for the pyre. Religious and social beliefs govern cremation in many cultures. The ancient Greeks believed that the freeing of the soul would occur more quickly through cremation (Richardson 1985), and the Romans, often concerned about desecration of the body, found in cremation a way to prevent this (Ragon 1983).

Today, we have invented a multitude of bizarre ways of dealing with dead bodies. We can donate them to scientific or forensic work, allowing our bodies to be dissected, thrown out of planes, and exposed to the elements (Roach 2003). We shoot cremains into space, stuff them into fireworks, and even extract carbon from them to create diamonds. Death in the 21st century has become commodified as a result of our collective need to distance ourselves from the reality of loss that ancient people lived with on a daily basis through plagues, high periods of infant mortality, famine, and war. Although the Catholic church still forbids cremation of the dead on pain of excommunication, since the end of the 19th century, cremation has enjoyed a resurgence in the Western world as a hygienic and secular method of disposing of the dead (Parker Pearson 2001). In terms of beliefs, Prothero (2001:12) notes that Western society underwent "significant transformations in the theology of everyday life—from viewing fire as punishing to viewing fire as purifying, from seeing the person as an amalgamation of body and soul to seeing the person as soul-only, and from viewing hell as a real and present danger to viewing hell as an antiquated relic of nastier times." Even though Prothero's observation is based on the relatively contemporary increase in popularity of cremation during the last two centuries, it shows us that more than one change took place in the belief system of Western culture. The change to cremation was not simply one of hygiene, nor one of lack of space, nor one of religious dogma, nor one of cost-effectiveness. The lesson here is that we can neither simply apply modern ideas about the best burial tradition to the ancient world nor assume one discrete reason for the complex spiritual process of disposing of the dead.

In the previous chapter, I detailed the range of questions that could be asked of skeletal remains as a general category, or complete bones that come from interred individuals.

Yet with so many centuries of cremation in the ancient Mediterranean, it will be useful to explicate the kind of information that can be gathered from this process. In the world of Roman archaeology, cremated remains, at best, have been treated as isolated biological remains that can provide only demographic information and, at worst, have been completely ignored owing to the beauty or rarity of their container (Becker 1997). Simon Mays (1998:216), an expert on skeletal biology in Britain, notes that there are three reasons for studying cremated bone: 1) in some time periods, only cremated bone exists in the archaeological record, leading to a necessity for anthropological investigation; 2) cremated bone is less likely to be destroyed in the archaeological record on account of its different mineral composition than inhumed bone; and 3) cremated remains are excellent for reconstructing ancient funerary practices. Studying cremations often requires time and effort, in addition to the expertise of a bioarchaeologist or skeletal biologist in identifying and noting changes in burned bone. But one of the main rewards for such painstaking work is the possibility of reconstructing the process and ritual surrounding cremation from archaeological information. Since we are fortunate in the ancient world to have textual descriptions of cremations, I will first synthesize that literature before turning to further questions we can ask of cremated material.

Cremation in the Ancient World

The earliest textual evidence of cremations, at least 3,000 years old, comes from the ancient Mediterranean through Homer's Iliad and Odyssey, as well as from India by way of the Vedas and Upanishads (Prothero 2001). Homer writes about the death of

Elpenor, one of Odysseus' men, in the following passage. Elpenor's body is cremated and then topped by a mound of dirt in the same place, following the traditional funeral rites (*Odyssey*, Book XII.11-15):

> Straightaway then we cut billets of wood and gave him burial where the headland runs furthest out to sea, sorrowing and shedding big tears. But when the dead man [Elpenor] was burned, and the armour of the dead, we heaped up a mound and dragged on to it a pillar, and on the top of the mound we planted his shapely oar (Murray 1984).

By the time of Homer, cremation was likely an established practice in the ancient Greek world. Both archaeological evidence of cremation cemeteries and philological evidence of stock hexameter phrases for cremation attest to its antiquity even in Homer's time (Lorimer 1933). A few centuries later, cremation shows up in the archaeological record of Italy among the Etruscans and the Veneti. However, there is a lack of translatable texts from these cultures. In the Roman world, the Twelve Tables, the earliest (450 BC) attempt at lawmaking in a young Republic, state that no one should be burned or buried within the city and legislate limits to emotional and monetary display at funerals. But it was not until the Roman Empire, when the leaders and elite began practicing cremation, that numerous authors mention this method of disposal.

In 53 BC, Caesar comments on the customs of the Gauls, including one brief mention of their funeral practices (*De Bello Gallico* 6.19.4):

> Funera sunt pro cultu Gallorum magnifica et sumptuosa; omniaque quae vivis cordi fuisse arbitrantur in ignem inferunt, etiam animalia; ac paulo supra hanc memoriam servi et clientes, quos ab eis dilectos esse constabat, iustis funeribus confectis una cremabantur (*De Bello Gallico* 6.19.4).[1]

[1]Their funerals, considering the civilization of Gaul, are magnificent and expensive. They cast into

Around the same time, Cicero notes that inhumation was the primitive burial practice in Rome (*De Legibus* ii.22.56), and Lucretius debates the merits of several forms of burial in *De Rerum Natura* (iii.890-3), including cremation (*ignibus inpositum calidis torrescere flammis*), mummification in honey (*in melle situm suffocari*), and inhumation (*urgerive superne obrutum pondere terrae*). Around 60 AD, Pliny the Elder writes in his *Naturalis Historia* (vii.187) that *ipsum cremare apud Romanos non fuit veteris instituti; terra condebantur*: cremation was not an ancient custom for the Romans, as they used to inter their dead. He further explains the popularity of cremation among the elite as conservation of an old custom; it is reported that the general Sulla was the first elite cremated in Rome, sparking the resurgence of the practice following his death in 78 BC. In the early years of the second century AD, the historians Tacitus and Suetonius mention cremation. In his *Annales* (xvi.6), Tacitus comments that Nero's wife's body *non igni abolitum, ut Romanus mos*: it was not cremated as per Roman custom but instead was mummified. Suetonius details the funeral of Augustus, whose body was carried to and around Rome before cremation and burial in the mausoleum he famously built for himself within the limits of the city (*De Vita Caesarum: Divus Augustus* 100.2-4). To some extent, the textual evidence is confusing owing to loose definitions of burial terms. The Latin noun *sepulcrum* referred to a tomb, whether for an inhumation or cremation, and the verb *sepelire* referred to any manner of disposition of a corpse (Smith 1875). Even the verb *humare* came to mean the same as *sepelire*, although its original denotation was

the fire everything, even living creatures, which they believe to have been dear to the departed during life, and but a short time before the present age, only a generation since, slaves and dependents known to have been beloved by their lords used to be burned with them at the conclusion of the funeral formalities (Edwards 1958).

of inhumation burial only.

Grave forms are identified in some detail in Jocelyn Toynbee's (1971) *Death and Burial in the Roman World*, in which she spends over 150 pages on types of tombs, some of which are cremation and some of which are inhumation. The sheer variety of tombs in terms of size, permanence, material, inscriptions, and depictions of the dead has generated many a dissertation on mortuary form through time. To the practice of cremation, however, Toynbee gives only three full pages. Cremation varied across time and space, and it required natural resources that leave interesting signatures in the archaeological record. It is archaeologists who can help fill in the gaps in textual evidence of ancient cremation practices.

The Late Bronze Age in Europe is often distinguished by a change from ostentatious inhumation to simple, often artifact-less cremation of the dead following the collapse of major Greek trade centers such as Mycenae (Collis 1984). With the end of the Bronze Age in Europe, many Mediterranean areas consisted of settlements that were fortified or in naturally defensible locations. These settlements had site-level hierarchy, but nothing on the scale of the previously powerful Greek polities. Regional traditions thus influenced the character of cremations beginning in the Early Iron Age, around 1100 BC.

Cremation became popular in the Italian peninsula in the Iron Age with the Villanovan culture, which existed from around 1000 BC to 750 BC in Etruria. Villanovan cremations were often contained in biconical or hut-shaped urns. During the early period, little differentiation was seen in grave goods and treatment of the dead. By the middle of the 8th century, with the rise of the Etruscan culture, cremated remains were being placed in so-called canopic jars (anthropomorphic ceramic vessels) or continued to

be placed in hut-shaped urns. Burials in the late 8th century, however, had more time and money spent on them, and expensive and exotic objects buried in the grave indicate a growing interest in social stratification (Torelli 1986).

The Etruscans practiced both inhumation and cremation, more or less in equal measure. Between the 7th and 6th centuries, there was a change in burial form among the elite from single cremation or single inhumation to collective inhumations in chamber tombs (Prayon 1986), but from the 4th through 2nd centuries, cremation was found in the central and northern areas of Etruria, and inhumation was found mainly in the south and on the western coast (Toynbee 1971). On the whole, burial practices remained largely continuous from the late Etruscan to the late Republican cremation burials and chamber tombs. From the 4th century BC through the 1st century AD, cremation was the dominant burial practice in Rome, spanning the Republic and the Early Empire (Smith 1875). By the first century AD, though, writers such as Petronius called cremation a Greek custom (*Satyricon* 111.2) and, by the time of Hadrian around the 2nd century AD, inhumation surpassed cremation as the most popular burial practice. Most scholars do not attribute this change to the advent of Christianity, as the timing is too early, but rather to a change in custom brought about by some unknown complex of causes (Toynbee 1971, Morris 1992).

In terms of funeral rites, Toynbee (1971:49-50) details the typical Roman method of cremation based on definitions by Festus, the *Naturalis Historia* of Pliny the Elder, the *Epistolae* of Pliny the Younger, and Vergil's *Aeneid*. The corpse was either cremated and buried where it lay (called a *bustum*) or cremated at a special place (called an *ustrinum*) and subsequently buried elsewhere. The pyre was square or rectangular and

made of wood, and the body of the deceased, along with various goods and sometimes animals, was placed either directly on top or on a couch on top of the pyre. Individuals, usually the family of the deceased, threw oil and perfume onto the pyre, along with food and ornaments. Animals were sometimes killed at the site of the cremation, as the Di Manes (spirits of the dead) were fond of blood sacrifices (Smith 1875). After the cremation, the fire was doused with wine, and the remains were collected and placed in any manner of urn: marble, stone, or glass most commonly for the elite, and terracotta or lead for others. These urns in turn could be buried directly in the ground or placed in underground tombs or *columbaria*, special structures built above-ground or into the ground that housed hundreds of cremation urns (*ollae*) in niches with inscriptions about the deceased. It is thought as well that ceramic urns such as *ollae* were commemorative of the deceased at a deeper level: use of a cooking vessel within a mortuary context might have symbolized the incorporation of the memory of the deceased into living society as an analogy to how food and drink are incorporated into the body (Williams 2004). Lower-class Romans were generally buried in the Campus Esquilinus, whereas the elite were buried in the more prestigious area of the Campus Martius or along the Via Appia leading to Rome (Smith 1875).

