(Re)Conceptualizing Death:
Examining Attitudes toward Death at the Anthropological Research Facility

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Dedication

I dedicate this thesis to my family:

to the memory of my mother, Phyllis Compton,

for igniting in me the desire to learn

and an appreciation for education;

to my father, Michael Compton,

for encouraging me to shoot for the stars

while reminding me to never forget where I come from; and

to my sister, Laura,

for always believing in me

and continuing to inspire me.

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Abstract

The Anthropological Research Facility (ARF), commonly known as the "Body Farm," provides a unique research setting in which researchers work intimately with human remains in various stages of decomposition. While the ARF, and forensic anthropology, is well documented in popular culture, little academic research has been conducted to investigate the sociocultural phenomena associated with working with human remains.

This thesis investigates the reactions and attitudes toward death of those involved in operational and administrative duties at the ARF focusing on how these attitudes influence and are influenced by involvement at the facility. This research also provides a point of departure from which to interpret the relationship between the science of death and cultural attitudes toward death, the feminization of forensic anthropology, and public interest in the discipline.

Ethnographic methods including participant observation and interviews were the primary procedures of data collection in this study. Participant observation was conducted in various activities including intake (collection of body donations from regional funeral homes and forensic centers), placement of body donations at the ARF, and recovery (retrieval of body donations from the ARF after decomposition research is complete). Interviews were used to assess participants' reactions to the nature of their work and their attitudes toward death. Participants were comprised of individuals involved with various aspects of the ARF including the coordinator, assistant coordinator, former and current faculty and graduate students representing a cross-sectional sample varying by age, length and degree of involvement at the ARF, and profession.

This thesis shows that attitudes among ARF personnel simultaneously reflect and deviate from cultural norms regarding handling human remains; the dead body represents both a scientific object and a symbol of mortality. Furthermore, public interest in and the feminization of forensic anthropology are informed by cultural attitudes toward death including fears of and fascination with death and dying. This study underscores the importance of understanding the sociocultural consequences produced from scientific and technological discovery and the importance of reflexive inquiry.

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Chapter I: Introduction

Introduction

The University of Tennessee, Knoxville Anthropological Research Facility (ARF) provides a unique research setting in which researchers, faculty, and volunteers work intimately with human remains in all stages of decomposition. The work conducted at the facility starkly contrasts with other fields of study and professions that involve contact with deceased individuals. Emergency response personnel and police officers encounter bodies with extreme trauma or in advanced stages of decomposition, but are typically only exposed to bodies briefly. Medical workers and pathologists are also typically exposed to bodies briefly and do not witness the process of decay. Anatomy students performing cadaver dissection provide the best analogy to ARF researchers and personnel because of the length of time they work with the cadaver but many differences are present, including the ages and conditions of medical cadavers (Carter 1997; Montross 2007; Nolen 1968; Roach 2003; Quigley 2005).

The most striking difference between cadaver dissection and decomposition research is that dissection cadavers are preserved through embalming thus maintaining a life-like appearance and preventing decay. Anatomy students rarely encounter blood or body fluids. The head, hands, and feet of dissection cadavers are covered except during dissection, thus hiding the parts seen in the living and aiding in emotional distancing. The ages of cadavers range from 57-101; rarely does an anatomy student dissect a cadaver in his or her age cohort (Carter 1997; Hafferty 1991; Montross 2007; Nolen

1968; Roach 2003; Quigley 2005). William Bass, founder of the Anthropological Research Facility, acknowledges the difference between cadaver dissection and decomposition research stating, "By dissecting the dead, they hoped to learn more about the flesh and bone of the living. My interest was about death itself" (Bass and Jefferson 2003: 112).

The ARF is not a lab in the classic sense. ARF personnel travel to morgues and funeral homes where they collect human bodies—most are recently deceased; some are severely decayed. Then they transport the remains as far as 200 miles. Once at the ARF, faculty and graduate students remove clothing and medical devices, take photographs, collect hair and blood samples, then lay the naked body on the ground and cover it with black plastic. Some bodies are utilized in research projects and the process of decay is monitored. Others are left to decompose in isolation. Personnel at the ARF may be acquainted with a body as a living pre-donor, as a recently deceased body, as a decaying corpse, then as a skeleton.

For more than 25 years, the ARF was unique in that it was the only facility of its kind. It is now one of four. Western Carolina University's Forensic Research Facility in Cullowhee, North Carolina, and Sam Houston State University's Southeast Texas Applied Forensic Science Facility (STAFS) in Huntsville, Texas were established in 2006. The Forensic Anthropology Center at Texas State (FACTS) in San Marcos, Texas was established in 2008. These facilities conduct research related to human decomposition and provide training to students, law enforcement, crime scene investigators, and forensic scientists.

The Anthropological Research Facility and other such forensic facilities appear even more unique when evaluated through the lens of a society that values grandiose mortuary ceremonies but disapproves of contact with corpses or discussions of death. Participants at the ARF are uniquely positioned in a setting where they simultaneously navigate a cultural system where handling human remains is considered taboo and a research setting where handling human remains is routine. Involvement at the ARF is further complicated as researchers attempt to study the intricacies of a phenomenon to which they, and their loved ones, are vulnerable: death.

Research Objectives

This thesis seeks to investigate the reactions and attitudes toward death of those involved in operational and administrative duties and research at the ARF focusing on how these attitudes influence and are influenced by involvement at the facility. Specifically, I will focus on the following: Does handling human remains and understanding taphonomy—changes to biological organisms after death lead to decreased anxiety regarding death? Does working with human remains in the context of the ARF cause workers to contemplate their own mortality? Do ARF personnel and researchers become desensitized to death, dying and the corpse? What factors, if any, influence one's reaction to human remains?

Through pursuit of the primary research objective, this thesis will also discuss the relationships between science and technology and culture, and attempt to explain trends in forensic anthropology including the public fascination with and feminization of the

discipline to provide further insight regarding attitudes toward death at the ARF. This thesis will also attempt to provide an authentic portrayal of the ARF and the experiences of those involved.

In order to achieve the above goals, I conducted ethnographic research at the ARF. I observed and participated in operational activities at the ARF specifically related to the body donation program and conducted interviews with current and former faculty, staff, and graduate students involved with operational activities and research projects. Interview questions were designed to assess participants' attitudes regarding the following: death and exposure to human remains, activities at the ARF, and trends in forensic anthropology (Appendix A-1). Furthermore, interviews were designed to discover participants' personal and professional experiences with death and how those experiences shape their experience at the ARF.

Expectations

Expectations for participant observation in activities at the ARF were influenced by my previous experience there. Prior to graduate school, I served as a volunteer where I assisted with data entry and the recovery and processing of skeletal remains and learned much about the protocol. I expected to discover a clinical approach driven by procedural standardization and protocol consistency. I expected this clinical approach to serve as a means to honor scientific rigor, but also as a distancing strategy. I expected to discover the utilization of other distancing strategies as well such as the use of euphemisms and humor. The need to distance, I expected, would relate to attitudes toward death and

dying. More specifically, I expected to find variation in attitudes toward death among participants based on their degree of personal experience with death and professional or academic experience handling human remains. I also expected participants to report experiencing an increased awareness of and preoccupation with their own mortality.

This research shows that participants employ a variety of strategies—some which were individually acquired and others mandated by ARF protocol—in their attempt to remain emotionally detached from the human remains they encounter. However, despite such attempts, researchers and personnel are unable to remain completely objective as deeply engrained cultural attitudes toward death and the dead body penetrate participants' experiences and perceptions. The degree of detachment and desensitization is dependent on the context in which death is encountered – physically, relationally, and conceptually.

This thesis shows that public interest in forensic anthropology is a function of public curiosity regarding death and dying in a cultural climate where authentic discussions on the topics are repressed. Fears of death led to such repression; rationalization of death serves to ameliorate anxieties. Furthermore, media capitalizes on the public's interest and presents a sensationalized representation of the ARF and forensic anthropology.

Finally, this research explores the feminization of forensic anthropology and finds that explanations of the phenomenon are grounded in gender stereotypes such as women are more patient, pay more attention to detail, are more empathetic, and are more willing to work for less pay than their male counterparts. Such explanations weaken women's scientific credibility. This thesis presents alternative explanations for the feminization of

forensic anthropology including the appeal of the cultural capital associated with the discipline.

Theory

Embodiment and Reflexivity

Pierre Bourdieu's theory of practice is informed by his position that objectivity is not truly achievable because observers unconsciously introduce their own principles into their interpretations. Researchers and scientists perceive and interpret information through a lens filtered by knowledge of their social world. Bourdieu explains the weakness of objectivity through the concepts of field, habitus, and practice. Field refers to a structured social space (Bourdieu and Wacquant 1992). Habitus is defined as culturally prescribed "systems of durable, transposable dispositions"—acquired schemes of perception (Bourdieu 1977: 78). Habitus is influenced by cultural and historical memory. Practice can be thought of as the behavioral manifestations of the combination of field and habitus (Bourdieu 1977; Bourdieu and Wacquant 1992). In other words, field can be thought of as an environment or milieu. Habitus can be understood as the unconscious, hegemonic ideological underpinnings of sociocultural norms. Practice is behavior that is influenced by the mutual effects of environment and cultural attitudes.

Central to Bourdieu's theory of practice is the concept of embodiment. Embodiment is the notion that historical, cultural, and social values are experienced in the body (Bourdieu 1977). The social and cultural world influences the biological body. The biological body is then symbolic of sociocultural phenomenon. A dead body, for

example, may represent to an observer the loss of a loved one, his or her own mortality, or appropriate cultural norms regarding mortuary rituals and grieving behavior. Research involving human bodies is complicated by the fact that researchers have bodies. Research involving dead bodies is further complicated by the corpse's status as a cultural symbol and a material object (Crossland 2009; 2010; Rosenblatt 2010). According to Bourdieu's theory, a researcher cannot remain objective when the object of study holds such symbolic value (1977).

Bourdieu's argument regarding the shortfalls of objective research and analysis is especially relevant when examining attitudes toward death. Researchers who study death or the dead body are deeply embedded in a society with long-standing principles, or habitus, that influence their perceptions of and attitudes toward death. For the purpose of this thesis, field can be conceived as the context in which death is encountered both physically (e.g. funeral homes or morgues) and relationally (death of a loved one or a body donor). Habitus can be understood as attitudes toward death. Attitudes toward death in the United States and the long history that informs them will be discussed further in Chapter II. Practice is understood as the treatment of the dead and is shaped by the field—the context in which death is encountered—and habitus, or attitudes toward death.

This thesis investigates if and how personnel and researchers at the ARF are influenced by cultural norms dictating attitudes toward death despite their attempts to remain objective. For example, are personnel and researchers at the ARF more likely to experience an emotional reaction if human remains are those of a young decedent rather than an aged individual since young deaths are considered more tragic? Furthermore, is

the degree to which these attitudes infiltrate influenced by the context, or field, in which death is encountered? For example, do the experiences and reactions of ARF personnel differ when the dead body is encountered in a novel context such as the ARF versus a familiar context such as a funeral home as each field has different cultural connotations? Finally, do practices, or the treatment of bodies, differ based on the above?

Bourdieu also advocates for reflexivity in social science—acknowledgement of one's own subjectivity and the influence of subjectivity on research development, implementation, and interpretation. Bourdieu argues that anthropologists need to "question the presuppositions inherent in the position of an outside observer" or understand the biases they carry (1977: 2). Such questioning requires acknowledgement of one's own bias and the "modes of production" that produce the knowledge and perceptions that inform attitudes or habitus (Bourdieu 1977; Bourdieu and Wacquant 1992). This thesis also attempts to discover if those involved with the ARF are aware of such influence if it exists.

Clinical gaze

Michel Foucault's concept of the clinical gaze refers to a detached, unemotional regard for bodies and a dualism, or separation, of the person from the body it occupies (1994). The clinical gaze allows the viewer to perceive a body separately from the person. The body is a system of parts, a specimen, or a research question but not a human person. Viewing the body as such allows the observer to remain emotionally unattached to the personal or humanized aspects of the body. Foucault discussed the

clinical gaze in terms of power relations between physicians and their patients – the powerful physician wields power over the "docile" patient (1994). The concept is also useful in understanding how researchers are afforded the ability to maintain objectivity when human bodies are the objects of inquiry.

To better understand how attitudes toward death operate at the ARF, this thesis also seeks to understand if ARF personnel are able to remain emotionally detached from the bodies they encounter—able to view with a clinical gaze. This thesis presents the concept of the clinical gaze of the dead body as an abstract perception of the body rather than a personal one. When perceived in the abstract, the body is seen as a specimen not a person; and death is understood as a cessation of biological functioning rather than loss of a loved one. When perceived as personal, the body is understood as a former person the researcher can relate to; the death is understood as a loss experienced by people who loved the person and who are now mourning. The body and the death take on a more subjective meaning. The following questions are posed to understand how the clinical gaze operates at the ARF. Are ARF personnel better able to remain detached when they are unaware of the personal histories attached to the dead bodies? Does corresponding with body donors' families personalize and humanize the body? What role does the field, or context, in which dead bodies are encountered play in the ability to remain detached?