It is interesting to note here that in the early Imperial period, Rome had so-called burial societies (*collegia funeraticia*), mainly for slaves and freedmen who contributed money to a common fund to ensure their own proper burial. In his *Satires* (1.8.8-13), Horace comments on the poor state of burial afforded to those who did not provide for their own passing: "Huc prius angustis eiecta cadavera cellis conservus vili portanda

locabat in arca. Hoc miserae plebi stabat commune sepulcrum."[2] Although by tradition the family of the deceased paid for and effected the last rites, those who had no money or family to provide this did everything they could to avoid being buried in *puticuli*, large pits into which human and animal corpses and all manner of trash were thrown (Hopkins and Letts 1983). Contributions to a *collegia funeraticia* usually helped pay for the construction of a *columbarium* and the cremation rites, and sometimes provided for continuing graveside rites on the traditional Roman holidays for the dead (Toynbee 1971).

Although information on the ritual behind cremation that we get from ancient authors is useful, archaeological investigation can provide us with a better understanding of the process of cremation than that given by texts alone and can provide a better model of the recoverable traces of cremation in the archaeological record. Coupled with experimental cremation analysis from the past few decades, numerous aspects of ancient cremation can be recovered, including fuel for the fire, burial furniture, artifacts such as grave goods, and ecofacts, not to mention the human remains themselves.

Cremations in the ancient world required a significant amount of natural resources, particularly wood, in order to effectively consume a corpse. Barber (1990:380) notes that the necessary amount of wood to cremate a corpse is about 21 cubic meters, or about the size of a 10x10 ft room filled to the ceiling with stacked wood. Even on relatively deforested Mediterranean islands like Thera, in ancient times the inhabitants were importing wood in order to cremate the dead, attesting to the importance of the

[2]Hither in other days a slave would pay to have carried on a cheap bier the carcasses of his fellows, cast out from their narrow cells. Here was the common burial-place fixed for pauper folk" (Fairclough 1970).

practice (Lorimer 1933). The position of the body is also crucial for prudent use of fuel; if a corpse is placed directly on the ground or directly on the fuel, insufficient oxygen circulation can cause the body to incompletely incinerate (Hershkovitz 1989, Barber 1990). Thus, in many cultures a structure made of wood or other material is placed on top of or in the pyre with the corpse. Additional burial furniture may be required, such as a semi-permanent *ustrinum* or *bustum*. Offerings for the deceased, including ceramics, personal effects, and plants and animals, were either placed on the pyre with the individual or reserved for final burial in the ground with the cremated remains. Ancient cremation thus took quite a bit of supervision, time, and money in terms of procuring wood, stoking and controlling the fire, adding accelerants, performing the requisite funeral rites, and making sure the body was reduced to a sufficient degree. We can therefore infer that this custom of burial was likely attended to by a social group, whether it be the family, the community, or paid professionals.

But what exactly is left after an ancient cremation for archaeologists to find? In 1933, H.L. Lorimer noted that, in classical archaeology, cremations were "established if the bones are found in a receptacle too small to contain even a contracted burial and there are no features suggestive of secondary disposal and the soil shews (*sic*) the actions of fire" (Lorimer 1933:163). Fortunately, this tendency towards use of negative evidence of inhumation as the basis for cremation has largely been eliminated. Archaeologists now realize that cremations can be recognized from architectural correlates that depend on the permanence of the material used in construction, and biological correlates that depend on the temperature and duration of the pyre and the collection of remains.

In the 2000 volume *Burial, Society, and Context in the Roman World*, Michel Polfer and Jacqueline McKinley both reconstruct aspects of cremation in the provinces. Polfer details the different kinds of archaeological deposits generated by an ancient cremation. First is the *ustrinum*, which in Gaul and Britain was a rectangular or circular area of built stone used for several cremations. In addition, an archaeologist might find postholes that would have been used to stabilize the *ustrinum* or to mount a wooden pyre atop it. Cremated bone can possibly fall into these holes and appear to be a final resting place. Remains from cleaning the pyre might also find their way into the archaeological record in one deposit, and it is possible to find pits that were used for offerings alone with no human remains in them (Polfer 2000:31-2).

Although the ancient texts are somewhat lacking in descriptions of general processes of cremation (Hopkins and Letts 1983), as noted above we do know that the cremated human remains were either buried where they fell or gathered up into a container and placed elsewhere, either in the ground or in a built tomb. Yet including every single piece of bone was unnecessary to properly effect the last rites. McKinley notes that "all archaeological cremation burials, with the possible exception of some combined pyre site and grave features (*busta*), are essentially token; rarely, if ever, were the entire cremated remains of an individual collected for burial" (McKinley 2000:41). Given an average range of 1,600 to 2,000 grams for the weight of a cremated human body, McKinley found that only 40-60% was recovered archaeologically. Nevertheless, cremation graves, especially *busta*, can contain artifacts and ecofacts in addition to the human remains. Kreuz (2000) investigated the botanical remains from several dozen Roman sites in central Europe and found that in more than half of the cemeteries, there was evidence of peach, garlic,

chestnut and other garden plants, as well as evidence of dates and olives. Iregren (1998) and Sigvallius (1998) both examined animal offerings in Iron Age cremations in Sweden and found that different animals were provided for men and for people of high status, and that there were temporal trends in the popularity of animals found in graves. In ancient Rome, plant and animal offerings were often placed on the pyre, but could be buried intact with the urn of cremated remains or left as an offering at the final resting place of the deceased in connection with an ancestor cult or other funerary commemoration (Toynbee 1971).

Therefore, based on the textual descriptions of ancient cremations that we have from sources such as Homer and Caesar, archaeologically we might expect to find four categories of remains: 1) *human bone* in various states of preservation owing to the temperature and length of the pyre; 2) *plant and animal remains* provided as offerings to the deceased or resulting from post-depositional taphonomic processes; 3) *artifacts* such as ceramic vessels and jewelry that were provided for the deceased on the pyre or after cremation; and 4) specially-built *architecture* such as an *ustrinum* or other furniture necessary for cremation. In the following section, I will detail the kind of information we can discover from analysis of the first category of remains: human bone from cremations.

Bioarchaeology of Cremations

Morphological and chemical analyses are not as straightforward for cremated remains as for inhumed remains, but cremated remains can inform on various topics pertinent to biocultural questions. Charles Merbs (1967:498) excellently outlines four areas of

investigation: 1) cultural patterning, including heat of fire and deposition of ashes; 2) sociocultural reconstruction involving the differential treatment of individuals based on age or sex; 3) biological distance models of gene flow within or between populations; and 4) population studies including growth and pathology. Modifying these categories slightly, in this section I will present evidence from past studies that deal with methodological issues in cremations (e.g., temperature and length of burning time of the pyre), biological issues (e.g., diet, disease, demography), and archaeological issues (e.g., population movement, gender and status, change in beliefs).

Prior to the 1940s, there was a distinct absence in the archaeological literature of any kind of biological analysis of cremations. In the classical world, for the most part archaeologists studied the spatial arrangement of cremation graves or, more commonly, the vessels in which cremations were contained. Urns that were used for the final resting place of an individual were among the most ornate vessels in the ancient world, thus very likely to find their way into private collections of European elite in past centuries as antiquities, not as archaeological artifacts with biological contents. Although Wilton Krogman mentioned methods of identifying cremated remains in his 1939 *Guide to the Identification of Human Skeletal Material*, the canonical study of cremations that spawned decades of further research is Nils-Gustaf Gejvall's 1947 article on methods of estimating age and sex from cremated remains. Gejvall found that the unerupted permanent teeth of children were extremely useful in estimating subadult age because the alveolar bone protected the tooth crowns and allowed room for expansion and contraction due to heat produced by the cremation process. For estimating adult age, Gejvall concluded that width and shape of tooth roots, also protected by bone in tooth sockets, could help provide age cat-

egories for adults. Although written in Swedish, this article was used as a benchmark for decades until, in the 1960s, a wider concern with osteological investigation of cremated remains arose. Gejvall recapitulated his older article in a 1963 publication in English, in addition to advocating that archaeologists become familiar with certain pieces of bone that tend to survive cremation morphologically intact, including heads of the humerus and femur, complete vertebrae, and bones of the hands and feet. Further, Gejvall introduced a method of estimating sex from cremated remains based on the thickness of walls of bone. Females, on average, have bones that are one-quarter to one-third thinner than those of males, which he based on an experimental study of 100 modern cremated skeletons for which he knew biological sex (Gejvall 1963:475). The best early article on identification of cremated remains came from British anatomist T.F. Spence (1967) who not only detailed the fragments of bone commonly found following a cremation but also provided both descriptions and drawings of the fragments.

Attempts at identification and demography gave way in the 1960s to processual questions about the method of cremation in terms of temperature, the location of the corpse on the pyre, and the duration of the pyre, and fostered a tradition of experimentation that continues today.[3] Baby's (1954) early observations on Hopewell cremations were based on experiments using both dry (defleshed) and fresh (fleshed) material: fresh bone yields transverse splitting of bone and significant warping, whereas dry bone produces longitudinal fractures. In 1960, Calvin Wells conducted his own experiments for estimating age and sex of a cremated body, but also noted technique and temperature of

[3]Contemporary authors, however, are still publishing methods of estimating age and sex from cremated remains; q.v. Maat 1998 and Grosskopf 1998.

cremations. He found that, in archaeological cremations from 5th through 7th century Early Saxon England, the body was likely placed *beneath* the funeral pyre as indicated by the degree of bone calcination, which was less on the dorsal side of the body. Further, based on the break-down of glass beads discovered in these ancient cremations, Wells was able to reproduce the conditions under which the beads became molten and estimated the temperature of the pyre at about 900°C. Numerous other temperature experiments have been made over the years (e.g., Binford 1963, Shipman et al. 1984, Mays 1998, Whyte 2001) that investigated color changes in heated bone as an indicator of temperature. Shipman and colleagues (1984), for example, determined that bones fired under 285°C were white or yellow; those between 285 and 525°C reddish or greyish; between 525 and 645°C black, blue, red, or yellow; between 645 and 940°C white or light grey; and those over 940°C were white with some grey, red, or yellow. Other experiments, however, have yielded different colors of bone, indicating that this is not the best method of estimating temperature. A relatively recent method of estimating temperature is X-ray diffraction detailed first by Bonucci and Graziani in 1975 and used, for example, by Drusini and colleagues (1998) to estimate an average temperature of 550-600°C for cremations in ancient northern Italy. Temperature of cremation, therefore, depends on the conditions of firing (e.g., open-air or in crematoria), the duration of the cremation process, the amount of fat in a corpse (Holck 1998), and the kind of fuel used (e.g., gas, wood, oil).

Since the late 1970s, the utility of cremated remains in investigating biological issues has been discovered. In 1977, Herrmann found that histological analysis of some cremated remains could be used in the same way as non-cremated bones. At a temperature of 700-800°C, the mineral content of bone changes. However, his investigation of incom-

pletely cremated material, or that from cremations that did not reach 700°C, revealed only minor shrinkage compared to fresh bone. Therefore, histological features indicative of diet and disease can be identified equally on inhumed bone as on bone cremated at low temperatures. Histological analysis is also useful in estimating the number of individuals in a given cremation assemblage and can provide evidence of age of an individual based on qualitative age references such as Haversian systems, resorption canals, and the circumferential lamellae (Cuijpers 1998). Isotopic analysis has been applied to cremated remains as an indicator of diet from bone. This method has had great success on complete, inhumed skeletons, but its utility for cremated remains is questionable. Although Price and Kavanagh (1982) note no significant differences in isotope analysis due to the heat of cremation and consequent chemical changes in bone, most researchers found varying levels of isotopes following cremation (DeNiro et al. 1985). After bones are burned, following recrystallization of the hydroxyapatite, trace elements that are present in dry bone are usually excluded from the cremated bone (Runia 1987). Herrmann and Grupe (1988), however, found that it is possible to isolate Ca, P, Sr, Ba, Mg, Zn, and Pb from cremated remains, although Ca increases due to incineration and can cloud the Sr/Ca ratio. Later research by Grupe and Hummel (1991) demonstrated that by using regression analysis, the Sr/Ca ratio can be reliably reconstructed if the temperature of cremation is known. Finally, some researchers have claimed that DNA can be isolated from ancient cremations. Cattaneo and colleagues (1994) found that in 8 out of 31 ancient cremations from as early as the 10th century BC, human albumin could be detected, probably resulting from the incomplete cremation of the corpse at low temperatures that often characterize ancient pyres. Brown and Brown (1992) also claim to have extracted DNA

from cremated remains from the Early Bronze Age. The number of biological studies of cremated remains is slowly increasing, and it is possible that detection of albumin and extraction of DNA could be perfected in the future, leading to cremations becoming a more viable resource of scientific analysis.

The practice of cremation in a given culture raises numerous questions, particularly when burial practices change. Using demography and biology, contemporary researchers have begun to look at archaeological questions such as changes in religious belief, population movement, and gender and status differences in a more sophisticated manner. The advent of Christianity in the Roman world, for instance, did not directly cause the unpopularity of cremation as a burial practice. We find cremation graves in the necropolis of Isola Sacra, for instance, between the 1st and 3rd centuries AD, long after Christianity began influencing the Empire, but the practice of cremation was declining before the introduction of this new religion. As noted earlier, it is likely that a complex interaction of changing religious beliefs and changing ideas of status in a society centuries removed from the end of the Republic led to the prevalence of inhumation during the late Empire. In the past, classical archaeologists often ascribed any change in culture, whether it be the introduction of a new pottery style or the waning of cremation as a burial practice, to population movement. Today, though, with more advanced techniques of analysis of human bone, population movement can be identified through gene flow. Murail and Girard (2000), for example, report on a cemetery from Gaul that dates to the 1st through 5th centuries AD and contains cremations, inhumations, and ossuaries. Based on the high instance of nonmetric traits such as the occipital bun and congenital pathologies such as osteochondroma (a bony projection often found on the distal femur), the authors

conclude that gene flow was limited and the population relatively homogeneous. Thus, within the span of four centuries and several different forms of burial practice, there is no indication of a new population replacing the old. In the ancient Roman world, in certain time periods cremation was reserved mainly for the elite. As noted earlier, the Roman general Sulla was the first historical figure in several generations to be cremated, and it is thought that this led the elite to emulate him. In some special cases, additional individuals, perhaps slaves or consorts, were cremated along with the deceased (Becker 1993). Differences in artifacts and faunal remains can indicate differential treatment of the dead based on status or gender (Binford 1963, Becker 1995, Iregren 1998, Sigvallius 1998, Kreuz 2000), but within any given time-period in Roman history, there is no clear-cut distinction between burial practices of the elite and the non-elite. Rather, it is necessary to take into account the local burying practices and the social climate in order to fully understand which individuals were provided which kind of burial.

Fortunately, with ample textual and archaeological evidence, this kind of fine-resolution investigation is possible in the Roman world. In the following section, I will briefly examine the necropolis of Isola Sacra and outline how an analysis of cremation burials could add to the extant bioarchaeological data from inhumation burials.

Case Study - Isola Sacra

An ancient road that extended between the Roman city of Ostia and the Portus Romae, started by Claudius in 42 AD and completed by Trajan in 112 AD, is the setting for the necropolis of Isola Sacra, so-called because an artificial canal created by Trajan

joined with the Tiber River to circumscribe an island between the two cities. This necropolis, in use by the inhabitants of Portus Romae between the 1st and 3rd centuries AD, extends about 1.5 km along the ancient road.

The site of Isola Sacra was first discovered in the middle of the 19th century, but archaeological investigation was not begun until 1925, when Guido Calza undertook excavations. Calza excavated for several decades and published his comprehensive report, *La Necropoli del Porto di Roma nell'Isola Sacra*, in 1940. Although he details the architecture, art, and inscriptions of the necropolis in this volume, as per the time, he barely mentions the skeletal remains. Subsequent excavation at Isola Sacra from 1973 to 1982 recovered the skeletal remains that Calza put back in the tombs: more than 1,000 individuals were found (Bondioli and Macchiarelli 2005). Further excavation was carried out in the late 1980s, and the skeletal series of Isola Sacra now includes at least 2,000 individuals (ibid.). The variety of tomb types is large at Isola Sacra, including single interments in sand (what Calza calls *tombe dei poveri*), wooden coffins, and sarcophagi; single cremation interments in amphorae; and single or multiple cremation or inhumation burials in sarcophagi, columbaria, *formae*, and *arcosolia*. The necropolis has not yet been completely excavated, meaning it is probable that further cremation and inhumation tombs will be discovered in the future.

From textual and inscriptional evidence, it appears that the people who lived at Portus were relatively wealthy, associated with trade as the main port of Rome (Prowse et al. 2004). Occupations of the inhabitants ranged from trader to merchant to administrator under the Roman Empire, but there is no evidence of aristocracy in the epigraphical evidence (ibid.). Archaeology can be used to broaden this picture of life in Portus in the

Imperial period. Particularly useful would be to answer three questions: 1) Where and when were people buried at Isola Sacra? 2) Who was buried in this necropolis? 3) What social processes were occurring that controlled the manner of burial of an individual? Where and when are relatively easy questions to answer of this site. Based on inscriptional evidence, tomb types, and artistic styles, the necropolis at Isola Sacra can be confidently dated in use from the 1st to the 3rd century AD. Based on excavations over the years, it would appear that the tombs cluster along the road near Portus. Because of Roman laws requiring burial of the dead outside the city walls, the sides of the road immediately outside of the city walls were often used for burial. Textual evidence indicates in general who was buried at Isola Sacra, but only archaeology's unique time-depth can help us understand the social climate and processes that led to the formation of the cemetery.

Yet what we do not know about Isola Sacra from texts is where and how the people who were not merchants or traders were buried, or what the inhabitants ate, or whether social change was more rapid in this area on account of its function as a port. Combining material culture with texts and biocultural remains is a way to answer some of these questions. Admirably, classical bioarchaeologists have begun to tackle the 2,000 human skeletons, particularly in terms of palaeodiet, demography, pathology, biological variation, histology, and DNA analysis.[4] Results of dietary analysis, for instance, have shown that the inhabitants of Portus ate both terrestrial and marine resources (Prowse et al. 2004). The skeletal remains, in spite of the confused array of Calza's 1,000 individuals, have been undergoing extensive analysis since the late 1990s. However, no publications

[4]See Bondioli and Macchiarelli 2005 for a comprehensive bibliography of the physical anthropology that has been done on the skeletons from Isola Sacra.

appear to tend to the cremations. Calza notes that the cremations were made in the usual fashion: ashes were collected in thick, rough vases and either placed within a circular niche in a built tomb or deposited directly into the ground with the neck and rim sticking out to receive libations (Calza 1940:53-4). In some cremations, Calza found coins and in some he found *i residui ossei della cremazione*, but no indication as to how much bone material or in how many urns. Calza found no evidence of an *ustrinum* to pinpoint the location of the cremation process.

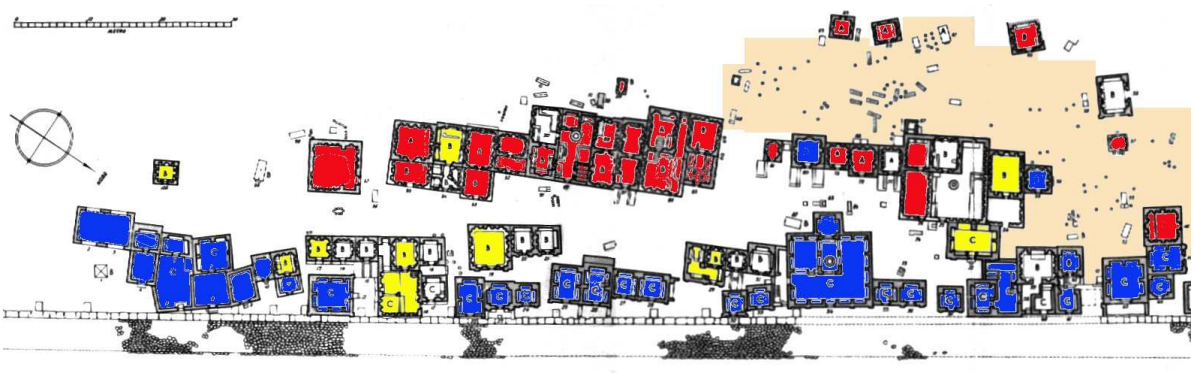

Figure 1: Necropolis of Isola Sacra, from Calza 1940

The built cremation tombs discovered at Isola Sacra mostly date to the first half of the 2nd century AD. There is a definite clustering of cremation (highlighted in red) versus inhumation (highlighted in blue) tombs, with the latter closer to the road as seen in Figure 1. Those tombs highlighted in yellow were built to house both cremation and inhumation burials and largely date to the second half of the 2nd century AD. Cremations are also found in what Calza calls the *campo dei poveri*, or the field of the poor, highlighted in tan. In this area, over 120 cremation graves were discovered. That the built cremation tombs and the *campo dei poveri* lie on a relatively straight axis might

indicate that the ancient road changed course slightly, allowing the inhumation tombs to be placed along it in a later time period. It is also interesting to note that the *campo dei poveri* is located further from Portus than the built cremation tombs.