Rationalization

The concept of rationalization is useful in understanding how attitudes toward death have evolved over time and how science and technology influence attitudes. Rationalization involves an increased understanding and control of the body and its functions and a decrease in the role of emotion (Schilling 1993). Rationalization can be understood as the attempt to understand and control the body, disease, and death. Rationalization of the dead body involves understanding death in terms of quantitative, individualized terms—attempts to quantify the moment of death, to understand death as something that happens to an individual. Elias argues in *The Loneliness of Dying* that rationalization of death provides a sense of security in the form of life extending technologies (1985). Conversely, according to Elias, rationalization also increases death anxiety as it highlights the fact that science and technology have limits and cannot prevent death thus facilitating avoidance of and repression of death as a topic of discussion (1985; Schilling 2003).

The review of literature in chapter II regarding the evolution of attitudes toward death in the United States shows that dying has become medically controlled and socially isolated, death has become an anxiety-producing topic that should be repressed, and the corpse has become a taboo object that must be kept separate from the living. This thesis attempts to investigate how the attitudes toward death defined above inform the ARF. Does handling dead bodies at the ARF violate cultural norms? Does working with human remains cause ARF personnel to confront their own mortality? Does

understanding – and rationalizing—death and taphonomy decrease anxiety regarding death?

Methods and Procedures

Ethnographic methods were used in this research including participant observation and in-depth semi-structured interviews. Participant observation was conducted offering a detailed and accurate portrayal of activities associated with the treatment of human remains at the ARF and the body donation program. Interviews were designed to explore participants' attitudes toward death and assess how exposure to human remains influences or is influenced by such concepts.

Participants in this research include the following: ARF founder, William M. Bass, who, in addition to creating the ARF, conducted research and continues to promote the ARF through talks and interviews; the current coordinator of the ARF, Lee Meadows Jantz and assistant coordinator, Rebecca Wilson Taylor, who oversee the ARF and the body donation program; current and former faculty who have been involved in research at the ARF; current and former graduate assistants employed by the ARF who facilitate the body donation program; current and former graduate students involved in various research projects; and graduate student volunteers who assist with the facilitation of the body donation program (Appendix A-2). Participants were selected to represent a cross-sectional sample varying by age, profession, and length and level of involvement at the ARF. Interview questions were designed to elicit information regarding participants' personal, academic and professional backgrounds, previous experiences with human

remains, personal experiences with death, feelings regarding body donation, and their wishes for their own remains. Additionally participants were asked to discuss their experiences at the ARF (Appendix A-1).

Participants were given the option of being identified by name or remaining anonymous. For those that wish to remain anonymous, identifying data has been altered. Likewise, details about donors, donors' families, and personnel at partner agencies (e.g. funeral homes, hospitals, morgues) have been changed or omitted to protect their confidentiality.

Structure of Thesis

Chapter I presents the objectives of this research and the theoretical concepts that influenced its formulation and analysis. These concepts include embodiment and reflexivity, clinical gaze, and rationalization. Chapter I also presents the methods and procedures used to conduct this research.

Chapter II offers a review of literature regarding attitudes toward death in the U.S., the history of Forensic Anthropology, and the history and operational structure of the ARF. The history of forensic anthropology shows the significance of the ARF to the discipline and defines many concepts useful in understanding the ARF. The history of the ARF provides an understanding of how the facility was established, how it evolved, and how it currently operates. The history of attitudes toward death serves to situate the ARF within broader historical and cultural contexts.

Chapter III presents data gained from field research including participant observations and interviews in an attempt to provide an accurate portrayal of the ARF. Participant observation at the ARF primarily focused on operational activities related to the body donation program. Interview data in this chapter supplements participant observation.

Chapter IV provides a discussion of topics and themes uncovered in chapter III. The following themes are discussed: attitudes toward death, clinical gaze and objectivity, distancing and detachment, desensitization, confronting mortality, public interest in forensic science, and the feminization of forensic anthropology.

Finally, Chapter V presents limitations of the research, conclusions, and future directions.

Chapter II: Literature Review

This chapter will present a review of literature regarding forensic anthropology, the Anthropological Research Facility and attitudes toward death. A history of forensic anthropology is useful to understand the discipline and the significance of the ARF. Literature regarding the ARF presents a history of the facility and its operational structure.

An evaluation of literature regarding the history and evolution of attitudes toward death is necessary to understand the cultural climate in which the ARF is situated. Among topics explored are the medicalization, bureaucratization, and privatization of death, along with the subsequent repression of the topic in the United States. This section will present a discussion of brain death and organ transplant to serve as an example these topics. Furthermore, this section will present and discuss public fascination with death.

History of Forensic Anthropology

A short history of forensic anthropology is necessary to situate the ARF. Forensic science is defined by Steven Byers as the "field of study in medicine and jurisprudence that deal with legal issues, both criminal and civil" (2008: 1). Forensic anthropology, as defined by the American Board of Forensic Anthropology (ABFA), refers to "the application of the science of physical or biological anthropology to the legal process" (AFBA 2011). The contraction "medicolegal" is commonly used to describe the medical and legal settings in which forensic sciences operate. Forensic anthropologists assess

human remains when the level of decomposition is too advanced for traditional methods employed by forensic pathologists and Medical Examiners. Forensic anthropologists also assess burned human remains. In addition to medicolegal settings, forensic anthropologists apply their knowledge to mass disasters, war crimes, and human rights violations (Adams 2007; Byers 2008).

Forensic anthropology serves several functions. The first is to construct biological profiles of individuals. A biological profile typically consists of age, sex, ancestry, and stature but may also include records of previous trauma, disease, or skeletal anomalies. Biological profiles are instrumental in determining the identity of unidentified remains, another fundamental objective of forensic anthropologists (Adams 2007; Byers 2008). When necessary, forensic anthropological methods are used to assess trauma such as gunshot wounds or sharp force trauma sustained from stabbings (Adams 2007; Byers 2008). Forensic anthropologists are also tasked with determining the postmortem interval, or time since death, which is the amount of time the person has been dead (Adams 2007; Byers 2008). Typically, forensic anthropologists are trained in archaeological methods and are instrumental in locating remains (Byers 2008).

The history of forensic anthropology is frequently divided into three periods: Formative (1800's-1932), Consolidation (1939-1971), and Modern (1972-present). Thomas Dwight is often considered the "father of forensic anthropology" because of his early research in human skeletal identification and his 1878 publication, *The Identification of the Human Skeleton: a Medicolegal Study*, during the formative period (Byers 2008; Ubelaker 2008; Stewart 1979). The formative period was marked by high

profile murder cases where methods consistent with forensic anthropology were used to assess trauma and determine identity. For example, Harvard anatomists, Oliver Wendell Holmes I and Jeffries Wyman, investigated the death of a prominent Harvard physician, George Parkman, in 1849. Their investigation involved reassembling disarticulated remains and formulating a biological profile (Byers 2008; Snow 1982: Ubelaker 2008). Similarly, anthropologist George A. Dorsey evaluated tiny bone fragments for the prosecution's testimony in the famous Luetgert murder trial. Adolph Luetgert was tried and convicted of murdering his wife and disposing of her body in his sausage factory. Dorsey helped the prosecution by determining that the bone fragments were that of human remains and marked the first time that an anthropologist testified (Byers 2008; Snow 1982; Stewart 1979; Ubelaker 2008). Similarly, the investigation of the 1936 Ruxton murder involved the comparison of antemortem and postmortem records in determining identity (Byers 2008).

Some, including physical anthropologist Doug Ubelaker, argue that Aleš Hrdlička played an important role in the formative period of forensic anthropology. Ubelaker notes as evidence Hrdlička's publication and research record, which focused heavily on biological relationships to abnormal behavior and criminal activity, and his record as a consultant in medicolegal issues (1999; 2008). Hrdlička also served as the first physical anthropologist at the Smithsonian National Museum of Natural History where he amassed an impressive human comparative skeletal collection (Smithsonian Institute website 2012; Stewart 1979).

Likewise, physical anthropologist Earnest Hooton applied anthropological knowledge and methods of evaluating skeletal remains to identify individuals (Byers 2008; Ubelaker 2008). However, Hooton also employed anthropological methods in an attempt to support biological bases for criminality and eugenics (Rafter 2004; Stewart 1979). Other anthropologists such as Clyde C. Snow and T. Dale Stewart assert that Hooton had minimal influence in the history of forensic anthropology (Snow 1982: Stewart 1979).

The formative period is also credited with the development of comparative skeletal collections. Physical anthropologist T. Wingate Todd, from 1912 to 1938, amassed the remains of 2600 individuals in what is known as the Hamann-Todd collection. Robert J. Terry and Mildred Trotter, from 1914 to 1965, amassed 1636 individuals in what is known as the Terry Collection. Both of these collections are still referenced today (Byers 2008).

In 1939, Wilton Marion Krogman published *Guide to Identification of Human Skeletal Materials* as a reference for the Federal Bureau of Investigation. This publication—and the shift from a theoretical discipline to an applied practice—demarcates the transition from the formative period to the consolidation period of forensic anthropology (Adams 2007; Byers 2008; Stewart 1979; Ubelaker 2008).

Two significant events in the 1940's and 1950's led to developments in forensic anthropology during the consolidation period: WWII and the Korean War. WWII war dead in the Pacific led to the development of the Central Identification Laboratory in Hawaii (CILHI), now known as the Joint Pacific Accounting Command (JPAC).

Renowned anthropologist Charles E. Snow was the first director. When Snow left in 1948, Mildred Trotter oversaw the laboratory (Byers 2008). During her time at CILHI, Trotter conducted research on stature estimation from skeletal remains (Trotter and Gleser 1952).

The Korean War presented the need for an identification lab in Japan, which was run by T. Dale Stewart. Here, Thomas McKern researched techniques for determining age from skeletal remains (Byers 2008; McKern and Stewart 1957; Ubelaker 2008). This information led to the publication of *Skeletal Age Changes in Young American Males* in 1957 (McKern and Stewart 1957).

Finally, during the consolidation period, Krogman expanded his 1939 publication initially designed for the FBI. In 1962, Krogman published *The Human Skeleton in Forensic Medicine.* Krogman's publication is considered the first book devoted to forensic anthropology (Adams 2007; Byers 2008; Ubelaker 2008).

The modern period began with the first meeting of the Physical Anthropology Section of the American Academy of Forensic Sciences (AAFS) in 1972 (Adams 2007; Byers 2008; Ubelaker 2008). Then, in 1977, the American Board of Forensic Anthropology (ABFA) was established. The ABFA provides a certification program for forensic anthropologists (Ubelaker 2008).

Another important development during the modern period as noted by Byers is the establishment of the Forensic Anthropology Data Bank (FDB) at the University of Tennessee, Knoxville in 1986 (2008). The FDB is a computer database containing skeletal information from nearly 3400 modern individuals and provides a comparative

reference sample and data concerning secular change—changes overtime in stature or bone morphology, for example, due to environmental and genetic factors—and human variation (Byers 2008, FAC website 2012). The FDB is continually updated and serves as the database for ForDisc, a computer program that compares skeletal measurements against the database to estimate ancestry and sex (FAC website 2011).

An important note when scanning this brief history of forensic anthropology is the focus on developments regarding skeletal remains and the lack of focus on soft tissue. This is despite forensic anthropologists' involvement in remains that are burned or badly decomposed but that still retain soft tissue. The ARF served a pivotal function in providing data concerning soft tissue and decomposition.

History of the Anthropological Research Facility

The Anthropological Research Facility (ARF), commonly known as the "Body Farm," came to fruition out of a variety of factors. In 1971, ARF founder Dr. William Bass came to the University of Tennessee to serve as the head of the Anthropology Department. Around the same time, Dr. Bass was asked to serve as the state's forensic anthropologist where he assisted the Tennessee State Medical Examiner's office with death investigations that required forensic anthropological methods and expertise (Bass and Jefferson 2003).

Prior to his move to Tennessee, Dr. Bass worked in Kansas where, due to climate differences, most of the human remains he encountered were dry, skeletal remains. When he began his involvement with death investigations in Tennessee he was struck by

the differences in the condition of remains, specifically with the fact that remains often retained soft tissue. Dr. Bass reported that these, and other, observations "planted the germ" for decomposition research (personal interview 2010). Dr. Bass frequently relates a story about the death investigation that served as a catalyst for the ARF. The death investigation involved remains found in a disturbed, Civil War-era grave. Dr. Bass's initial postmortem interval estimate suggested that the individual died within the year. However, further analysis revealed that the remains were of a Civil War Colonel. This gross miscalculation highlighted the lack of knowledge among the forensic community about human decomposition and taphonomy.

At the time when Dr. Bass began his career at the University of Tennessee's Department of Anthropology and the State Medical Examiner's office, the accommodations for storing forensic cases were insufficient. Remains were stored in a barn on land annexed from the College of Agriculture that proved, due to its proximity to a prison, to have security issues. In the late 1970's, Dr. Bass approached the University of Tennessee administration with his request—land to research human decomposition. Lucky for Dr. Bass, the Department of Anthropology, and forensic science, his request was granted (Bass and Jefferson 2003; 2007; Meadows Jantz and Jantz 2007).

In 1980, the Department of Anthropology acquired a plot of land located behind the University of Tennessee Medical Center. This land previously functioned as the hospital's incineration grounds. Several land additions followed including two in the late 1980's, another in 2003, and the most recent plot acquired in 2007 where the William M. Bass Building was constructed in 2011. Decomposition research began in May 1981 and

focused on what happened during the extended postmortem interval (PMI). Researchers and death investigators were familiar with what happened to the body soon after death—within the first twenty-four hours. For example, patterning of blood pooling (livor mortis), decrease in body temperature (algor mortis), and stiffening and rigidity of the muscles (rigor mortis) were well-documented phenomena with consistent timelines following death (Byers 2008). However, after twenty-four hours, these signs become less reliable. Extended postmortem interval research (PMI) focuses on what happens after the first twenty-four hours and throughout the process of decomposition and skeletonization (Mann et al. 1990; Vass 2001).

Initial PMI research focused on documenting what changes occur, establishing a time line of changes, and determining what variables are involved in the taphonomic process. Since no previous research of this kind had been conducted, simple observations were greatly informative. Early research also focused heavily on forensic entomology studies. Forensic entomology involves the application of entomological (insect) research to problems of a forensic nature. For example, understanding both the life cycles and migratory patterns of insects provide information about crime scenes or human remains containing insect evidence (Rodriguez and Bass 1983).

Since the ARF began in 1981, myriad research topics were investigated including questions about ecology, animal activity, and chemistry as they relate to human decomposition. In addition to research opportunities available at the outdoor facility, skeletal remains are amassed in the William M. Bass Donated Collection. With the remains of over 1000 individuals, the collection is the largest of its kind. The skeletal

collection serves as a modern reference sample for researchers and provides information included in the Forensic Anthropology Data Bank (Meadows Jantz and Jantz 2007: 18).

The ARF also hosts training courses for law enforcement. This practice began informally in the early 1990's and focused on methods for recovery of skeletal remains. In 2001 the ARF and National Forensic Academy (NFA) advanced the scope and enrollment of these classes (Bass and Jefferson 2003; Meadows Jantz and Jantz 2007). Topics include outdoor recovery, forensic arson/fire investigation, human identification, and forensic taphonomy. Enrollment criteria have been expanded to include other professions in the medicolegal sector (FAC website 2011). Both the research conducted at the ARF and the training courses have been instrumental in aiding law enforcement with several tasks including making positive identifications, estimating time since death, and discovering and investigating crime scenes (Bass and Jefferson 2003; Meadows Jantz and Jantz 2007).

Operational Structure of the Anthropological Research Facility

The operational structure of the ARF centers on a unique body donation program. The facility accepts donations that are turned down by medical schools and other cadaver research programs. The only bodies that the facility will not accept are those of individuals with known infectious diseases—HIV, hepatitis, tuberculosis, and antibiotic resistant infections. Donors with infectious diseases can, however, donate their cremated remains for use in forensic fire and arson research. Donations come from several sources—medical examiners, hospitals, and funeral homes when bodies are unclaimed,

families and powers of attorney, and self-donors (Meadows Jantz and Jantz 2006). Donations arranged by family members account for sixty percent of donations (FAC website 2011). Self-donors typically arrange their donation with family members or powers of attorney prior to their death.

Donors who make advanced arrangements with the ARF are known as pre-donors. Pre-donors fill out a "body donor packet[1]" which includes the program policy, instructions for donors, three copies of the body donation document stating the wish to donate, and a questionnaire providing information detailing pre-donors' biological profile and medical history (Appendix A-3). A biological profile includes information such as: race, sex, height, weight, handedness, and descriptions of tattoos, habitual activities, and occupation (FAC website 2011). Pre-donors also make arrangements for their donation through living wills.

While self donations and family donations differ in regard to when and how arrangements are made, it is difficult to know how many family donations result from honoring wishes of the deceased who had not previously arranged self donation. Also, donors who will their bodies to institutions involved in scientific research are often turned down by medical schools who have very strict criteria regarding the age, health status, and condition of cadavers (Meadows Jantz and Jantz 2006). It is likely that self-donors account for a higher percentage.

While, historically, cadaver research bears the stigma of using the unclaimed bodies of the poor and destitute, most of the body donations made to the ARF come from

[1] The body donor packet (Appendix A-3) was updated in 2012. Changes to the updated packet include the addition of consent for Simulation Center Training and a decrease in distance the ARF personnel will travel to pick up remains.

family members (Richardson 1987; Quigley 1996; Meadows Jantz and Jantz 2006). The FAC acknowledges on its website the use of Medical Examiner donations and reports that the frequency of such donations is declining. The FAC also reports on the website their commitment to identifying remains and cooperating with families (2011).

Body donations to the ARF have increased over the years. The second year of the program, the facility received only one donation. In 2006, from which the most recent information was published, 107 donations came to the facility (Meadows Jantz and Jantz 2006). However, at the time this research was conducted the number of donations approached 130. In addition, over 2,750 pre-donors have made arrangements (FAC website 2012). The numbers are increasing.

Several tasks are involved with the body donation program as bodies transition from corpses, to specimens in decomposition research, to data in the skeletal collection. Figure B-1 located in Appendix B[2] contains a procedural flowchart that documents the order of tasks. Proper documentation—donor packet, death certificate, release of medical records—must be filed and approved granting the ARF permission to acquire the body. ARF representatives frequently correspond with funeral homes and decedents' next-of–kin to arrange donations. After the ARF receives proper documentation, bodies are transported to the facility. According to ARF policy, ARF representatives will transport body donations that are both within 200 miles[3] of the facility and in the state of Tennessee. Families must arrange for transport of bodies that do not meet these criteria. Also according to policy, the ARF will transport bodies from funeral homes, forensic

[2] All figures are located in Appendix B.

[3] Policy was updated in 2012 and the ARF will transport body donations that are within 100 miles of the facility and in the state of Tennessee.

centers, or hospitals, but not from private residences or nursing home facilities (Meadows Jantz and Jantz 2006, FAC website 2011).

Upon arrival at the ARF, medical devices, clothing, and any personal identification are removed from the body unless prior requests were made by the donor or the donor's family. The "Instructions for Donors" document located in the "Body Donor Packet" provides information regarding special requests (Appendix A-3). Several photographs are taken to document images of the body, face, teeth and any identifying scars, tattoos, or other marks. Two metal tags stamped with the unique identification number are fastened to the body with cable ties—one on the arm and one on the leg. Samples of blood and hair are procured for future use in DNA research. Stature is measured and recorded.

After sampling and data collection are complete, bodies are "placed" at the facility. "Placement" is the term used to describe the entire process of data collection, sampling, and physically situating the body where it will remain until the decomposition process is complete. The site of placement depends on whether the body will be used in a particular research project and, sometimes, available space. Bodies are positioned face down then covered with black sheet plastic for privacy. A wooden stake with a metal tag marking the identification number is placed at the cranial end of the body.

Once the decomposition process and/or research project is complete, the skeletal remains are collected and transported to the anthropology department's annex[4]. Collected remains are typically skeletal or mostly skeletal with some soft tissue

[4] This research was conducted prior to the September 2011 construction of the William M. Bass Forensic Building, which now serves as, among other functions, the processing facility.

remaining. Cleaning, called processing, typically involves heat soaking with a mild detergent followed by light scrubbing. After the skeletal remains are allowed to dry they are transported to the anthropology department where they are inventoried, measured, and labeled with the identification number. Finally, skeletal remains are boxed and stored in the William M. Bass Donated Skeletal Collection (Bass and Jefferson 2003; Meadows Jantz and Jantz 2007; FAC website 2010).

According to Meadows Jantz and Jantz (2007) 69% of the remains are housed in the skeletal collection, 23% are at the research facility, 2% are at the processing facility, and 6% have been returned to families (Figure B-2).

Activities at the ARF revolve around the facilitation of the body donation program. Human remains are placed at the outdoor research facility where they are allowed to decompose in a natural setting. Some of the remains are used in a variety of research projects. Once the bodies are reduced to skeletal remains, the remains are collected, cleaned, catalogued, and stored in the William M. Bass Donated Skeletal Collection. The skeletal remains are indefinitely available to serve as research and reference data and teaching aids. Although not scheduled regularly, the ARF sometimes holds a ceremony honoring the remains in the collection.

Attitudes toward Death in the United States

The following review presents a historical overview of attitudes toward death and dying in the United States. Attitudes toward death, dying, and the dead in the United States are diverse. As U.S. culture is not homogenous, variation in mortuary customs

exists according to cultural, economic, regional, and religious differences. While the United States encompasses a range of cultural differences, "American" in this discussion refers to Anglo-American as this is the population to which most of the available data refers. Limitations of this restricted account involve the exclusion of class, cultural, and ethnic variations. The following discussion is not meant to serve as an exhaustive, comprehensive history of death and dying nor a comparative evaluation of diverse mortuary customs in the United States. Rather, the objective is to provide a historical backdrop in which to situate the ARF.

Response to death and dying is in many ways a cultural phenomenon. Meanings attributed to life and death are "product(s) of specific social, cultural, and historical contexts" (Lock 1993: 138). Concepts of death over time and between cultures share many common themes. Most societies have some type of mortuary ritual to commemorate death. These serve several functions. They serve to illuminate the rite of passage with which death is associated. They may serve as a means to increase social solidarity given that survivors are often in mourning and left to redefine and fill social roles left vacant by death. Mortuary rituals also have a cathartic effect for the bereaved marking the point at which grieving is to begin and ensuring the safe passage of the spirit of the deceased (Bryant 2001; Farrell 1980; Laderman 1996; Metcalf and Huntington 1997; Palgi and Abramovitch 1984).

While several common themes of death in American society have been maintained over time, other concepts about death have changed significantly. Shifts in how, why, and when people die along with shifts in how mourners respond to death have

led to alterations in and novel definitions of death. Many ideological and cultural transitions related to attitudes toward death were facilitated by technological and scientific developments.

Pre-1850

Prior to the mid-18th century, dying and death occupied a collective realm and was wrought with religious sentiment and ceremony. Most often people knew when to expect their death and how they were to perish. Sometimes this knowledge was born out of circumstances—illness or warfare. Other times, fortunes were acquired through the use of a profit, mystic or shaman. People of higher classes were less aware of their own death given their lessened susceptibility to disease and military service, as though class and social standing granted immortality (Ariès 1974; Laderman 1996).

Death was a public and collective affair. The dying, while on their deathbed, were surrounded by family, friends, neighbors and clergy. The deathbed, located in the person's home, maintained a sense of familiarity and comfort for the dying person and a sense of contribution and purpose for the survivors. While biological death was impending, social life remained intact. Physicians were typically absent when the moment of death took place and death was determined by a lack of biological functioning. Families of the deceased were responsible for nearly all aspects of mortuary services. Given the collective atmosphere of the dying process, public mourning was allowed and encouraged (Ariès 1974, Ariès and Murchland 1974; Elias 1985; Laderman 1996; Hayslip and Peveto 2005).

Judeo-Christian beliefs in early America centered on a just and terrible God. Death was the result of divine providence and, thus, inevitable (Laderman 1996; Stephenson 1985). Death represented a rite of passage into a spiritual realm where the soul would continue into immortality. With the promise of a life after death, less fear and anxiety surrounded the event (Ariès 1974; Laderman 1996).

Post-1850

Although the evolution of attitudes toward death and the circumstances that influence these attitudes are not unilinear, the Civil War marks a significant turning point and serves as a useful demarcation. The Civil War brought tremendous tragedy to U.S. soil and, with the death toll, changes in mortuary practices. Moreover, the Civil War fostered and coincided with several social changes that influenced mortality patterns and mortuary practices.

Estimates of the Civil War death toll range from 600,000 to 850,000 war dead. Disposing of the dead and returning remains to families required efficient and hygienic mortuary practices. Embalming became widely accepted as a method of sanitation and preservation allowing the transport of bodies. Of course access to embalming and other such funerary resources was limited by socioeconomic status. War dead without family resources to aid with their transport were buried at camps and field hospitals thus creating a trend in differential treatment of dead based on class (Laderman 1996).

After the Civil War, resettlement patterns in the United States led to increased industrialization and urbanization. With urbanization came urban crowding and an

associated increase in disease epidemics, mortality rates, and fears of both. Hygiene issues associated with diseased remains created the need to quickly dispose of human remains away from concentrated urban areas. The rural garden cemetery served such a function but also carried pastoral and serene imagery. Burials in rural garden cemeteries became standard for those with economic means. Those without the means to be transported and interred in rural cemeteries were buried in Potter's fields. Hygiene issues associated with human remains served to increase fears of the corpse (Farrell 1980; Laderman 1996).

The need for efficient disposal of the dead during and after the Civil War served to catapult a specialized funeral industry into mainstream society. Mortuary rituals were no longer managed by families but were contracted out to professionals and were largely governed by socioeconomic status. The funeral industry, orchestrated by undertakers, employed casket makers, gravediggers, landscapers, and hearse companies. Women, who previously contributed largely to domestic mortuary practices and were perceived as caretakers of the dead, were excluded from professional services (Farrell 1980; Laderman 1996; Mitford 1998).