In terms of status, the cremation tombs are somewhat of a mystery. Prowse and others can perform isotopic analysis to glean evidence of dietary differences among various social groups, but as noted earlier, cremated remains likely cannot yield similar information. Nevertheless, demographic studies can be done on cremated remains, biological distance analysis can be performed on fragmentary remains, and morphological analysis, such as evidence of disease and use of muscles, can be noted. These lines of evidence can inform on gender differences, particularly in use of the body in terms of occupation or household tasks. Tooth wear, musculoskeletal markers, histological changes, and the differences these take within social categories are worth investigating from cremated remains as much as from skeletal remains. If we add to this the artistic evidence from the cremations, we would find that at Isola Sacra the use of an occupational relief is common in inhumation tombs, but not in cremation tombs. In fact, only one built cremation tomb has a depiction of a miller; many others have carved floral or mythological scenes, but not reliefs of humans.

Complex social changes must have been occurring at Portus during the 2nd century AD. Archaeological evidence shows us that there is not just a simple change in burial practice: the spatial arrangement of burials becomes oriented immediately along the road rather than a bit further back; the artistic style of commemoration changes from floral and mythological figures to occupational and decidedly mundane depictions of humans; built tombs no longer have proscriptions against inhumation, and some are built to house

both cremation and inhumation burials; reuse of cremation tombs as inhumation tombs occurs in the later period, indicating either an acceptance of a different form of burial or a change in ownership. By limiting ourselves to the skeletal evidence from inhumations, half of which was excavated and mixed up by classical archaeologists in the 1940s, we can only answer the question of who the inhabitants of the necropolis were, what they ate, and how they died. Comparisons can be made, however, between the inhumed and cremated individuals in order to investigate differential patterns of diet, disease, and status. Histological analysis can inform on diseases that might have affected the inhabitants of Portus, whether they were inhumed or cremated, and biological distance based on inherited bony traits could help determine whether family groups made the change from cremation to inhumation or whether new lineages that moved to this busy port were the first to introduce the practice of inhumation.

A more nuanced approach is necessary to fully understand the people who lived at Portus, a booming trade center with merchants and sailors from all over the Mediterranean. Textual evidence will not detail every plot or niche purchased in a cemetery or *columbarium*, nor can it provide a diachronic explanation for biological or social change. This brief case study of the necropolis of Isola Sacra demonstrates how powerful archaeological and biological information from cremation can be in reconstructing past lifeways.

Conclusions

Cremation is a younger practice than inhumation of the deceased, but one that became quite popular in the Roman world. Previous classical archaeologists neglected not

only skeletal remains from inhumations but also fragmented remains from cremations, believing them to be of little use to archaeological reconstructions of past lifeways. Yet with the rise of processual approaches to archaeology, researchers began to realize the potential of cremations for answering methodological, biological, and archaeological questions. Classical archaeology is unsurprisingly lagging behind in the anthropological analysis of cremated remains, as even the current research focus tends to be on the aesthetics and provenance of the burial urns themselves resulting from the previous tradition of ethnohistoric concerns. Numerous sites in the Roman world, though, are ripe for analysis and reinterpretation of the biocultural remains. Isola Sacra is an ideal example of the potential for future research, as the co-occurrence of cremation and inhumation practices indicates two different traditions of burial that had to have been socially controlled to some extent. Diachronic change can be investigated at Isola Sacra by identification of variation in burial practices, but to date no reports on the cremations from this site have been published. If we wish to understand the nuances of Roman culture, particularly from such a variable and ritual-laden process as disposing of the dead, it is imperative that we examine all biological remains, not just the ones we feel are most intact.

Chapter 4 – Shades of the Middle

Negotium populo Romano melius quam otium committi. (Appius Claudius)

A tradition of ethnocentrism, of regarding The Other as alien, immoral, and inferior, has always existed among human cultures, but in equal measure have people been curious of the habits and customs of foreigners. In the early textual tradition, Plato and Aristotle created the essentializing ideas of *eidos* and the *scala naturae* in the 4th century BC as ways of explaining and classifying humans among the other animals. Caesar and Lucretius write about the Gauls and the Germani, painting a picture for the literate Roman elite of how The Other lived. In recent times, anthropology rose as a discipline to investigate The Other following the Enlightenment, when Europeans were intent on studying human behavior through such areas as law, sociology, philology, and especially history. As a discipline taught in schools of higher education, however, anthropology was mostly born out of natural history as a way of understanding people in European colonies in much the same way as the plants and animals of those colonies were understood and described. Archaeologists, both in the American and in the classical traditions, were equally interested in classifying and categorizing artifacts and, by extension, people in the early 20th century. In generating a theoretical approach to research questions, though, American archaeologists and classical archaeologists have taken two different directions; the former have relied on theory generated largely by cultural anthropologists, while

the latter have languished in the historical tradition. Archaeology has a unique time depth to studies of the past, but it is important both to utilize the research methods and theoretical orientation in current anthropology in formulating questions and to recognize the limitations of this approach when confronted with data that do not fit predefined models.

In the past few decades, anthropologists have increasingly attempted to avoid structuralism in their analyses of human culture, moving into post-structural and post-modern methods of interpreting behavior. However, one clear residuum of the old doctrine is the use of binary opposites or dichotomies in ordering and classifying the world as we perceive it. In spite of the current self-reflexive nature of the discipline, which has led to questions about the validity and veracity of the practice of anthropology, scholars have clung to simple, often inherent, classificatory schemata even when tackling such heady issues as ideology, hegemony, power, and resistance.

Anthropology in the world today is largely practiced by educated, middle-class men and women who are directing their more popular publications and presentations at the middle class: we have an anthropology *by* the Middle, *for* the Middle, but one that ignores the middle ground between elite and non-elite levels of society. Identification of the ends of the social continuum to the exclusion of the intermediate is particularly apparent in classical archaeology. As noted in Chapter 2, the practice of classical archaeology comes from an historical tradition that values textual evidence, written by the elite, over material culture. In addition, recent theory in Italian archaeology has developed from post-WWII readings of Marx and Gramsci, who focus on the power the lower class has to change the social order. Contemporary questions in Italian archaeology, though,

cannot be answered by simple models. It has been shown in recent years, for example, that the process of romanization is not a unidirectional colonized/colonizer dichotomy; similarly, gender studies cannot be reduced to male/female, nor class issues to elite/non-elite. Social structure in the ancient Roman world was more complex, better represented by indices of status than by binary opposition.

In this chapter, I will address the possibility of moving beyond structuralist dualisms that pervade archaeological literature in an attempt to approach the Middle of ancient society. Following a brief foray into the utility of contemporary anthropological theory for investigating the Middle, I will present two case studies from the Roman world to show how bioarchaeology can help elucidate the daily lives of individuals who have been underrepresented in history.

The Concept of Class

For most of the life of anthropology as a discipline, in both the U.S. and Italy, the concept of class has been steeped in Marxist ideas of capitalism. When human labor power became a commodity that could be bought and sold, when virtually enslaved serfs became landless peasants, capitalism came into being. The aristocracy became the bourgeoisie, which owned the land and the means of production and which paid the peasant workers, or proletariat, to produce food, energy, and other goods for them. Mediation between these two groups occurred by means of commodities, whether goods or services, resulting in an obvious disparity in surplus. The Industrial Revolution served to drive the wedge between the proletariat and bourgeoisie even deeper; the proletariat

became increasingly disgruntled with working conditions, pay rate, and social relations as the bourgeoisie became richer. To Marx, the fundamental inequality in history was economic, that between the proletariat and bourgeoisie. There was no true middle class to him—communism would ideally create one class economically somewhere between the proletariat and the bourgeoisie.

Modern anthropology's concept of class has broadened from that of Marx, yet the middle class tends to hold the position of an amorphous non-entity. *Inclusion* in the middle class is allowed when *exclusion* from the lower and upper classes is made. Complicating the modern notion of class is that we are no longer talking simply about an economic division of society. The idea of the middle class in Western society involves various other cultural correlates: higher education, but perhaps in a public university; variety and quality in diet, but lacking both fast food and five-course meals; social values, such as disdaining the poor and envying the rich. The American and Western middle class is indeed the Goldilocks of our hierarchical society: wealthy, but not rich; educated, but not overly so; creators of knowledge, but not of power.

But we as Western anthropologists today largely come out of middle-class economic upbringings. There are no longer armchair ethnographers who report on second-hand information about far-away peoples without leaving the comfort of their enormous house and their upper-class social world. Nor are there archaeologists who refuse to sully their crisp white linen suits while local workers toil through layer after layer of dirt for a pittance. The days of anthropology as a pastime of the privileged class are over. The discipline is now institutionalized and professionalized. Although anthropology began as the study of non-Europeans by middle-class Europeans interested in "studying down" to

other cultures, with the advent of post-structuralist and post-modernist approaches to anthropology, recent research has gone into both "studying up" and "studying across." Borrowing from the philosophy of Heidegger and Hegel and from the philosophy-cum-literary-theory of Derrida, modern anthropologists seek to situate themselves and their work in a self-conscious worldview, asking what it means to be an anthropologist in today's society.

In Roman archaeology, it seems that most studies of culture are still geared towards understanding the differences between upper and lower: the Empire and the provinces, males and females, the elite and the slaves. In order to fill in the gaps between these categories, we cannot use contemporary theory in cultural anthropology as a crutch. Lateral studies have been made in linguistics and American ethnography; however, the latter tend to isolate groups in society such as Latino restaurant owners, urban teenagers who espouse hip-hop culture, or U.S. soldiers on foreign campaigns. There is no ethnography of the yuppies, those individuals with a spouse, 2.1 kids, house in the 'burbs, SUV, and good job on which we can model our archaeological questions about the Middle. Focus has been placed on class, race, and patriarchy as the fundamental inequalities underpinning society today, which leads to a focus on historically underrepresented groups of individuals: the lower class, women, and people of color, often called the subaltern in anthropological literature (Spivak 1988). Is the Middle (economically or socially) too diverse to warrant closer examination? In terms of the ancient Roman world, the answer to this question is a resounding no. In order to understand the totality of Roman society, we need to examine people from all social perspectives, not just the ones the elite immortalized in texts. In the remainder of this chapter, therefore, I will examine

past and present dichotomies in anthropology and propose a way to use bioarchaeology to reintroduce the Middle to our often polarized discipline.