There were also changes in the cultural norms for grieving behavior. Previously, mourners were expected to display grief whereas the new era promoted a suppression of grief symbolized in the widow's black veil. Self-control was equated with dignity (Ariès 1974, Ariès and Murchland 1974).

Several other changes followed resulting in shifting ideologies about death. Changes in theological beliefs lessened the religious influence. Before death became

more secularized, Judeo-Christian beliefs about the nature of God changed. Previously, God was viewed as just and terrible. The new era embraced a God that was all forgiving and passionate (Farrell 1980; Stephenson 1985). Under this new theology death, especially miserable or young deaths, seemed less rational (Farrell 1980). Waning faith in an afterlife also served to increase anxiety about death (Schilling 2003).

The discovery of germ theory and other medical advances led to the eradication of many diseases and a decrease in mortality rates and an increase in life expectancy. A sophisticated knowledge of anatomy surfaced, supplying information about death and the body and highlighting symbolism associated with the corpse. Until recently, when there is a movement to involve dying patients with decisions regarding their care, doctors and families tried to protect patients from knowing the seriousness of their condition and their ultimate fate (Ariès 1974, Ariès and Murchland 1974; Kaufman 2002; Laderman 1996; Hayslip and Peveto 2005). With increasing advances in science and medicine toward the end of the 19th century "death began to be understood as located in the body, and resulting from something that happened to the body" (Kaufman 2002:247). According to Michel Foucault "with the coming of the Enlightenment, death, too, was entitled to the clear light of reason, and became for the philosophical mind an object and source of knowledge" (1994: 125). This discovery brought death into a medical realm where it had previously occupied a religious or spiritual domain (Stephenson 1985: 26). The new medicalized, secular death represented an end without the promise of heaven, hell, or an afterlife.

Modern Concepts

Modern concepts of death create several tensions. Death and the corpse are symbolic of medical and technological failure—they contradict the progress to which Western society so passionately adheres. Death is antithetical to the American idyllic valuation of science, rationality, the individual and production (Elias 1985; Metcalf and Huntington 1997: Schilling 2003). Death defies science and rationalization by highlighting humans' failure to control their mortality. Death challenges the importance of the individual and individual production by eliminating future contributions. Death also threatens social relationships and opportunities for personal achievements (Elias 1985; Riley 1983; Stephenson 1985). Death, and the process of dying, has "become more gruesome in many ways, more lonely, more mechanical, and dehumanized" as society learns details of taphonomic and disease processes while relying on multiple bureaucratic systems to mediate dying and the dead (Palgi and Abramovitch 1984: 402).

Organ Transplant and Brain Death

A discussion of organ transplant and brain death and the history that informs associated legal, medical, economic, and cultural practices is helpful in understanding how death, as a culturally interpreted phenomenon, is shaped by similar influences. Organ transplant and brain death represent how science and technology simultaneously influence and are influenced by cultural factors. Organ transplant and the concept of brain death also contribute to changes in how death is conceptualized in the United States. Organ transplant and brain death are wrapped in cultural norms such as fears of

death and attempts to control mortality through life-extending technology and the medicalization and bureaucratization of dying and death. The "gift of life" technologies intervene to extend the lives of organ recipients and brain-dead patients. Meanwhile, the donor is immortalized as a small piece of them lives on in the recipient's body. Both technologies are also dictated by a complicated network of medical, legislative, and economic bureaucracies. Organ transplant and the concept of brain death illustrate how technology, bureaucracy and culture intersect to create new cultural norms and redefine nature. New norms have been established regarding the implementation of life-extending technology; death has been redefined as previous criteria to determine death have been replaced. Each also responds to society's fear of and desire to control death through extending life. However, both also increase fears of dying a social death—withdrawn and isolated from family, friends, and community—followed by a bureaucratically controlled death where the individual has minimal agency in regard to end-of-life decision. There are also fears that lifesaving intervention may be withheld in the interest of harvesting organs.

The mechanical ventilator, originally used to allow such treatments as bypass surgery, became standard by the 1970's (Kaufman 2000). The combination of the artificial ventilator, intensive care units, and trauma units provided the ability to keep patients alive for months or years (Lock 2003) This technological and medical advancement created a new cultural form—the brain-dead patient—and made the finality of death become ambiguous (Kaufman 2000; Lock 1996; and Lock 2003). The concept of brain death resulted as an attempt to quantify the moment of death, a difficult task since

death is the absence of, rather than presence of, biophysical properties. The Declaration of Death Act of 1981 supplied the criteria—although ambiguous and open to interpretation—for determining brain death (Appendix A-4).

Despite the institutionalized criteria for brain death, a brain-dead person, or a person in a persistent vegetative state, is thought to be in an indefinite state of liminality. Life and death are prolonged and the line between the two becomes blurred (Kaufman 2000, Rapp 2003). A brain-dead patient resembles a sleeping live person. They are warm and retain their normal color. Their bodies respond to reflexes such as sneezing and yawning. They also maintain digestive, metabolic, and excretory functions. Brian-dead women have even given birth. They are, from most appearances, biologically alive. However, cognitively, they are unaware. They occupy a hybrid status. With this cessation of consciousness, the brain-dead patient suffers a social death—the death of the self (Lock 1996; Lock 2002: Lock 2003; Sharp 2006). Brain death illustrates a cultural redefinition of nature as previous criteria for determining death have been replaced and a new entity—the brain-dead organ donor, not dead but not alive—has been invented.

Brain death is closely associated with organ transplantation. In 1967, Christiann Barnard performed the first successful heart transplant in South Africa. Beginning in 1968, transplant surgeons began harvesting organs from patients with irreversible brain damage. At this point, it became a medical imperative to be able to determine the moment of death (Lock 1993; Lock 1995). Similar to previous medical advancements, organ transplant became widely accepted with little public input or inquiry (Lock 1995).

The rhetoric used when discussing organ transplant ignites imagery culturally compatible with ideologies associated with death and the quest for immortality (aversion to death). Donors are said to be "giving the gift of life." This gift takes the form of altruism for living donors and immortality for cadaver donors (Lock 1993). Organ recipients receive a second life or rebirth. This is evident in the agricultural terminology used: organ harvesting and transplantation. The language also suggests the dehumanization and commodification of donors. Brain-dead patients are often referred to as GPO's—good for parts only—or bones (Sharp 2006).

In the United States organ transplant is a multibillion-dollar industry benefiting both medical and pharmaceutical corporations. In 1997, the United States performed over twenty thousand transplants, just hundreds short of the entire continent of Europe. The body represents a host of commodities: major organs including the lungs, liver, heart, kidneys, pancreas, and intestines; tissues including bone, bone marrow, ligaments, corneas, and skin; reproductive material such as sperm, ova, placenta and fetal tissues; and blood plasma and hair. Organ transplant has created a demand that cannot be met and thus an organ shortage (Sharp 2006). Of course, organ recipients, even those privileged enough to have medical insurance, must still pay exorbitant amounts to fund the surgery, hospital stay and medications.

First introduced by Dr. Berry Jacobs in 1983, the International Kidney Exchange was a proposal aimed at reducing the kidney shortage by "brokering kidneys from living donors" (Munson 2002). The plan included recruiting poor, global donors to supply recipients wealthy enough to pay. Jacobs would, or course, keep a small finder's fee.

After his plan was introduced, classified newspaper advertisements began emerging in New Jersey, California, and Georgia offering kidneys for sale. The plan was condemned by most and led to the enactment of the National Organ Transplantation Act (NOTA) of 1984. NOTA among other things, made it illegal to buy or sell body parts deeming unethical the commodification of the human body (Munson 2002).

Other proposals responding to the organ shortage emerged and posed similar ethical concerns. Several proposals have been made such as paying partial expenses of funeral costs for the cadaver donor and reimbursement for travel costs and lost wages of voluntary donors. The donor card movement operated to enlist potential donors, especially new drivers valued for their young, healthy organs and their statistical likelihood of entering the brain-dead donor pool. There has also been a recent movement to establish "presumed consent" laws where brain-dead patients are presumed to have donor status unless they previously voiced their position on—or opposition to—the topic. Other solutions include loosening criteria on organs, allowing surgeons to harvest organs from elderly patients. This resource remains untapped because of the quality of aged organs. Similarly, suggestions have been made to allow prisoners to voluntarily donate organs in exchange for a lessened sentence. Of course concerns about hepatitis and HIV coupled with the historical exploitation of vulnerable populations for scientific advancement will likely prevent this solution from ever happening (Sharp 2006). Any attempt to counter the organ shortage seems ethically questionable and appears to make the body into a commodity.

Fear and Repression

A combination of the secularization of death and the social isolation of the dying—both prompted by science, medicine, and technology—caused increased fears about death. People now know more than ever about death and what happens to the body after death—advances in medicine and forensic science explain the processes of dying and decomposition—but nothing is known about what happens to the "self." Without the promise of an afterlife, the "self"—the secularized soul—faces an end equally as abrupt as the death of the body. Death has become a topic so repressed that "ordinary men have become mute and behave as though death no longer existed" (Aries 1974:537).

This repression is evident within the discipline of anthropology. Apprehension to explore the topic of death among social scientists, except when related to the other, suggests that they, too, obey the taboo. Studying death within one's own society is complicated by a potential lack of objectivity related to studying one's own culture and also studying a phenomenon we will all encounter and one that often induces anxiety (Lock 1993; Schilling 2003). Understanding the repression also highlights the importance of a reflexive approach.

Beginning in the late 1950's and extending through the 1970's, several publications on death and dying surfaced. Two of the most prominent were Herman Feifel's 1959 anthology, *The Meaning of Death*, and Elisabeth Kübler-Ross's 1969 publication, *On Death and Dying*. Both sought to illuminate an understanding of the experience of death and dying from the perspectives of the dying and survivors. Kübler-Ross's work on the stages of grief is still widely acknowledged today. These

publications serve as an attempt to confront the realities of death and dying that had been banished from mainstream discussions but also as an attempt to control the experiences and associated anxieties that result from such discussions. These publications are credited with ushering a new culture of professional services related to death anxiety such as grief counseling and funeral planning (Farrell 1980). While these discussions seem like a step toward confronting death anxiety and associated taboos, they in many ways facilitate them by providing further rationalization and attempts to control the inevitable (Schilling 2003).

Surveys[5] conducted during the 1980's showed a preoccupation with and fear of death (Neimeyer et al. 2003). Both opinion and evidence indicate an increase in wills and life insurance policies (Riley 1983; Stephenson 1985). Consistent throughout the discussion of death in the United States is how socioeconomic position shapes the experience of death and dying. Wealthy are less likely to perish in war or from disease. They are more likely to receive expensive life-extending interventions. Upon death, the remains of the wealthy are provided elaborate funeral services. Their families receive benefits from life insurance policies. The amount of resources devoted to attempts to extend life and preserve and separate the corpse is further evidence of fears of death and how multiple systems have capitalized on this fear. Life's worth has become quantifiable in death (Farrell 1980; Laderman 1996; Mitford 1998).

Perhaps the most prominent location where socioeconomic status and death taboos intersect is the modern funeral industry. The funeral industry capitalizes on

[5] Neimeyer et al. present aggregate data sourced from multiple surveys that assessed death anxiety among the elderly and professional and nonprofessional caregivers, as well as comparative surveys assessing death anxiety among terminally and chronically ill and healthy adults and religious versus non-religious adults.

cultural ideologies of immortality. Embalming, an expensive, non-crucial service, is offered as a means of "preserving" the corpse. However, embalming only briefly stalls the process of decomposition. Coffins, or caskets as the funeral industry prefers, are typically expensive and operate as items of conspicuous consumption. Interment involves expensive cemetery plots, burial vaults, and tombstones. Entombment in mausoleums is also very costly (DeMott 2009; Mitford 1998). The monetary value of the funeral service is thought to be indicative of the worth of the individual (Mitford 1998).

The manner in which corpses are handled illustrates the multiple symbols associated with death. The corpse is a symbolic repository containing society's concepts of death (Emerick 2000). The modern funeral industry responds to society's fear of the corpse in a variety of ways. Most often, families and friends of the deceased do not view the body until it has undergone certain preparations. Modern funeral practices obscure the reality of death by preventing spectators from viewing the corpse in its natural state (Ariès 1974; Farrell 1980; Palgi and Abramovitch 1984). While embalming once had spiritual significance, and is also marketed as a method of preservation, it now represents an aversion to bodily processes and an effort to maintain hygiene (Farrell 1980; Laderman 1996; Palgi and Abramovitch 1984). The casket serves as a receptacle that separates the dead individual from the living. Burial vaults serve the same purpose. Both devices also appeal to sanitation concerns. During funeral rituals, the corpse is displayed in a familiar, lifelike manner obscuring the reality of death and decay. As material items, corpses, coffins, and mortuary practices have significant symbolic value (Verdery 1999).

According the National Funeral Directors Association (NFDA), the average cost of a "basic" funeral in 2009 was $7, 755. This total does not include cemetery plots or monuments, flowers, or obituaries. The NFDA also reports the revenue for funeral homes in 2007 as $11.95 billion (NFDA website 2012). The modern funeral industry reflects and capitalizes on multiple cultural attitudes toward death including fears of death and the corpse, hygienic concerns, differential access to funerary resources based on socioeconomic status and conspicuous consumption, and spirituality and religiosity.

Cremation also illustrates modern concepts of death. According to Ariès, cremation "does away with the cult of cemeteries and the making of pilgrimages to graves" (1974:553). The process represents a deviation from previous religious standards dictating burial of whole bodies as a requirement for passage to an afterlife. Cremation is becoming more popular in the United States. According to NFDA, in 2009 the U.S. cremation rate was 36.86%, nearly a 10% increase from 1999 (NFDA 2012). In contrast, the Canadian cremation rate in 2009 was 68.4% (NFDA 2012).

While the increase in cremation rates may seem indicative of the loosening of adherence to traditional mortuary customs, cremation also responds to many of the same fears as traditional body preparation. Cremation is considered by many to be more hygienic than traditional burial and burial preparation and thusly represents disgust associated with the corpse (Davies 2005; Prothero 2001). Cremation also serves as a less expensive mortuary service compared to burial or entombment.

When death occurs, "a corpse must be looked after; the deceased placed in a new status; vacated roles filled; property redistributed; the solidarity of the group reaffirmed;

and the bereaved comforted" (Riley 1983:206). Most commonly people die—or are pronounced dead—in hospitals; corpses are relocated to funeral homes where they are embalmed, decorated and buried. The process is both institutional and impersonal (Elias 1985). The relationships between the social and bureaucratic aspects of death are very nuanced. The medicalization of death is a function that responds to fears of death through attempts to prolong life but increases fears of dying a painful, medically controlled, socially isolated death. Likewise, the funeral industry responds to fears of the corpse and symbolically serves as a means to control taphonomic processes, but also deprives the bereaved of opportunities to participate in meaningful ways (Mitford 1998). The bureaucratic institutions that respond to fears of death, dying and the corpse create additional fears that must be reconciled (Elias 1985).

Fascination and Spectacle

American society since the mid-19th century has held a strong fear of dying and the dead and subsequent repression of the topic (Ariès 1974; Elias 1985; Laderman 1996). Changes in theological beliefs removed the comfort of an afterlife while advances in technology made death seem less of an imminent threat, rather an event that could be controlled (Schilling 2003). Researchers maintain the idea that American society still holds a strong fear of death and the corpse (Farrell 1980; Laderman 1996; Schilling 2003). Yet, in many ways society seems fascinated with death given its popularity in the media. Forensic dramas dominate prime time television, violence infiltrates film, television journalism displays graphic images of war, and forensic

scientists are successfully marketing books about their trade to a popular audience. Fascination with death and the consequential defiance of death taboos, according to most researchers, is either a paradox or another extension of fear.

Several explanations have been crafted to explain both positions. Death imagery keeps death at a distance, separating abstract death from personal, individual death (Emerick 2000). Others suggest images of death encapsulate, and somehow calm, society's fear of mass death from warfare or terrorism (Palgi and Abramovitch 1984). Rationalization of the body, disease, and death serves as a means to control the phenomena. Likewise, death presented as a spectacle has replaced authentic knowledge (Debord 1995).

Society may seem comforted by knowing the details of forensic science. Or perhaps American perceptions of death are evolving again. Death has become a pop culture phenomenon. "The Pornography of Death," written by Geoffrey Gorer in 1955, relates the sex taboo of the Victorian era with the modern death taboo. Gorer asserts that pornography resulted in response to the suppression of sexuality. Gorer relates images of violence as pornography under a society with a death taboo (Gorer 1955).

Perhaps the best illustration of pornography or spectacle of death is the art, or science, of plastination. Plastination is a preservation technique developed by German anatomist Günter Von Hagens. The technique involves injecting chemicals into a cadaver that preserve it and allow it to be molded. Plastination illustrates the intersection between technology and changing concepts of death, the corpse, and the body. Referring to how the living, or dying, body has become an experiment of life-extending technology

and machinery, Dijck posits, "if the living body has become a mix of nature and artifice, it is no great surprise to find this also applying to the dead body" (2007: 641).

Von Hagens displays his "anatomical art" in an exhibit titled Bodyworks. The popularity of this "scientific" exhibit is overwhelming. The exhibit in Germany attracted over one million visitors in four months. The Vienna museum that housed the exhibit had to remain open twenty-four hours a day, seven days a week to accommodate the swarms of spectators (Dijck 2007).

The exhibit's popularity seems shocking given the controversy with which it was surrounded. In 1997, the German Anatomical Society censured von Hagens (Jones and Whitaker 2009). The German Anatomical Society and other critics charged that display of human cadavers was unethical. However, as Dijck points out, the historical roots of human anatomy conducted similar practices. It was not uncommon in the 18th century for dissections to be held in public nor was it unusual to see macabre museum exhibits with body parts displayed in jars of formaldehyde or in more artistic manners (Djick 2007; Jones and Whitaker 2009). Marlin-Bennet et al. accuse von Hagens and the other "plastinators" of unethically and illegally procuring bodies, commodifying human remains, and exploiting laborers involved in the plastination process (2010). Others suggest that critics of the exhibit are troubled by the use of whole bodies and the artistic, life-like nature in which bodies are posed, and the use of the term "specimen" to describe a once-living human (Djick 2007, Jones 2002; Jones and Whitaker 2009; Walter 2004). Plastination also presents a challenge to the mortuary ritual (Walter 2004). Regardless of the how plastination is defined, and despite the controversial nature of plastination

exhibits, both the practice and exhibits have popular appeal that serves as evidence of a popular curiosity with death and the dead body.

Understanding the histories of forensic anthropology and attitudes toward death helps to situate the ARF within its broader cultural and historical context. The ARF has greatly influenced the field of forensic anthropology and led to a better understanding of taphonomy, but operates in a climate where authentic discussions of death have been replaced with repression and spectacles. Similarly, the experiences of ARF personnel are complicated by their subjectivity with regard to the body and death. The next chapter seeks to provide an accurate portrayal of the ARF and examine participants' experience.

Chapter III: Field Research

"When your research lab is a body farm and your chosen field is the field of the dead, mysteries take many forms." –Bill Bass (Bass and Jefferson 2007:210)

This section will detail field research conducted at the Anthropological Research Facility. The section is structured according to specific operations involved with handling bodies: intake, placement, and recovery. I provide a narrative of my experience along with my observations of ARF personnel participating in these tasks. Interview data supplements the narrative. However, when investigating a topic considered to be repressed, attitudes are not observable phenomenon. Repression is not visible. Repressed topics such as matters involving death are not openly and obviously discussed thus requiring direct questioning. This section closes with interview data that reflects such repression.

Participant observation was conducted over a span of eight months. Interviews were conducted immediately following the completion of participant observation. The actual dates are withheld to protect the identity of participants and donors. Eleven face to face interviews were conducted with individuals at various private offices in the Department of Anthropology and Department of Pathology at the University, Knoxville. Six interviews with participants who no longer reside in Knoxville, Tennessee were conducted via telephone.

Intake

Depending on where the body originates, such as a hospital or morgue, body donation pick-ups, or intake, typically involve prior correspondence with personnel at the facilities where body donations originate to ensure that necessary documentation has been provided. This documentation may include a biological profile, a detailed medical history, and a signed release form permitting the ARF to obtain the body. Often, an ARF representative will fill out the death certificate. Once the documentation is provided, facility personnel travel to the location in one of two trucks owned by the ARF. The trucks are standard utility pick-ups. The beds are covered with camper tops. The cabin has a small back seat. There are no decals or other markings to indicate what the trucks are used for. Each truck is stocked with a gurney, personal protective equipment, and body bags.

If a body donation is within 200 miles of the facility and in the state of Tennessee, personnel from the facility will provide transportation. Otherwise, the family must make arrangements to ship the body. Bodies that are transported are either flown in to an airport and picked up by facility representatives, or, occasionally, transported directly to the facility. Bodies are typically picked up at forensic centers, morgues, mortuary facilities, and airports. Rarely, bodies are picked up at hospitals, nursing homes, or private residences. The locations to which ARF protocol will allow travel are relevant to note in terms of the bureaucratization of death. Forensic centers, morgues, and mortuary facilities are places that are uniquely contracted to deal with the dead and serve as examples of how the treatment of the dead has become less personal and less intimate.

The context in which human remains are encountered will be discussed further in Chapter IV.

Intake from each of the different facilities offers a unique experience. Picking up bodies from a forensic center is typically rather efficient. One forensic center even seems like a drive through service—efficient, yet highly impersonal. For example, during one pick-up we pulled up to a garage door where a phone was available to announce our arrival. The garage door was then opened allowing us to drive inside a large room with a metal table. Inside this room was a ramp leading to a door that entered the morgue. A morgue technician brought the body out on a gurney and we transferred the body to our gurney, placed the body in the truck, reviewed the documents and were on our way. The entire process took less than ten minutes.

Intake at hospitals is similar to forensic centers but not quite as efficient. ARF personnel are typically required to contact hospital security upon arrival. Hospital morgues are often located in hidden areas of the hospital and it is often necessary to pass hospital staff and visitors with the gurney in tow. Personnel are required to wear a shirt with the ARF logo, so there is little question from spectators as to the purpose of our visit and the fate of the body on the gurney. The hospital setting created some tension for me. I was never uncomfortable with handling human remains, but at the hospital, I felt that I was being scrutinized. In some ways, I think people were curious, especially with the public interest in forensic anthropology. In other ways, my own biases about the death-care industry—concern that my handling human remains would be considered taboo by others and suspicion regarding the commodification of mortuary rituals, for example—

were at work and I felt that I was now a part of the bureaucratic machine there to take the remains of someone's loved one.

One hospital intake was conducted at a hospital that I am familiar with and where I have been a patient. I never knew where the morgue was prior to this visit. When we arrived, ARF graduate assistant Jamie and I waited in the truck at the emergency room entrance while ARF graduate assistant Morgan went to notify security staff of our arrival. We parked at an entrance that was used by maintenance. The ARF representatives had picked up bodies at this hospital before so they were familiar with the layout. When we got out of the truck we put on gloves and removed the gurney from the truck. I felt there was something symbolic about putting on gloves, especially so early in the process. While the gurney is cleaned after each use, it is still best practice to wear gloves when handling it. And we knew that we would soon be handling human remains, an activity which also warrants the use of gloves. However, I also felt that the gloves served as a symbolic barrier between the living and the dead.

Once we were ready, we entered the back entrance and met the security guard who escorted us to the morgue and unlocked the door for us. Morgan pulled the shelf out of the cooler then, together, we unzipped the body bag. The remains were that of an elderly man, emaciated as though he had suffered a long illness prior to his death although I never learned the details of his life or death. I never asked about donors' personal histories. Their confidentiality, per ARF protocol and the conditions of my IRB approval, is to be protected. But those types of details were also rarely discussed among ARF staff and so I felt that it would have been inappropriate to ask and often assumed

that the ARF personnel would not know. I also perceived it as disrespectful to inquire about the private, personal details of someone who is now so vulnerable. In my view, as their naked bodies are observed throughout the entire taphonomic process, they should retain something private.

The body was dressed in a hospital gown and loosely wrapped in a fitted sheet. I assumed that the sheet was used to lift and transport him into the body bag—he was that light. The man in the bag matched the description in the biological profile, but there was no tag or other documentation on the body. Morgan asked that the security guard procure the appropriate documentation to verify that we were taking the correct individual. Once we received the verification, we transferred the body to our gurney, zipped the attached bag closed, tightened the belts to secure the body, and were on our way. Again, as we passed hospital employees and, who I assumed to be, visitors, I wondered if they thought I was committing a taboo offense in handling human remains and in ushering those remains to a facility where they would not receive the full ceremonial mortuary service that the average person believes are standard. One of the ARF graduate assistants, Jordan, related a similar discomfort in regard to the presence of family members:

> I feel like the uncomfortable crypt keeper in the background, going to go take your loved one away, so I kind of try to not make any interaction because it's a different experience for them than it is for me so I just kind of want to be in the background, let them have their moment.

Some of the people we passed in the long maze of hallways glanced over, but most did not. Perhaps working in a hospital makes a covered gurney seem mundane. Perhaps they were pretending not to notice out of respect for the dead or respect for cultural norms that dictate maintaining a quiet distance from the dead.

Experiences at mortuary facilities vary depending on the type of facility. Facilities that only serve to prepare bodies for services or cremation are different from facilities that offer the full gamut of funerary services. The former was the first type of facility that I visited during my fieldwork.

I arrived early to the osteology lab to meet with the ARF assistants I would be traveling with that day. This gave me some time to chat with Dr. Jantz. I overheard some details about the donor and indications that Dr. Jantz had correspondence with the donor's family. On the way to pick up the body I asked the ARF representatives what they typically learn about donors.

> Principal Investigator (PI): How much do you typically know about a donor before the pick-up?
>
> Morgan: As little as possible.
>
> Jordan: I'm nosey. As much as I can—especially weight so I know what I'm getting in to. Like a 400 pound man.