Beyond Dichotomies in Anthropology

Long before Claude Lévi-Strauss postulated a series of dualisms applicable worldwide to human cognition, the early historical Western world was concerned with binary opposites. One of the main tenents of the Pythagorean school of philosophy in 6th century BC Greece was the ability to reconcile opposites such as odd/even, right/left, male/female, light/darkness, and good/bad (Guthrie 1981). Anthropologists, drawing from ideas such as these in philosophy, took as their main dichotomy nature versus culture, which underpinned much early anthropological research. Such broad categories as nature and culture, though, are hardly specific enough for the purpose of examining the median of society. Thus, the dichotomies in anthropology on which I will focus in this section are colonizer/colonized and elite/non-elite. In deconstructing one idea each from ethnography and archaeology, it is possible for the Middle to be recovered in the interstices (or are they chasms?) of the dichotomies.

Arguably the most overused dichotomy in ethnography exists between the colonizers and the colonized, especially favored around the 1950s and 1960s as former European outposts such as India and Algeria fought for the freedom of the indigenous people and their culture. This idea of decolonization, which Frantz Fanon (1963:35) defines as "quite simply the replacing of a certain 'species' of men by another 'species' of men," forced ethnographers to seriously consider their position in the creation of history, narrative,

and native events. However, framing the interaction in colonies as an often quite literally black-and-white situation can lead to the omission of intermediary or Middle points of view. Fanon (1963:38) characterizes the colonial world as "a world cut in two," that is divided into the settlers and the colonized. The former are "first and foremost those who come from elsewhere" (Fanon 1963:40) and are seen as alien and superior, whereas the latter are "declared insensible to ethics" (Fanon 1963:41). The unethical native is markedly contrasted with the superior alien, but Fanon believes that if the colonized recognize that morality is underwritten by the settlers they can overthrow their oppressors and effect the complete transformation of the situation that is necessary for decolonization. There is no Middle for Fanon—native intelligensia are self-serving puppets of the settlers, and educated settlers aid in the persistence of Western education and thus Western morality. But what of his own position, or that of the so-called *compradors*, individuals who are able to move socially between the colonized and the colonizers? Other authors are silent on this as well, tending, like Fanon, to collect such cultural mediators to the offensive side of the game board.

Edward Said (1989) discusses a mediator of sorts, what he calls the *interlocutor* in a colonial exchange. This notion, though, is still dyadic in that the interlocutor is polarized as either native or non-native. For Said, the colonial interlocutor can be either a compliant native who happily talks (and therefore is likely to be a marginal member of society) or a native intellectual who refuses to talk (because antagonism is better than compliance) (Said 1989:210). Anthropologists tend to view colonialism as a distich of two peoples intertwined by the poetry of culture. Yet explanation for culture change is all-or-nothing: "The histories, traditions, societies, texts of 'others' are seen either as responses

to Western initiatives—and therefore passive, dependent—or as domains of culture that belong mainly to 'native' elites" (Said 1989:212). The dichotomy of colonizer/colonized would appear, then, to be largely devoid of applicability to an investigation of the Middle.

Archaeology is probably even more guilty than ethnography of failing to situate the Middle. Fewer artifacts are generally taken to mean lower class, whereas artifacts of increased quantity and quality tend to mean upper class or elite. Better health, discernible through skeletal remains, is assumed to be linked to access to better subsistence, discernible through botanical material. Reliance on purely material remains such as these, however, can trap archaeologists in an *argumentum ex silentio* for representation of the non-elite and can create a large, poorly-defined Middle for characteristics of culture that do not neatly fit into the categories of elite/non-elite. It is as if archaeologists envision status as a Venn diagram, where the Middle is merely an amorphous region of overlap between the two clearly-defined circles comprising the elite and the non-elite. At the Greek site of Mycenae, for example, there is one large cemetery of simple graves with few artifacts, in addition to two smaller cemeteries with more elaborate graves and such artifacts as hammered gold masks (the infamous mask of Agamemnon among them), weaponry, ceremonial objects, and exotic goods from various Mediterranean locales. Laying aside for the moment the fact that the larger, simpler cemetery was never properly excavated, are we to believe that Mycenaean society consisted of just elite and non-elite? Or could there have been some inchoate strata within the elite or non-elite that we have not recovered archaeologically because of our myopic perspective?

It seems that many archaeologists feel the recovery of the Middle is akin to Hawkes' ladder (Hawkes 1954), an old postulate which claimed technology (which represented

the lower, working class) was easier to recover and understand than religion (which was controlled by the upper, elite class). Ritual became for many archaeologists a catch-all category into which any material object whose use could not be surmised was thrown. Visibility of groups in the archaeological record, though, does not exactly parallel Hawkes' ladder because the Middle is not a categorical step but defined in relation to the elite, which has an abundance of material remains, and the non-elite, which has no material remains. This failure to position the Middle archaeologically unfortunately seems to coincide with a decline in the use of ethnoarchaeology (itself possibly a product of the self-questioning nature of modern ethnography) to understand social position and the workings of ideology. One study, the Garbage Project of Bill Rathje, is using contemporary trash to study refuse discard patterns that could potentially be applied to theories of present and past conceptions of social class. Nevertheless, archaeology should be responsible for identifying *all* groups in the archaeological record, not just elite versus everyone else. Said and Fanon may contribute little for archaeologists to use in deconstructing dichotomies, but other sociocultural theory can be used as a starting point for situating the Middle. Two potential springboards for an anthropology of the Middle can be found in Michel Foucault's *Discipline and Punish* and *Society Must Be Defended* (1976, 1977), and in Erik Hobsbawm's (1983) concept of invented traditions.

Discipline and Punish is an early attempt at using various social sciences to sketch a history, yet one that is still steeped in structuralist tradition. Foucault is largely concerned with such dichotomies as body versus mind as the object of punishment through time and the change in power of the sovereign from that of taking life and letting live to making live and letting die (Foucault 1976, 1977). What is interesting about Fou-

cault is that he allows for the emergence of the Middle as the public, the spectators at a public execution for example, but does not paint them as necessarily complicit in the hegemonic domination of the sovereign. The public execution brings together the elite (sovereign), the Middle (observers), and the lower class (prisoners) in the shared scandal of torture (Foucault 1977:9). Later in history, the "right to punish has been shifted from the vengeance of the sovereign to the defence of society" (Foucault 1977:90), such that wrongdoers become traitors and rebels to society, instantly categorizing themselves as opposed to the Middle. The Middle is also the group that elites are treating as "biopolitics' first objects of knowledge and the targets it seeks to control" (Foucault 1976:243). This group is not James Scott's (1987) "weak" nor Fanon's colonized. Archaeologically, if not ethnographically, it could be possible to recover something of Foucault's Middle. Perhaps burial practices in some contexts parallel Foucault's public executions: hundreds of people found in bogs in Denmark appear to have met untimely (punished) ends, some with nooses still hanging around their necks, and the discovery of skeletons with neck and foot shackles at Phaleron, one of the harbors of Athens in classical times, has been interpreted as a crucifixion-type of punishment called *apotumpanismos* (Thompson 2003). If these contexts also produce "standard" burials as well as "elite," we effectively have a Middle as Foucault would see it. However, the problem with using Foucault in this sense to create a Middle is that it is defined in relation to the prisoners, the social deviants whose misdeeds we are using as a foil to re-create the proper behavior of the Middle. Again we are falling into the trap of creating a Middle in relation to another class, setting up two categories on either side of an inequality sign.

Another author whose work has potential for recovering the Middle is Eric Hobsbawm.

His concept of invented traditions would appear to be applicable to all strata of society. An *invented tradition* is a "set of practices, normally governed by overtly or tacitly accepted rules and of a ritual or symbolic nature, which seek to inculcate certain values and norms of behavior by repetition, which automatically implies continuity with the past" (Hobsbawm 1983:1). The creation of these traditions is not limited to the elite—the Middle and the lower class can just as easily reuse material remains and mental constructs to create an ideology justified by pseudo-continuity with the past. If it is possible to find correlates of tradition (patriotism, loyalty, school spirit (Hobsbawm 1983:10)) in a culture, then it should be possible to locate a Middle (or several middles) in ethnographic studies or archaeological remains. Not that this is a straightforward task. What do antiques signify in the archaeological record, other than a means of throwing off our endeavour of chronological reconstruction? We cannot necessarily assume that antiques equal elite (as, for example, in the Toumba burial at Lefkandi) because antiques could just as easily equal poor (as in the reuse of discarded or hand-me-down items by African slaves in the U.S.). In the same way, the concept of an invented tradition can bring the realm of antiques to the ideology of the Middle. Other traditions can be identified in the archaeological record as well, including such plastic methods as pottery production and physical changes such as cranial deformation. Each of these traditions would have been steeped in practices and methods handed down through the ages, and each can tell us something about both the physical processes and the belief systems of the practitioners.

It is too easy sometimes to neglect the Middle as we separate our material or ethnographic information into the haves and the have-nots. Previous anthropology focused on the elite, and modern anthropology focuses on the non-elite. Yet a Middle can be iden-

tified in numerous contexts—social, economic, political: those individuals or groups that have *some* power, *some* knowledge, *some* wealth. Perhaps it is a problem with semantics. The contemporary Western middle class is amorphous, comprising numerous social, economic, and political groups, as well as various anthropologists and their methodological and theoretical approaches. This lack of definition of our own Middle colorizes our view of what is important to study in anthropology, and we find it easier to identify dichotomies than to tackle the entirety of a complex topic. Classical archaeology suffers similar problems as contemporary ethnography. Ancient Roman and Greek society was complex and far-reaching, yet differentially experienced by people in divergent geographical and social contexts. Archetypal categories of colonizer/colonized and elite/non-elite are just as useless for ancient society as for modern.

In order to avoid merely trading a binary for a ternary, though, classical archaeologists need to approach their data with an eye toward matrices of status rather than how well their information fits into a neat social category. Cultural change was represented by German diffusionists as culture circles (*Kulturkreislehre*) in the early 20th century, and Roman archaeologists adopted this idea to model the spread of Roman art and architecture through the provinces in a process called romanization. But questions such as the validity of the idea of romanization as a unidirectional process are being influenced by post-colonial thought and being complicated by the contextual contingencies that archaeological investigation can provide. Numerous books and articles have come out in the past decade that are focused on understanding the sociocultural interactions between the colonizers and the colonized, rather than on simply tracing the introduction and spread of particular aspects of Roman material culture (Meadows 1994, Woolf

1997, van Dommelen 1997, Woolf 1998, Keay and Terrenato 2001). Yet not all classical archaeology is as theoretically oriented as this debate. Two paradigmatic dichotomies largely unexamined by archaeology, elite/non-elite and male/female, would benefit from a contextual rather than a purely textual approach. In the remainder of the chapter, I will present two case studies to address these issues: first, the daily lives of the unsung small farmers whose agricultural labor provided the bulk of the foodstuffs in the Roman world; and second, the role of women and children within the context of the Roman fort. By drawing on biocultural information on diet, activities, and environmental stressors, I will emphasize how skeletal material can be used to give greater depth to the day-to-day existence of those individuals at neither the bottom nor the top of the social ladder.

Constructing an Identity of the Middle

It has been widely accepted in archaeology that artifacts found in association with graves can connect the deceased's social identity or persona with participation in an ordered social structure; thus, grave goods belie an individual's place in organized society. The archaeology of individuals' presentation of themselves and their loved ones in death began in earnest in the 1970s with several processual approaches to the analysis of burial furniture, material culture, and mortuary patterning as material indicators of a social persona, or the collection of identities a given person accrued in life and reflected in death (Goodenough 1965). The Binford/Saxe mortuary plan, a mixture of the two major orientations in mortuary archaeology at the beginning of the 1970s (Binford 1971, Saxe 1970), states that differential treatment of the deceased is based on social persona, and the peo-

ple who can claim relationship to the oldest member of a cemetery are likely also to be the elite of the group. Another influential ethnographic analysis was performed in the 1970s by Joseph Tainter (1978), who examined measures of complexity in mortuary practices and formulated his theory of energy expenditure. Archaeological correlates of mortuary complexity, in Tainter's theory, include body treatment, construction and placement of interment facilities, extent and duration of mortuary ritual, material contributions to the ritual, and human sacrifice. Tainter termed these correlates collectively 'energy expenditure' and found that the social rank of an individual could be equated with the degree of energy expended on his funeral rites. Using statistical methods of analysis quite popular in the 1980s, O'Shea (1984) was able to lend credence to the long-held belief that larger quantities of grave goods and greater degree of elaboration of graves provide evidence of vertical stratification in a population. He also examined horizontal distinctions of status, or those that obtained within a specific social rank, including age-specific artifacts and burial styles, sex-specific artifacts and burial styles, and social relationships marked by perishable material culture such as hairdo, clothing, and totemic grave goods.

Early processual approaches to identifying individuals and classes in mortuary analysis, however, tended to reinforce an interest in vertical status, an elite/non-elite dichotomy, by seeking to identify the individuals in a cemetery who were treated differently with respect to the mean. In the realm of bioarchaeological analysis, postprocessual approaches to mortuary data led by such scholars as Mike Parker Pearson began in the 1980s and took firm hold by the 1990s. Several key themes surfaced over the years that separated this new way of thinking from the Binford-Saxe generation, including identity, social memory, agency, and performance (Chesson 2001). Rather than merely a

reification of the deceased's social persona, mortuary ritual could be seen as "a sensuous arena in which the dead are mourned, social memories are created and (re)asserted, social bonds are renewed, forged, or broken, and individuals make claims for individual identities and group membership" (Chesson 2001:1). Thus, because of individual agency, mortuary practices and their biocultural correlates are no longer assumed to faithfully reflect society as a whole (Silverman 2002).

Also on account of a burgeoning interest in individual identity and memory, there have been several mortuary studies describing social deviancy, although there are varying definitions of the term. Some authors see deviance as a social persona completely outside of cultural norms, perhaps an individual who committed suicide or criminals who were beheaded (Hopkins and Letts 1983, Bush and Stirland 1991). Others see a socially deviant persona as a person who is either a threat to the limits of normal conduct or ambiguous, perhaps a physically or mentally handicapped individual (Little and Papadopolous 1998). Yet others believe deviance is anything different than a hypothetical average, meaning individuals who are elite or non-elite are deviants from the mean (Shay 1985, Becker 1993). The question of social deviancy is an interesting one, as we can potentially identify people in the bioarchaeological record such as criminals and the handicapped who would likely not appear in textual records. Even if we adopt a loose definition for deviancy, however, we are still left with a formless Middle: those individuals who constitute the average from which others are seen to deviate.

The problem with using artifacts and mortuary archaeology to reconstruct past social structure is that the resulting hierarchy is a closed system that often does not take into consideration gender, age, environment, or occupation as confounding indices. Recon-

struction of status is an important part of mortuary archaeology, yet information about diet, health, disease, and activities can be better understood through bioarchaeological analysis of skeletal remains to create a window into the lives of *any* ancient population, not just those who had the most or the fewest artifacts. Two groups of people about whom little is known from textual evidence will be considered here: small farmers in the Roman countryside and women and their children at forts in the Roman provinces. By asking questions that bioarchaeology can help answer, I will demonstrate that there is important information to be gleaned from more thoroughly examining those Romans whose lives were not memorialized in history.

Rural Smallholder Farmers

In contemporary Western society, the traditional concept of work as a moral prerogative finds its origins in the Reformation of the 16th century which produced the Protestant work ethic. Coupled with a Weberian and Marxist attitude towards the value of labor, our idea of what it means to work is quite different from that of the ancient Romans. To them, and to the Greeks, work was something that slaves did, while wealthy men were free to participate in government (Mossé 1969). There did still exist, however, a Roman ideal of the free man who owned and cultivated his own land, the man who was prepared for war and returned to his farm immediately after serving his country like Cincinnatus. In *De Officiis* (I.xlii), Cicero notes that there are several occupations that befit the lower classes, including tax-collecting, mechanics, manual laboring, cooking, fishing, and entertaining. Those that are more worthy for the elite include medicine, architecture, and teaching; of agriculture, Cicero says that, "Nihil est agri cultura melius, nihil uberius, ni-

hil dulcius, nihil homine libero dignius."[1] Numerous other authors have sung the praises of a farming lifestyle, including Cato, who wrote *De Agricultura* in the 3rd century BC, Varro, Columella, Palladius, and Vergil, whose *Georgics* (2.458) quite clearly extols the fortunes of the farmer (Mossé 1969). The average Roman in the Republic, though, likely would not have felt a strong connection to other individuals with the same occupation, simply because the average Roman was engaged in small-scale agriculture in the interior of the peninsula, not in a guild-based trade in an urban center. For all the panegyrics Vergil and Cicero give to farming, the accolades and idealism merely serve to obscure the precise nature of smallholder farmers.

Unfortunately, until very recently the archaeology of rural Italy was lacking as much detail as the textual evidence. Archaeologists in France and Great Britain were reasonably quick to engage in studies of their countryside, coming from a tradition of autochthonous identification with the land, but archaeologists of Spain and Italy, lacking this tradition, tended to focus on villas and elite artifacts therein (Dyson 2003). As in many past studies within classical archaeology, large villa sites, which would have constituted hundreds of acres with elaborate architectural correlates and hundreds of slaves working the fields, were the focus of researchers because of the information they could learn about the Roman elite. With the adoption of Marxist theory after the 1950s, some archaeologists began to investigate smaller farms. Yet Dyson (2003:29) notes that neither an elitist nor a 'Marxist' approach takes into account the full picture of ancient agricultural workers: "The elitists saw high-status sites as the only really important ones, while

[1]None [of all the occupations] is better than agriculture, none more profitable, none more delightful, none more becoming to a freeman (Miller 1938).

the 'Marxists' regarded the domination of the Roman rural world by the plantations and the latifundia as having marginalized and destroyed the world of the smaller farmer."

Recent archaeological surveys have shown that various types and sizes of agricultural settlements existed in the Roman world: there were definitely slave-based villas (*latifundia*), but free peasants and tenant farmers also cultivated the land. In addition, in the countryside, manufacturing and mining were occurring, and production involving pastoral, marine, and forest methods also existed (Dyson 2003). What we can glean from adding archaeological surveys to the textual evidence of agriculture in the Roman world is that "the essential basis for the ancient city was... a community of small farmers who were free and who owned their land" (Mossé 1969). Thus, the majority of the Roman population at any time lived close to subsistence level, and most of the labor force was engaged in agriculture (Scheidel 1995). Until the 4th century BC, much of Italy was occupied by these small farmers who lived in small houses not much fancier than a hut and who grew produce (most often grain, grapes, and olives) for themselves and for trade in the larger market. After the 4th century BC, the government began to take control over more and more land, creating the *ager publicus*. Anyone who could pay a *vectigal* was allowed to occupy the land and cultivate it, which resulted in the rich owning a lot of public land. The rich would then allow peasants to cultivate their land as sharecroppers (*politores*) or hired laborers (*mercenarii*). Some elite began to amass huge tracts of land at the end of the Republic (the *latifundia*) with anywhere from a dozen to a couple hundred slaves and free peasants working side-by-side. However, slave revolts such as that of Spartacus in Campania led to a reduction in the size of agricultural estates, and coupled with the agrarian crisis in the middle of the 2nd century AD, small-scale

farming re-emerged, and *latifundia* declined (Mossé 1969). This brief history of the social structure of agricultural production comes largely from Claude Mossé, a colleague of Moses Finley and fellow believer in the utility of Marx and Engels to explain changes in economics and society through class struggle. More recent theoretical approaches to the tradition of agriculture and rural economy of Italy, like that of Horden and Purcell in their *Corrupting Sea* (2000), stress the *diversity* of peoples in the Roman world, including their particular histories, environments, and socioeconomic structures (Dyson 2003:103). Following their lead, we can begin to ask questions about the nature of the small farmers' work so that we can discover what kinds of food they ate, what diseases they were prone to suffer, and what activities they performed on a routine basis in the course of producing food for the Empire.

Diet Small farmers were not by any means the most wealthy members of society, and therefore did not have unlimited access to elite food items. Neither would the farmers in the rural countryside have had access to the coast, where *piscatores* trolled for seafood to grace the plates of the elite. We know from literary and archaeological sources that fish (and *garum*) were more or less restricted to the Roman elite, and that the majority of the population got up to 75% of their daily caloric intake from cereals (Prowse et al. 2004). The remainder of the diet was composed of wine, olives, and meat (mutton and pork). Although the amount of calories obtained from grain has been questioned, as a diet that high in carbohydrates would have resulted in malnutrition from lack of protein, it appears that the majority of Romans were consuming a lot of grain, which was produced by the small farmers. Through a combination of stable isotope analysis of skeletal remains from archaeologically identified small farmers and botanical analysis from pollen or residue on

cooking pots, we should be able to reconstruct their diet. Differing levels of carbon and nitrogen isotopes can indicate reliance on mostly terrestrial or mostly marine organisms for the large portion of the diet. We might hypothesize, therefore, that the small farmer would: 1) have more carious lesions on the teeth than an urban-dweller or *latifundia* operator because the production of grain, usually high in sugar, was key to the success of the farm and the small farmer would have consumed more grain than any other food; 2) show a different stable isotope signature than an urban-dweller or *latifundia* owner because the latter would have more access to marine resources.