Jordan paused after saying: "as much as I can," as though having second-guessed the appropriateness of that statement. The follow-up statement about wanting to learn the weight of individuals seemed to operate as a means to correct the previous statement and suggesting it may be not be appropriate to indicate interest in any personal aspects of a donor, or at least to admit such.

> Morgan: I like to know weight.
>
> Jordan: Weight is often grossly underestimated.

The question was meant to discover what types of information they were automatically provided with. However, both participants interpreted the question as

asking how much they wanted to know. Morgan's answer was clear. Jordan started to indicate an interest in more personal details about the donor, but qualified the statement with an interest in the weight of the individual. This brief conversation was an early indication of both the differences between participants in how they approach their work and the use of distancing strategies, which will be discussed further.

The mortuary facility was located in what appeared to be a regular house in a residential neighborhood. Only a small sign marked its function as a mortuary service. The "service entrance" was at the rear of the building. Jordan had to call the owner of the facility to let him know that we had arrived. He arrived promptly with paperwork in hand. The ARF representatives reviewed the paperwork while the mortuary facility staff member went to get the body. He brought the body out on his own gurney. The body was in a body bag and wrapped in plastic. I later learned that the body had suffered severe trauma and had been autopsied. The incisions created during autopsy are not closed thoroughly and result in "leakage" as does sharp force and gunshot trauma. The body bag was then contained in a long, coffin-shaped cardboard box with several handles. The last name of the individual and "body farm" were written on the box. Morgan and the owner were able to roll the gurney to the truck and slide the box into the bed of the truck.

Much like the forensic center, the mortuary facility was very expedient. The only people involved were those that work with human remains on regular basis thus eliminating the need for the delicate rhetoric typically used when discussing death with the bereaved. It was very much a business-like atmosphere.

My first experience at a funeral home was quite different. The funeral home was located about 100 miles away from Knoxville requiring a long commute. I arrived to the osteology lab to chat with Dr. Jantz and meet Kate Driscoll who I would be traveling with that day. They were waiting on the funeral home to fax paperwork. During the delay, Dr. Jantz clarified some of the protocol regarding paperwork. She related a story in which an HIV-positive individual was almost donated by a Medical Examiner's office. The ARF representative noticed the diagnosis in the paperwork before they left and was able decline the donation. Dr. Jantz used this example to emphasize the importance of reviewing all paperwork so that nothing "slips by." I also learned from Dr. Jantz that, because of chain of custody protocol, they cannot return a body once they drive away. It is because of this that they need to receive and review documentation prior to picking up a donation. It is even more important when there is a long commute involved.

After an hour, the paperwork finally arrived. As Dr. Jantz reviewed the paperwork she commented that the donor was younger than she. She did not comment further but the look on her face showed a degree of empathy that was not typical with every donation. When asked to discuss situations they find difficult, several participants expressed feeling sympathetic when encountering young decedents.

> Alex: In terms of doing those cold cases, we had quite a few that were young, teenage girls…I don't like the unidentified ones being in the donated collection…
>
> PI: Do you think that the young, female cold cases were difficult because you identify?
>
> Alex: Yeah, it always shocked me because I would imagine that if I was missing the Calvary of Cleveland would come out and try to find me and it depressed me because I knew they were runaways and probably their parents didn't care. Now, that may not be true; I hope it's not. I hope somebody is looking for them but it's

> probably not true and that was always kind of rough for me to, I don't know, put myself—I'm probably this girl's age…

Kate and I discussed the age of the donor during our long drive. Kate reported that, with the increase in donations to the facility, they are more selective in who they accept. The result is an influx of younger individuals to diversify the skeletal collection. Understandably, older individuals are better represented in the skeletal collection.

During a subsequent interview Kate elaborated on her feelings regarding young donors:

> KD: It just kind of makes me think of my own mortality…Over my years here we've had younger people come in and unfortunately most of the time they come in there's some kind of violence associated with them…And those cases it just seems like—it's so pointless; the death is pointless. And I think that's hard for me to deal with. Our accepting donations is a fantastic service to the community but the violence that sometimes takes life is hard to deal with.
>
> PI: How do you handle dealing with those situations?
>
> KD: I think it's one of those things that you take away and you kind of file away and don't think about. And dealing with the forensic database, I read a lot more forensic cases than we actually get into the collection, and I think that, if anything, it strengthens my resolve that we do need to continue working on our methods to be able to identify these people. I mean, if you have an eighteen-year-old girl who's died, we need to be able to identify her and so it really increases the validity of my work, I think.

While not everyone involved seemed to contemplate the comparative youth of recent donations, Kate, Dr. Jantz, and I certainly noticed and commented. While I cannot comment on how others truly felt, I never felt confronted with my own mortality. I did, however, feel a degree of sadness at the loss of a young life and for the family left behind. Later, Dr. Jantz commented on the age of another donor and simultaneously

recognized the sadness associated with the death of young individuals and the tremendous scientific value of their skeletal remains:

> We received a donation the other day of a relatively young person….and that was very sad, you know. We get these young individuals, or occasionally we'll get a baby and that's very sad. And at the same time, though, I get excited because we're going to have the skeletal remains of this young female and how exciting is that because it's not that typical, and so it's both I get going on.

Similarly, Rebecca Wilson Taylor presented her feelings regarding young donors:

> …You see young people come in and it's a tragic situation or not natural or something happened and you're like 'they're the same age as I am,' and when you have that you realize 'hey, I really need to be doing some more with my life.'

Rebecca relates that witnessing young donors, while sad, has provided her with a grasp of the fragility of life and the need to enjoy life and take advantage of opportunities.

I had heard during casual conversations that Dr. Jantz did not work with the remains of children. I asked her about it directly and she offered the following:

> Well, first off, that just doesn't happen. We don't get those cases. We do get infants, and that's—it doesn't upset me like it used to, and I completely tie all this back to my own children. When I was in graduate school and my oldest daughter was about… 2 or 3 years old and a case came in…and that child had been missing. It was three or four years [old], something like that, and when the case occurred I remember thinking 'oh that's sad, but the mother probably did something.' That was the belief at the time. And then when her remains were actually found, she was the age that my daughter was at that time, and all the images that they were showing of her—this blonde-haired, blue-eyed kid—I said, 'that's my daughter.' I couldn't do it; I could not work on that case. If one came in today, I don't think I'd have a problem. I could do it and I wouldn't have a problem with that. At the time it was too close, it was just way too close. But I've worked with infants and stillborns. It's not fun.

Kate Driscoll had been with the ARF since 2004 so she was a wealth of knowledge. Our discussion about increases in donations led to a discussion about the

popularity of forensic anthropology. Kate admitted that she sometimes gets slightly annoyed with the misconceptions about forensic anthropology that are gained from television shows like "Bones." She told me that some acquaintances have called her "Bones." But she also related a story where the popularity of the ARF and Dr. Bass worked in her favor. She was returning from picking up a donation, but still quite a distance from Knoxville, and had the body in the back of the truck when she had to make a quick stop. Almost immediately she realized that she had locked the keys in the truck. She had to call the police for help and, while she had to tell them her connection to the facility to explain the body in the truck, the public interest in the ARF and Dr. Bass, she believes, helped the situation.

Dr. Marks also commented on the sensationalism created by the media:

> A lot of people in your situation that I do interviews with; they're—they were looking for a monster—they're looking for some: 'What's in you? What's going on inside you that allows you to do this?' You know--why do I-- and what they're asking is 'Why can't I do it?' Not everybody can do it. Not everybody can do what you've done whether it's laying out the body or picking it up or measuring the maggot or digging up a skeleton for a class. So when you have the media come in and they're like all, you know, enamored by it, CSIed by it, and all this stuff, what they're asking is 'why can't they do it?'…So you know it isn't about the person. I mean it's about—as an investigator, the best investigator you can is to be unbiased and go for those remains. There's times to be sympathetic later…You have to do the job that you're called to do and afterward you can get sentimental about it or whatever. So I never went home and beat my kids or hung up my dog. And people look for that: 'What kind of a dark person does this?'

During our drive, Kate also discussed the system used for cataloguing and labeling donations. Kate reported that a similar facility refers to the donations by name whereas UT uses a numbering system. The identification number consists of a number

marking the sequence and the year the donation was received. For instance the third donation received in 2009 would be 03-09.

After an hour and a half drive we finally arrived to the funeral home. The funeral home operated out of a large, Victorian-era house. The house was extravagantly decorated complete with lush carpets, Queen Anne couches, wing back chairs, chandeliers and curved stairways—quite different from morgues and forensic centers. When we arrived we had to wait outside a small office. Inside this office were "customers" discussing arrangements with the funeral planners. When we were finally greeted by one of the owners of this family business, he approached us in the same quiet, reserved, consoling manner he used with "customers." He informed us that the "deceased" was not at "this facility" but would be arriving soon. We had to wait in the main lobby for 30 minutes.

I found the wait to be rather awkward. Like the visit to the hospital morgue, there was a tension between the purpose of my visit and the context. I was in a facility that catered to the bereaved, and I was approached by employees with the same gentle tone and language used with the bereaved. The purpose of my visit did not necessitate such a tone. I suppose the research I had conducted on the funeral industry also made me skeptical. The funeral industry is often accused of selling unnecessary products and services to clients who are too distraught to make reasonable decisions (Mitford 1998; Roach 2003). The tone, I felt, was a useful tool for such fleecing and I was suspicious that it was being used on me. Additionally, I felt the same sense of tension I felt at the hospital. I was also worried that my presence may have created an increased level of

discomfort for the funeral home clients— wearing a shirt with the FAC logo clearly marked me as a representative.

When the body arrived, we were to accompany a funeral home employee to the embalming room in the basement of the home. We first moved the truck to the back entrance. To access the basement from the back entrance we had to ride a strange, lift-type elevator. Perhaps the strange elevator set the tone for me to expect something eerie. I do not know what I had expected an embalming room to look like, but I was surprised. The room was well lit, clean, and almost clinical. After a quick confirmation of the identity of the body, we transferred the body to our gurney and then into the truck and began our commute back to Knoxville.

During the drive back Kate and I discussed the awkwardness of the funeral home. We did not disclose why it was uncomfortable, perhaps we did not know why. We just agreed that it was "weird." It seems that the discomfort lies in the fact that we were removed from the context in which we normally handle human remains and thrust into a conflicting context. I could just as easily have been sitting on that Queen Anne couch waiting to plan or attend the funeral of a loved one. But, instead, I was waiting to transport a scientific specimen.

Participants related a similar tension when picking up donors from locations where the bereaved may be present.

> Morgan: At the facility, the bodies you see…they've lost a certain degree of humanness whereas if you're picking up a fresh body from one of those caring facilities…In the nursing home you get that 'okay, this is where that person was actually living when they died.' So it's, for me, that's the main place where I've had a reaction to the feeling human aspect, feeling a connection to that body as a previous person…

> Alex: I don't like picking up individuals because you have to sometimes, it's very rare, but sometimes the family is there. I don't like that.
>
> JH: …at one point I was asked to go with a funeral home director to someone's house and we walk in the door and there was a guy watching TV and there was family all over crying and it turned out the guy watching TV was actually dead and we were asked to move him and I did not like going to people's houses…Going to pick up donations was very difficult no matter where it was, but homes, the one time I went to a house was really disconcerting. And then several pick-ups at assisted living areas for the elderly—that was always really hard because they allowed the other residents to kind of be around quite a bit and it was very hard and I didn't like it.

Since this was the longest commute I had traveled for ARF business, it was the longest amount of time I had traveled with a body in the bed of a truck. The trucks used by the facility are regular pick-up trucks with camper tops. There are no windows on the sides of the camper, and no conspicuous markings. Although there is a window on the camper above the tailgate, the gurney is out of view for the most part. Despite these facts, it was certainly an odd feeling to transport a body in a pick-up truck. I felt like I was doing something wrong. I wondered how we would be received if we were to be stopped by the police. I associated transporting bodies in the back of anything other than an ambulance or hearse with criminal activity.

I was invited to travel to pick up two body donations, one from an airport and one from a Medical Examiner's office just under 200 miles away. Remains that are transported via air cargo are contained in a metal casket-like box that sits atop a wooden board; both are encased in a cardboard box. The box is longer than what the ARF typically handles and will not fit in the ARF truck. Because of this, they must rent a van

from the university for airport intakes. The cargo van does not have a divider, but is open between the front, passenger section and the rear cargo area.

Rebecca Wilson Taylor and I met at the osteology lab in the morning to make it for the afternoon flight arrival. We arrived to the airport cargo area at the exact time as the flight's ETA. The cargo area was very much like shipping headquarters for shipping companies with a large warehouse area that connects to loading docks and an adjacent service area. We checked in to the service area upon arrival and were allowed to use their employee restrooms. We expected our wait to be longer since human remains are unloaded last as to not disturb passengers, but we only waited ten minutes. We were instructed to back our van into the cargo garage. Airline personnel helped us load the box into our van. One of the airline employees said, "I bet you guys are happy," suggesting that we were happy about this individual's death because of benefit to the facility. I was surprised and would not have known how to respond. Rebecca, however, handled it beautifully. She was brief and professional in stating that we acknowledge the loss of the individual and are grateful for the gift.