Diseases In addition to carious lesions mentioned above, the small farmer would have been at risk of several disease processes, including dietary deficiencies and degenerative bone diseases. Heavy reliance on grain in the diet to the exclusion of protein can lead to intestinal problems, vitamin A deficiency, and anemia. Lack of vitamin A can result in blindness and in parturition deaths, and anemia can manifest itself as porotic hyperostosis, a condition in which bone walls, often the cranial vault, become thin and porous. Farmers would also be at risk of developing osteoarthritis from overuse of joints and lifelong repetitive movements. This pattern of disease would be quite different for farmers than for pastoralists, for example, who consume more meat and dairy and who have a higher mobility (Robb 1994).

Activities and Trauma In addition to osteoarthritis, other indicators of a person's use of his body include musculoskeletal markers and evidence of trauma. Musculoskeletal markers (called MSM for short but also known as markers of occupational stress or MOS) have been examined from archaeological and medical situations for decades, particularly in the field of forensics where identification of a specific individual has generated

the need to investigate all aspects of the skeleton for clues to an individual's behavior in life. Excessive lifting adversely affects the vertebral column; routine pounding, as in processing grain, can produce stress in the upper limb; and one-sided tool use can be seen in unilateral bone changes (Kennedy 1989). For individuals involved in ploughing, stress at the shoulder joint can be identified from costal syndesmoses caused by bending and elevating the shoulder to move a plough (Capasso et al. 1999). Accidental traumatic injuries would likely have occurred to small farmers in the process of carrying out daily tasks, perhaps a horse trampling the farmer's foot or the severing of a finger with careless use of a scythe in reaping.

Family Life Small farmers were not just men in the Roman world. In this patriarchal society, men owned the land as well as their wives and children, but there is no doubt that women also contributed a significant amount to agricultural production on the small farm. Scheidel (1995) estimates that at least 20% of the entire Mediterranean population would have been composed of adult women living in a rural context. Women would likely have helped in the harvesting of grain, using tools just like the men, as well as in indoor textile production and outdoor pottery production. The rural woman who worked at subsistence level on a small farm, then, would not have been spared her duties while pregnant or after delivery. We can hypothesize that length of breastfeeding would be short and weaning of children would have occurred earlier in order for rural women to return to their duties (Scheidel 1995), and this might be seen in the osteological record of children.

Although the small farm was the mainstay of the Roman agricultural economy, little is known about the farming families that toiled in the fields to produce foodstuffs. Because

small farming families lived in structures no bigger than huts, it might be difficult to detect these dwellings archaeologically. However, armed with knowledge about the kinds of information that can be learned through bioarchaeological analysis, it is possible to undertake a study of skeletal remains from rural agricultural contexts in order to redress the textual lacunae regarding the daily lives of farming families.

Women and Children at Roman Forts

Taking a gendered perspective on the past has been popular for decades, mainly born out of a feminist desire to understand the role of women in ancient societies. Male/female is in a sense the ultimate dichotomy, arguably a biological truism, with man/woman its culturally-constructed counterpart. The difference between sex and gender was often overlooked in old cemetery studies where archaeologists would identify the sex of a skeleton based largely on its associated artifacts rather than on bony markers. Yet gender is a powerful concept that allows us "to decode meaning and to understand the complex connections among various forms of human interaction" because it is a "field within which or by means of which power is articulated" (Scott 1986:1069-70).

It is within a framework of gender that we can tackle the question of women's lives at ancient Roman forts. Very little is known about the role of women in this context, and for a long time the presence of women and children at forts was denied based on textual evidence that specifically forbade it (Laurence 1999, Allison 2003). A decidedly male perspective on the Roman Empire existed for most of the history of classical archaeology, and Roman culture was identified with exceedingly masculine values (Allison 2003). The model for military establishments such as forts was based on a 19th century European

concept of segregated communities, although archaeology has shown that Roman forts were in actuality communities unto themselves in which men, women, and children lived (van Driel-Murray 1995, Allison 2003).

The typical Roman fort was a permanent structure in the outskirts of the Empire and contained anywhere from 600 to 1,200 soldiers (Allison 2003). It is probable that women and/or children lived within the fort, perhaps officers' wives and kids, but for the most part only men occupied the fort itself, and the rest of the community lived in the *vicus* nearby. The *vici* were civilian settlements that sprang up near forts; in Germania, for example, nearly 90% of the archaeologically known forts have evidence of associated *vici* (Sommer 1989). *Vici* were established in order to fulfill the needs of the soldiers; they had marketplaces as well as centers for production of pottery and armour. There does not appear to have been enough land immediately surrounding the average *vicus* for large-scale agriculture, and it is probable that some sort of animal husbandry or shepherding was practiced (Sommer 1989). Cemeteries associated with the *vici* were planned at a distance from the forts and towns in order to allow for growth. Evidence from tombstones clearly demonstrates that women and children were living and dying on the frontier, but little is known about the circumstances. A typical trope on a grave marker for a woman is *lanifica* or *lanam fecit*, meaning someone who makes or spins wool (Dixon 2001). While many women likely did participate in this activity, it is not to be taken as a literal occupation but rather as a way of indicating a woman who appropriately followed cultural conventions for her gender. So although the tombstones from fort contexts give inscriptions for women married to all ranks of soldiers, their utility as indicators of women's lives is low. Textual evidence written by women has been found

at Vindolanda, a Roman fort in Britain, of letters written between two officers' wives. However, this glimpse into the social lives of women is extremely rare in the Roman hinterland.

One strain of modern feminist theory is interested in the body as a metaphor for the struggles that women have faced in the past. This approach is "concerned with the *lived body* so far as it is specifically represented and used in particular cultures" (Meskell 2000:177, original italics). The female body is thus both a signifier and a signified, participating in and being affected by social customs, laws, and rules of economic and sexual exchange, making it the "political, social and cultural object par excellence" (ibid.). While textual analysis of the role of women in antiquity is useful, it is not the entirety of women's lived experiences. Combining biological information gleaned from skeletal remains with textual and archaeological evidence thus becomes an extremely powerful way to understand the physical and social environments that intertwine to produce the context in which women lived in antiquity. Through application of bioarchaeological techniques, we can discover information about women's diet, activities (including child-rearing), and social structure in a situation about which little is known.

Diet and Disease The creation and consumption of food have been considered integral to a gendered approach to the past. Christine Hastorf explains that "gender is created out of more general relations within the family through division of labor, differential access to goods, social negotiation, production, and reproduction" (Hastorf 1991:133). Cross-culturally, it would appear that women typically prepare food, and in the Roman world this seems to hold true as well. Nevertheless, we can investigate the level of intensity of women's cooking by examining musculoskeletal markers and

pathological conditions such as dental caries. Several MSMs have been identified in the upper extremities as resulting from pounding and griding actions, as of grain (Kennedy 1989). Different MSMs in women and men could indicate the types of activities they were performing. In addition, differential access to foodstuffs, as in the process of preparation, has been noted with a higher frequency of dental caries among women on the Roman *limes* in Croatia (Šlaus et al. 2004). It is also possible to examine differences in isotopic frequencies in male and female skeletons. If, for instance, only men at a Roman fort had access to elite foodstuffs like fish-based *garum*, we might fairly expect them to have a nitrogen isotope value distinctly different from women and children.

Activities Based on tombstones and archaeological evidence of needles at Roman forts (Allison 2003), we can assume that some Roman women spun wool, and based on biology we can assume that many of them had children. These and other activities can potentially be seen in the osteological record. In some cultures, sewing involves the practice of moving thread between the teeth, and this abrasion by coarse material over the dental enamel results in distinctive striations on the buccal or occlusal surfaces of the teeth (Larsen 1997). The practice of weaving while sitting at a loom for long stretches of time can result in "weaver's bottom," a condition in which chronic inflammation of the tissues and bursa around the ischium leads to osteitic changes in the pelvis (Kennedy 1989), or to kyphosis of the thoracic region (Capasso et al. 1999). Several MSM studies of males and females have found significant gendered differences in muscle use. Two studies of a British populations, one Neolithic and one Medieval, found that females tend to use mostly forearm extension muscles and engage in activities that move the arm laterally and up and down along the midline, while males tend to engage in rapid and repetitive

movement of the right upper limb (Mays 1999, Wysocki and Whittle 2000). One study by John Robb (1998) from the Italian Iron Age cemetery at Pontecagnano investigated muscle groupings, and Robb discovered that males had greater muscle markings than females. He interpreted this as an indication of social division of labor, in that men were participating in specialized tasks whereas women were performing more generalized tasks. In addition to their daily activities, Roman women were also giving birth to children and were likely the primary care-givers. Although marks of parturition on the female pelvis are controversial in their identification, Kelley and Angel (1987:202) point out that a general estimate of number of births per mother is an indicator of female stress in a population. We know from textual evidence such as the works of Soranus and Galen that ancient women breastfed their children. Newborn children have nitrogen isotopic values similar to their mothers, and breastfed children have a higher nitrogen value as the children ingest nitrogen from their mothers' milk (Schurr 1998, Herring et al. 1998). By comparing values of nitrogen isotopes of adult females and children of various ages, several researchers have found that the sharp dropoff in nitrogen isotope values can indicate the point at which the child was weaned (Schurr 1998, Dupras et al. 2001). Carbon isotopes have been determined to result from giving infants supplementary goat's milk (Dupras et al. 2001), and oxygen isotopes can also indicate weaning practices (Wright and Yoder 2003). Researchers have also investigated evidence of diseases such as porotic hyperostosis and Wilson bands as an indication of weaning (Salvadei et al. 2001), and measurements such as skull base height can be an indicator of childhood nutrition (Kelley and Angel 1987). As noted above, the practice of breastfeeding might not have been practical for a duration of one or more years in agricultural (small farming) situations, and the point

at which children were weaned can provide evidence for the health of children as well as the activities of their mothers. In addition to activities that women were voluntarily performing, activities such as interpersonal violence that were not necessarily under their control can also be examined. In the context of the Roman fort, it is possible that violence among spouses would be higher than for other populations. John Robb (1997) found that violence at Pontecagnano was differentiated by sex, with males having more injuries than females. In the Roman world, women were expected to stay at home; thus, a pattern of trauma in women rather than men could indicate spousal abuse, the use of force to imply power over women (Walker 1997, Meskell 2000).

Migration and Kinship It is unclear at many military encampment sites whether women followed their husbands and fathers on their tour of duty or whether they came to the *vicus* from the surrounding countryside. Bioarchaeologists have long been interested in explicating population relationships to identify migration and kinship patterns. Large skeletal populations can be examined through biological distance practices, in which metric or nonmetric skeletal markers are statistically analyzed in order to estimate gene flow between groups. If women were coming from different geographical and biological backgrounds than men, it is highly likely that divergent biological distance scores would demonstrate this. Certain cultural practices can also be taken as proxies for migration, including cranial deformation or other physical modifications. Salamon and Lengyel (1980) found that 11 out of 28 individuals examined from a cemetery in Roman Pannonia showed evidence of cranial deformation, a practice unknown to the Romans but practiced by the Huns, Alans, and Goths who settled in the region in the late 4th century BC. This practice indicates an influx of people with different aesthetic ideals

about the human body. Finally, isotopic analysis can shed light on migration practices as well. A Late Roman camp site in England has provided evidence of immigrants in the lead isotope analysis of a child, which matched a source of lead in the Laureion in Greece (Richards et al. 1998). Stable strontium isotopes have also been used to study migration in Late Roman Bavaria. Schweissing and Grupe (2003) recently examined 70 individuals from a Roman fortress site in Bavaria in order to determine whether the inhabitants were from one or several tribes. By comparing the strontium signature isolated from enamel of the first molar with that isolated from the soil in the region, the authors determined that over 55% of the females were non-local, while only 36% of the males were from elsewhere, possibly indicating exogamy of women.

The lack of investigation into the lives of Roman women belies a disparity in power, both in the ancient world through gaps in literature written by men, and in the modern world of archaeology that is even today too concerned with uncovering the domain and power of men in the past. Bioarchaeology provides us with a way to consider the female body as her instrument for interacting with the biological and cultural world, as well as an object that was acted upon by men seeking to reinforce their power. The particular context of the Roman fort is interesting because of the lack of information about what women and children who lived in the barracks and the *vicus* were doing on a daily basis.

Conclusions

I have shown in this chapter that simple dichotomies offer little aid in reconstructing both ancient and modern societies. A former tendency to focus on cultural and

material correlates of the elite has given way recently with post-colonialist thought to anthropologists' attempts to recover the subaltern individual or the person without history. Ironically, though, this strong focus on the subaltern serves to reify the binary distinction between elite and non-elite, between colonizer and colonized, by defining the subaltern with reference to what it is not. Similar problems exist in examining the space between the elite and the non-elite. Too often the Middle is also defined negatively: neither elite nor non-elite, again reinforcing the dichotomization that post-structuralists seek to eliminate. The Middle really does not exist except in relation to the Upper and the Lower at any given time period. I am not attempting in this chapter to introduce a tripartite division to this classificatory scheme, but rather to show how enormous the chasm is between the ends of any dichotomy. Status is not a simple concept that can be reduced to elite or not. In a given culture, numerous indices are at play, coalescing into what has been called the social persona of the individual. This resulting matrix of everything that makes a person a member of a society can be ordered and reordered depending on the question asked.

With its unique abundance of textual evidence, classical archaeology has the opportunity to play a tremendous role in the investigation of all aspects of ancient society. We have ample textual and biocultural information about the Roman city of Portus and its necropolis Isola Sacra, for instance. The people buried in that cemetery have been labelled upper middle class by Prowse and colleagues (Prowse et al. 2004). From texts and archaeology, we know that Portus and Ostia had all the trappings of seaside cities: restaurants, warehouses, brothels, hotels, baths, homes, and temples. But how were the people of these towns organized socially? Could everyone come and go as they pleased?

Were there people from other cultures living among the Romans either year-round or seasonally? Simply applying modern nomenclature of class onto a site such as Isola Sacra does not help us understand the complex social roles that its inhabitants played on a daily basis.

The optimal way to see the shades of the Middle is by combining our knowledge of the ancient world from textual evidence with that generated by archaeology, osteology, anthropology, history, and other disciplines. By demonstrating in this chapter the kinds of information we can discover from skeletal material within the context of archaeological questions about the Roman world and within a framework of anthropological theory, I hope that I have provided a strong argument for the place of bioarchaeology in antiquity.

Chapter 5 – Conclusions

American and Italian anthropology varied significantly in their development into academic disciplines. Owing to vagaries in political situations, the former became known for its advocacy of an holistic, four-field approach while the latter struggled for existence in an academic tradition loath to combine scientific and humanistic approaches to information. Italian anthropology has more or less caught up to its American counterpart, becoming more reflexive and holistic in the past couple of decades. Archaeology in Italy, however, has been isolated in classics, unwilling to sacrifice its position as the origin of Western civilization to a comparative approach that views Roman culture as just another way that humans attempted to make sense of their world.

In the past twenty years, Wiseman (1983), Becker (1995), and Woolf (2004) have all argued that Roman archaeology needs to be more integrated, both within and without. Yet in all this time, little has been accomplished towards this goal. The utility of bioarchaeology in antiquity, as shown in this paper, is tremendous for framing and answering questions about the lifeways of everyone in the Roman world. By integrating material, biological, and textual information, bioarchaeological studies can bridge the gap between anthropology and classics and promote a fruitful exchange of ideas between these two traditionally separate disciplines.

In addition to adopting and engaging with archaeological theory, Roman archaeolo-

gists need to question the Big Dig mentality, become more comparative in their approach to data, and communicate with other archaeologists and scientists. Roman archaeologists have been criticized lately for isolating themselves from social theory and the debates in archaeology and anthropology (Laurence 1999, Woolf 2004). The first step is to sever ties completely with the purely historical, typological approach to culture. Culture is dynamic and fluid, building upon what came before while interacting with what currently exists. The historical approach fails because it is too linear and too interested in delimiting culture to a specific time and place so that it can be easily classified. A move to a more evolutionary model, in the modern synthetic sense of the term, will help Roman archaeologists conceive of culture as a broad term encompassing a multitude of behaviors and systems that can be investigated through material and biological remains. An adoption of a more modern model requires Roman archaeology to move to a comparative approach, relinquishing the idea that classical material remains are somehow better or more unique than those in other areas of the world. Archaeology is no longer being used to further the nationalistic claims of Italians or to promote racism against the South, but neither is it being used comparatively to help the understanding of the entirety of the ancient world. It is interesting to note that bioarchaeology is being adopted by Roman archaeologists, but that it is reversing the direction of the usual center-periphery model of shared information. While scholars working on the periphery of the Roman world are contributing to the growing body of osteological knowledge with stable isotope and palaeopathological studies, a similar contribution is not yet being made on the Italian peninsula. Further, the lack of communication outside the discipline of classics and the fragmentation of Roman archaeology need to be remedied. Marshall

Becker has attempted for decades to bridge anthropology and classical archaeology by doing bioarchaeological studies in various parts of Italy and has advocated for the use of palynology and ethnobotany in archaeology (Becker 1982, 1996), and other researchers have lambasted the increase of specialization in Roman archaeology as detrimental to integrated syntheses of sites, geographical areas, and time periods (Bietti Sestieri et al. 2002, Terrenato 2002, Woolf 2004).

By no means am I saying that there is a unidirectional contribution of anthropology to classical archaeology. There are several things that classicists can teach other archaeologists. First, classicists, as noted above, are trained in an educational system that promotes discipline and exactitude. In learning about art, literature, architecture, and other material remains, the average classical archaeologist has numerous examples of comparanda in her head (and in her bookshelf) at all times. Examining a complex ancient society requires training in the vagaries of material culture as well as knowledge of the literary corpus in which clues to archaeological questions can be found. In spite of the problems with the Big Dig mentality, the classical archaeologist is always seeking to integrate as much information from one site as possible because of the wealth of material remains uncovered in any one excavation. Dealing with this volume of artifacts, and often dealing with it well, is a contribution classical archaeologists can make to anthropology.

Second, the ancient Roman world was a relatively modern society, with monumental architecture, a sizable economy and trade, a top-notch military, and even sewers and plumbing. It may be tempting to think of the Roman Empire as functionally and even culturally similar to our own modern Western perspective, but in reality it held a multitude of voices, most of which were never heard in the literary and political records.

Roman society is not dichotomously elite and poor; there are many levels of status, gender, age, and occupation in between. Classical archaeology has begun to deal with the complexity of economies, politics, and social hierarchies, and the results of these analyses will be extremely useful to other archaeologists.

Third, ironically because of the lack of bioarchaeology in the Roman world, its skeletons are capable of contributing volumes to the growing body of literature on ancient lifeways. If what Dyson says is true (Dyson 1989b:146), that there are tens of thousands of Roman skeletons from the Mediterranean waiting to be analyzed, the potential for bioarchaeological research into this complex ancient culture is astounding. In addition, long periods of Roman history involve cremation burial. Coupling archaeological information with biological and textual evidence will lead to a more informed perspective on the practice and symbolism of ancient burial practices and will provide archaeologists in other areas of the world with a large comparative collection.

Finally, classical archaeologists do come from a tradition of thorough understanding, in the original languages, of their literary record. In terms of the vast majority of archaeology in the world today, classical archaeology has a definite advantage in contributing to theoretical advances. We have modern books such as Mirko Grmek's (1989) *Diseases in the Ancient Greek World* in which textual evidence is marshalled to describe the prevalence and incidence of diseases such as leprosy and tuberculosis in the past. Paradoxically, Roman archaeologists are not using the same kinds of texts to their advantage in formulating questions about the literary record or in seeking to fill in the gaps, but the potential is there. Bioarchaeologists of the ancient world can use interpretations like this as well as the texts of the past to understand disease processes and contribute to

questions of taphonomy and differential death patterns.

This thesis began with an epigram by Catullus on the fraternal duty to perform the last rites at his brother's grave. In the history of Western culture, textual evidence has always been considered of greatest importance, a poem such as this merely hinting at the deep despair the poet was feeling and the ritual significance of his journey to a foreign land. Yet just as we cannot generalize about Roman funerary practices from Catullus' description alone, neither can we ignore our affluence in terms of material culture, skeletal remains, and literary sources. A change in the current view is necessary in order to question our long-held assumptions about the Roman world. Greg Woolf (2004:419,425) raises the challenge that classical archaeologists should be concerned with "a methodology based on skepticism, on a concern with taphonomy, and with the biases introduced by different techniques for data gathering and recording," and that "it might be easier to develop genuinely antidisciplinary collaborations in emerging fields such as the investigation of foodways, of disease, of technology, or agriculture." Bioarchaeology is the perfect place to begin in addressing this integration that Woolf and others have been proposing for the past two decades for the mutual benefit of classics and anthropology.

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