From the airport we traveled to the Medical Examiner's office. Like the previous Medical Examiner's office discussed, there is a garage area with a phone. While we waited, morgue technicians asked Rebecca about how one would get a tour of the ARF. Rebecca replied, "only one way to get in," indicating that an individual must be deceased to get into the facility. Rebecca's reply, though delivered politely with the use of humor, implied that the ARF is not a macabre, sensationalized museum, but a place where human remains are treated with respect.

We had to go inside of the morgue so that Rebecca could review and sign documents. The morgue seemed quite busy, as there were several people dressed in scrubs bustling around. There was a long hallway with counters that appeared to have operated as stations for clerical tasks. There were several doors off the long hallway. On the wall, there was a dry erase board documenting morgue intakes. The morgue manager met us, provided Rebecca with the documentation, and prepared us for what to expect. He informed us that the body was old—had been at the morgue for five months, not advanced in age—and probably had "morgue mold." Morgue refrigeration does not preserve bodies or prevent the forces of decay any more than home refrigerators indefinitely preserve perishable food. Morgue mold results from a combination of decay and moisture build-up in the refrigeration system. It appears as round, colorful blotches on the skin.

After the paperwork was carefully reviewed, Rebecca and I loaded the body into the van and departed the M.E. office garage. As soon as we pulled into traffic we noticed that there was an unpleasant odor coming from the M.E. donation. Again, the cargo van had no barrier between the cargo and passenger areas. We began to worry about leakage because the body had advanced decomposition and M.E. body bags are not terribly sturdy. Rebecca thought it would be too difficult for the two of us to rebag the body in the back of the van. Perhaps, it would have also been inappropriate to do so on the side of the road. To prevent any potential leakage from reaching the passenger area, we created a dam with the extra body bags. We had to leave our windows cracked during the remainder of our drive.

When we finally got back to the ARF it was already dark so we decided to unload the bodies but postpone sampling and placement until the next day. The airport donation was a heavy individual as is the container used for airport transport, but we were able to slide the box out without too much strain. The M.E. donation was much lighter and body bag did not add any weight. Luckily, the bag had not leaked during transport, but leaked a bit when we slid it out of the van. We sprayed the van with a variety of cleaners designed for biohazardous products and cleaned it thoroughly.

Placement

After a donation is picked up it is transported to the facility. Several ARF volunteers are required for the next step in the process: placement of the body. The gurney is lowered out of the bed of the truck. The body is moved from the gurney to the ground, and clothing, medical devices, and identification are removed and discarded. Bodies transported as air cargo arrive in a simple, metal casket. The casket sits atop a wooden board. Each is encased in a large cardboard box. These bodies are removed from each of these storage devices. The body is then tagged with a unique identification number. The identification number allows for consistent cataloguing at all stages and also provides the donor with anonymity.

After the body is tagged, a series of photographs are taken including a profile of the body, the face, the teeth, and any scars, tattoos, or unusual markings. After the photographs are taken, data is collected. Blood samples are taken for most individuals although in certain cases, such as bodies that are embalmed or badly decomposed, this

step is not possible. The ARF coordinator discourages embalming when possible so embalmed donations are rare. I placed only one during my research. Hair samples are also taken. Hair and blood samples are sent to the Molecular Anthropology Forensic DNA laboratory[6]. Finally stature is measured and recorded.

After sampling and data collection are complete, personnel place the body. The site of placement depends on several factors including availability, use in research projects, and projected decomposition rates. The size of the donation dictates the method in which the body is placed. Larger individuals are difficult to maneuver. Even if several people are available to help, it is difficult to situate large individuals on stretchers. Larger individuals require the use of a forklift. The body is moved on to a stretcher. Several people will lift one side of the stretcher while the bobcat operator slides the forks underneath. The forklift is driven to a location as close as possible to the placement site. Personnel then take over and slide, carry, and pull the stretcher to the final site. In the case of very large individuals, a site is chosen that is accessible to the forklift and the body is deposited directly from there. I asked Rebecca how larger individuals were handled before the ARF obtained the bobcat. Rebecca reported that it was not a problem, as they did not receive individuals as large as they do now. Likewise the terrain at the facility is rather rugged with steeps hills. There are also many decomposing bodies—124 when I began my research—on the ground requiring careful navigation as to not disturb the remains or stumble. For smaller individuals, placement is easier and can be done

[6] As of September 2011, blood and hair samples are stored at the William M. Bass Building before going to the Molecular Anthropology Laboratory.

with the help of 3-6 volunteers. Sometimes the body is carried on the body bag or sheets it arrived in or transported on a stretcher.

Once the body is carried to the placement site, it is rolled onto the ground. Unless a research project dictates otherwise, bodies are typically positioned face down. Several factors influence this positioning. This position provides anonymity for donors while they are still recognizable. This position also aids in the recovery of skeletal elements as visceral fat creates adipocere—a waxy substance made up of fatty acids from decomposing body fat—that can encapsulate vertebrae if the bodies are placed face-up. With facedown placement, only the sternum and hyoid (when present) are affected. This position also reduces tooth loss. Care is taken to ensure that the arms are not underneath the body. This ensures that phalanges are exposed and not lost in adipocere. Phalanges have been the subject of research concerning rodent activity (Klippel and Synstelien 2007). The body is then covered with black plastic to provide privacy. The black plastic is held in place with bricks, rocks, and logs and a stake with the identification number is driven into the ground at the head of the individual.

While the protocol discussed above for placing bodies remains consistent for each body donor, the experience varies according to several factors including how and how long ago the individual died, if the individual was autopsied, the weight of the individual, and the weather at the facility. The first placement I participated in was memorable and significant for several reasons. The body had suffered severe trauma and had been autopsied. This marked the first time I had seen such trauma or an autopsied body. I was informed about the condition of the body prior to my arrival at the facility. I was

nervous. I had not been to the facility in three years and, as I mentioned above, I had never seen an autopsied body. I was not nervous about having an emotional reaction; rather, I was afraid that I would feel ill. In additional to the trauma and autopsy issues, the weather was very warm and humid creating an environment where smells are stronger and mosquitoes are peskier. Informally, I had heard stories and seen on television situations where sights and smells associated with death cause nausea, gagging, and even vomiting. While I held this expectation, at the same time, I felt the any sign of sickness would be a sign of weakness in the context of the facility.

When asked to describe their initial reaction, several participants reported similar anxieties related to their first visit to the facility.

> Casey: …I can remember being nervous about seeing decomposed bodies, afraid that I might get ill. But it was fine. So I was nervous the first time.
>
> RG: My only concern was that I was going to have a reaction because I was like 'oh, no, that will totally throw a wrench in all of my plans.' So I was just more happy that it wasn't too, that I wasn't like 'eww, gross' or got sick or anything like that.
>
> KD: It was my first experience with a dead body and for someone that's been dead for two weeks—I remember having the mask on and telling myself 'I'm not going to throw up on my first day at the facility; I'm supposed to be well-seasoned,' and really trying to keep all of those visceral reactions kind of in check.
>
> YJ: I didn't like the fresh body; I didn't like blood. I thought I could not endure; I could not stand blood. But, actually I think I did well. Most of the bodies were clean and the smell was better than I thought.

During the first placement, I was not allowed to handle the remains, as I had not completed the training on blood borne pathogens. Instead, I observed and offered assistance to the volunteers and staff. As the only person with clean hands, you become a

valuable resource. I was asked to retrieve a cell phone from someone's pocket and help someone else pull up her pants. I was encouraged that I would be able to establish a friendly rapport rather quickly. I felt a degree of relief that I would not be handling remains yet, as I felt the need to acclimate to the signs, smells, and procedures first.

The truck, parked on the gravel road that winds through the facility near the placement location, was carefully unloaded. The box that contained the body was lowered to the gravel road and opened. I stood back as the others unzipped the body bag. The individual was young and the trauma was severe. There was a moment of quiet and then a brief acknowledgment of the unfortunate circumstances. The coordinator of the facility was present for this placement and had corresponded with the family of the donor just hours before its arrival at the ARF. There was sympathy and sadness evident in her demeanor.

Corresponding with families of donors created some tension for participants. Participants relate the following experiences:

> KD: I think by the time that I ever see them they have come to terms with donating their loved ones so it's less of an emotional experience.

Former volunteer, Dana, discussed experiences corresponding with families and knowing personal details about the lives of donors:

> I speak to people's families and I read their last will and testament and I know, or I have an idea of, who these people are once I get them.

Joseph Hefner indicated experiencing discomfort with corresponding with donors' family. When asked to explain, Dr. Hefner responded:

> Well, I'm not sure I can. There's an empathy for anybody who's lost a family member that I think anyone would feel and there's the understanding that the family, at times in particular, have nothing to do with the donations; sometimes they didn't even want it. And in those instances you can't really fight the family even if it's something that they wanted – that the deceased wanted. So to put it into words is not really easy, you know. It's an uncomfortable position when you're dealing with someone who has recently lost a family member and there's no, I'm not sure, never mind, it's just uncomfortable for everybody.

After the brief pause, the team of five including the coordinator, co-coordinator, and three graduate assistants began work. They were meticulous and efficient at the same time. Rebecca took photos while Dr. Jantz cut the sutures to remove the organ bag. One graduate assistant placed tags on the body while another collected hair and blood samples. Blood samples, typically drawn from arteries with a needle and syringe, were taken from blood in the chest cavity since the body had been autopsied. The samples were smeared onto the collection cards. Hair samples were plucked with hemostats and placed in labeled envelopes. Hair sampling was the most difficult task for me to observe—and later, to participate in. I have a basis for comparison regarding what it feels like to have hair pulled. Although I know that the individual cannot feel it, I still experienced a private wince at the thought of having my own hair removed by the root. Finally, another graduate assistant measured the stature using a "body ruler," a caliper that measures from crown to heel.

Once samples and data were collected it was time to transport the body to the site where it would remain until the process of decomposition is complete. The body remained in the body bag during transport. The placement location was about 20 feet away from the road where the samples were collected. The body bag was carried and

sometimes slid up a rocky slope and around trees and other plastic-covered bodies. Once we arrived at the placement location, the body was rolled out of the bag face down on the ground and situated so that the arms were by the donor's sides. The body was covered with black sheet plastic marking the final time anyone would see the fleshed body. A wooden stake with a metal tag engraved with the identification number was hammered into the ground at the head of the individual. The plastic was held down with heavy sticks, rocks, and bricks – anything nearby that was heavy enough. The body bag was placed in a biohazard bag. The process took less than 20 minutes and was very efficient in terms of quickly, yet meticulously, collecting samples and data.

I was relieved that I had survived the experience without feeling ill or emotional. But I wondered what it meant that I had no reaction. Should I? Do cultural norms dictate that I should feel sick when viewing a corpse with severe trauma or sad when learning of a young life lost? Am I insensitive since I did not feel those things? Or was I just prepared or able to distance myself for the sake of my research? These questions began to guide my research.

Others report similar experiences when asked to describe their initial reaction.

> Alex: …I remember thinking 'this isn't so bad.'
>
> Jordan: I was very nerdily excited, super excited to do it because I wanted to be involved for a long time.

I was able to participate more actively in future placements. I was typically tasked with photography duties. Perhaps this assignment was because I was familiar with their camera although I felt that this task prevented me from getting too much in the way.

I also wonder if the assistants and staff worried that I would not be able to handle other tasks. The first time I measured stature, for instance, the coordinator asked me if I was okay. Measuring stature requires two people – one to hold the ruler at the heel and one at the head. During my first time measuring stature, I happened to already be at the head as I had just completed taking photographs of the face and teeth. I had to adjust the head to make sure it was lined up with the body. The head would not easily stay in the correct position and, instead, kept falling back. I was surprised, as I had expected the neck to be stiff and difficult to move. The coordinator, I believe, read the look on my face as discomfort and asked if I was okay. I was and I completed the task. I appreciated that she asked. She asked in a way that could have been interpreted as asking if I needed assistance with the technical part of the task so I did not feel that she was drawing any attention to me. But I could tell when I looked up and made eye contact with her and saw a subtle look of concern in her eyes that she wanted to make sure I was emotionally okay. While I was okay, it was a strange, almost indescribable, feeling to hold the head of a deceased individual in my hands. I did not feel sadness at the death of individual, or disgust at the corpse. I felt that others might experience sadness or disgust, and in knowing that, I felt an awareness of my need to distance.

There were situations that elicited disgust. I assisted with several placements of individuals that were already in advanced stages of decomposition. One such placement involved two individuals donated by a medical examiner's office. Both bodies were discovered after they had been dead for several weeks. After their discovery they were stored in the morgue cooler until ARF personnel could transport them.

I was already at the facility when the truck arrived. The odor of decomposition was so strong that I could smell it when the tailgate was opened. The bodies were removed from the truck and temporarily laid on the ground in front of the storage shed. We worked in teams. A graduate assistant and I unzipped the body bag of one individual and immediately noticed a strong odor. Both bodies were spotted with orange and green mold. The eyes were almost completely decayed leaving nearly empty sockets. The individuals hardly appeared human. We were unable to procure blood samples because of the advanced stage of decomposition. Hair samples, however, were easy as the scalp slid off with minimal tugging. Placing identification tags on the individuals was difficult. I had to lift the legs and arms to slip the tag on but would lose my grip, as the flesh was slippery and difficult to grasp. While the odor associated with bodies was difficult to tolerate during placement, both bodies were very light and able to be carried easily and placed quickly.

While the bodies were certainly more difficult to handle in terms of the unpleasant odors associated with advanced decomposition, the fact that they looked less human made distancing easier. Both bodies looked like zombies from a movie: green hued flesh, empty eyes, slightly opened mouths. What was most bothersome about these individuals was the fact that their advanced stages of decomposition were a result of their deaths not being immediately discovered. This ignited some reflection about the thought of dying alone. Participants had reported during interviews similar reflections about unidentified or unclaimed remains.

> KD: …The first experience that I had was actually picking up a donation...She had been in her house for two week and they just found her and her ex-husband decided to donate her…I think she had like four or five kids. So I remember thinking 'how does a woman who is, she's completely transplanted from her culture, sit in her house for two weeks when she's got, she should have people watching out for her.' So that was kind of a reality check for me.

> LMJ: …I remember [the body donations] were all unidentified. And I remember thinking at that time how sad that somebody is looking for these people and how sad it is that they don't know their family member has died. And you know that just—it really got to me and that's when it turned into concrete this whole desire to work in forensic anthropology and make identifications.

As mentioned previously, I had some difficulty taking hair samples. The sample must contain the root of the hair. Removing the hair with the root requires a lot of force. While I felt a degree of vicarious pain at the thought of having hair pulled out by the root, I also felt like I was brutalizing the body donor. Similarly, undressing bodies, although rare since most come from facilities where clothing is already removed, was uncomfortable at first. I felt that I was violating the privacy of individuals who were already vulnerable.

Participants reported similar sensitivity to maintaining dignity for the donors:

> Alex: …I always tried to be very respectful and put them in a good position...even though I know that they're dead…But I always just think of my mom in that way, you know, she would donate herself to the facility in a second. …But just for them and for their families I would want to think that when mom is donated to wherever she decides that they're trying to treat her with as much respect as possible…

> MM: …I find myself being very protective or feeling very protective of the remains…

Recovery of skeletal remains

After a certain amount of time, depending on weather and other factors, the remains are collected. Most often remains have skeletonized, although sometimes mummified or soft tissue remains. Ideally collection is conducted with teams of three people—two collect skeletal materials while one tends to paperwork. Paperwork includes documenting the inventory of skeletal elements, the location of the body, the position of the other nearby bodies, the condition of the remains, any anomalies such as extra ribs or vertebrae, and medical devices such as pacemakers.

Team members begin at the hands and feet, as these bones tend to scatter and, once the long bones have been collected, become more difficult to locate. Locating small elements like the hyoid, a small U-shaped bone located in the neck near the base of the tongue, and teeth can be difficult as well. Recovering skeletal remains can be a difficult process because of the terrain. Depending on weather, the ground may be muddy. The work often requires kneeling for long periods of time on soggy ground penetrated with a variety of decomposition liquids and adipocere. Remains with mummified or soft tissue can be difficult to disarticulate. Bones are placed in a bag and labeled with the identification number.

The process of recovering remains varies. Variation may be the result of the size of the individual as increased body fat leads to increased amounts of adipocere. Variation also results from differences in weather. For instance, hot, dry weather can lead to mummification. Some remains are dry and skeletal making recovery easy. The presence of soft tissue or adipocere requires more effort in locating small skeletal

elements. Sometimes it is necessary to almost knead the decomposing tissue or adipocere to feel for bone. The process can also be physically demanding. One such recovery involved remains that were situated on a hill surrounded by other bodies and trees. I had to squat or kneel on the cold, damp ground. Cold weather also poses a discomfort as your hands get stiff. Latex gloves worsen the problem as they hold in moisture.

Once remains have skeletonized it becomes easier to disassociate those remains from human cadavers. There is no face. While evidence of life is still present in artificial joints and braids of hair, skeletal remains seem somehow anonymous. Some volunteers and researchers prefer to avoid contact with soft tissue, but have no problem with skeletal remains.

> RW: One person actually was very blunt and very honest and she was like 'I like the skeleton.'
>
> Casey: Well, anytime you had to get into the soft tissue—you know the tissues that were still—anytime I had to dig into the actual decomposing—you know that soupy, um, mess—that's always unpleasant versus just dealing with dry bone, which is much nicer.
>
> Dana: I think probably the most—not shocking—but the thing that kind of would affect you the most when you first started doing it was more of the placements because that's when people actually still look like people that we're used to. I mean that you see living so I think probably the most shocking in the beginning was doing placements and having a fresh body just laying there in the woods. But processing was never really an issue for me because at that point it was very obvious that it was separate from bone and what you're doing and it's not that individual.
>
> MM…once they're picked up it's a skeleton and the soft tissue thing we're walking around in kind of disguises and once that's gone, well, it's not really a person. So it's a lot more difficult to lay a body out, as it is to pick it up. Because, when you pick it up there's goo and there's things that might not have

> decomposed, but you know, it's desiccated, it's just put in pieces in a bag, the person's gone. When they're fresh, that's what makes us, that's what makes it real.

Interviews

Interview questions were designed to supplement information gained from participating in operational activities at the ARF (Appendix A-1). Bourdieu's critique of ethnographic methods posits that ethnography, or "phenomological knowledge," is limited to a superficial understanding (1977). Observations, for example, provide the observer with a narrow and limited grasp of phenomenon; the significance attached to behavior is not observable. This critique is further complicated by the repressed nature of the information I attempted to gather. I wanted to collect information about attitudes toward death and insight regarding the repression of death in the U.S. I asked participants about their own experiences with death and their ideas toward body donation. Repression of death was most reflected when participants discussed their experiences talking about death and their work.

In order to learn if participants discussed death openly among their families of origin, participants were asked how death was explained to them as children. Some reported hearing explanations that relied on Christian ideals of heaven.

> Jordan: I think for the most part, they utilized biblical imagery and the kind of things that just kind of help you—help kids sort of understand it but also kind of buffer and make it almost seem like an upgrade, you know, like "they're not here, but they're actually in some place amazing." I guess immediately alongside with any explanation was an idea of an afterlife and heaven so it's going to be okay, basically.

One participant reported receiving a more honest explanation.

> Taylor: My folks were pretty open about it. They said 'this is what happens: you're born, you do your life and then at a certain point—' My aunt died when I was five, she got killed in a car crash, my dad's sister, and so my parents sat us down and said, 'this is not good, this is a horrible thing, but this is what happens.'

Most reported that they never had such discussion or do not remember receiving an explanation.

> RWT: I don't think I ever got an explanation. All I remember is my mother saying that if it was an event, a family event that's important, you must go to it and make every attempt to go to it no matter what it was. I remember being in elementary school and my mother would take me to funerals because she felt that you should be exposed to it early on because she said her first funeral was not until she was in her twenties because her mother said that's not a place for a child and so all we got was "here you go." We never got a sit down talk about it…and I think that was my parent's way of—they would let you see it, but their way of not dealing with it was not to discuss it.

This question was designed to investigate the level of discussion participants had about death and dying in their families of origin. Only one participant, Taylor, reported having honest discussions with family. This participant's father is a member of the clergy and would take Taylor to funeral homes and wakes creating the space and necessity to have discussions about death. Conversely, most participants reported either never having such a discussion or being unable to remember. It appears that, for most of the respondents, death was rarely discussed among the family even when faced with the death of a loved one.

Similarly, participants' responses to the question "are you able to discuss your work with friends and family?" reflected repression in conversation.

> Alex: I don't discuss it with my husband…The one time it was ever really upsetting for him, it was right around when I first started doing stuff and he had an uncle he was pretty close to die and I was just—talking about it—But to me—I just—it was to the point where I was new but I was kind of used to it and I guess

death had—and I hadn't had a death in my family in a while so I just didn't really think about it being weird.

Casey: [My husband] does not like to hear about the facility. And today he still does not like to hear about the cases we have. He's sensitive to it. But outside of my husband people are pretty open to discussing it—like extended family.

PI: Are there any topics that seem particularly off limits?

Casey: He just doesn't have like to hear about death really.

RWT: Yes and no. I can discuss things only so far. I've recently have kind of made friends in the, as we call it, the DMORT family, and extending outside of my own team. And I've noticed that I've been talking with them a lot more than I would have thought I would and most of it is talking about what I do because I feel like that's someone that can understand, where you can talk freely and you don't offend or—because at home I can talk about things in broad terms but I can't be specific and sometimes being specific helps you get it off your chest especially when it comes to the facility….so it depends on who the person is but it does lead to a lot of frustration.

PI: Do you feel people are more turned off by the gruesome nature or the idea of death in general?

RWT: It's the idea of death in general because if you talk about gruesome stuff without talking about the individual, you get the people—their ears perk up. They're okay with talking about the gruesome stuff because they —I, at least, see it as like the people who can watch the horror films and enjoy that.

KS: I can discuss my work with the people that I work with and maybe my friends at Tennessee, but not necessarily with my family, they don't really like to hear about it.

PI: What topics specifically are off limits to them?

KS: I talk to them about my research on skeletal morphology sometimes if they show any interest in it at all, but topics that are off limits would be anything at our forensic research facility anything that involves decomposition and they don't really like to hear about the body donation program in and of itself.

Several themes arose during my participant observation and subsequent interviews. Many of these themes illustrate concepts discussed in previous chapters: the significance of field, or context; clinical gaze and perceptions of abstract versus personal death; rationalization and repression, bureaucratization of death, and the influence of the media. Chapter IV will discuss these themes in greater detail.

Chapter IV: Discussion

> *"A fine transmutation of the corpse had taken place: gloomy respect had condemned it to putrefaction, to the dark work of destruction; in the boldness of the gesture that violated only to revel, to bring to the light of day, the corpse became the brightest moment in the figures of the truth. Knowledge spins where once larva was formed."* —Michel Foucault

This chapter provides a discussion of topics and themes uncovered in participant observation and subsequent interviews. The following themes are discussed: how the clinical gaze operates at the Anthropological Research Facility and the limitations of objectivity; perceptions of death as abstract phenomena versus personal affairs; rationalization and repression of death in the context of the ARF; and the public's interest in death that is, seemingly, contradictory in the context of a society where the topic of death is repressed. This chapter will also introduce and discuss the feminization of forensic anthropology.

Clinical Gaze and the Limitations of Objectivity

Efforts to remain detached—to view with a clinical gaze—were evident during field research. A clinical gaze allows ARF personnel and researchers to view the body donors not as former people but as scientific specimens. Corpses, when viewed through the lens of the clinical gaze, are perceived as abstract rather than personal. Several strategies were employed to attempt to remain detached.

During my first trip to pick up a body I asked one of the ARF representatives how much they typically knew about a donor before they picked it up. The individual answered "as little as possible." This question was meant to discover information about

protocol and procedure, but the answer suggests a possible strategy used by the individual to remain detached. Confidentiality protocol at the ARF serves to conceal the identity of body donors. The main reason is to protect the privacy of donors and donors' families. However, this practice also protects ARF personnel who, without knowing the identity of donors or the details of donors' lives and deaths, are afforded the ability to remain detached.

Some practices that serve a functional purpose also serve to conceal the identity of donors. For instance, the use of catalogue numbers protects the identity of donors and facilitates a systematic form of data management. Meanwhile, referencing a series of numbers instead of a name obscures the humanness associated with the body donor. Often, a donor's name —such a personal detail—is never known except to those responsible for intake. Similarly, donors are placed face down then covered with black sheet plastic. As discussed in Chapters II and III, these practices aid decomposition and the recovery of skeletal remains but also serve to conceal the donor. When scanning the grounds of the facility, instead of dead bodies, one sees black plastic tarps. The dead and the process of decay are hidden from sight even at a facility where death and decomposition are foci of research.

The clinical gaze is also represented in the use of euphemisms. In the U.S., cultural norms dictate that the discussion of death be approached in a manner that somehow masks or softens the reality (Quigley 1996). The dead are commonly referred to as "the deceased" or "loved one." When someone dies, the event is often described as "passing." Similarly, after they are dead it is said that they "passed away." Other

euphemisms employ the use of humor as a distancing strategy such as "going toes up" (Quigley 1996).

Language used at the ARF reflects a similar use of euphemisms. Bodies are typically referred to as "donors" or "donations." This allows for more distancing than referring to them as bodies or corpses, but is not as sterile as the word "cadaver." The words "donor" and "donation" also reflect gratitude and evoke images of contribution much like the agricultural language used to discuss organ transplant (Sharp 2006). Prior to decomposition, bodies are rarely described using gender pronouns, but are referred to as "it." Bodies from people who have died recently are referred to as "fresh." After decomposition is complete, the remains are typically referred to as "skeletal remains." The term "processing" assigned to the method of cleaning skeletal remains evokes less imagery than "heat soaking" or "boiling."

Another potential strategy used at the ARF to facilitate detachment is humor. The humor never presents as disrespectful. Often it involves inside jokes based on knowledge specific to the work. For instance, during a scheduled recovery of skeletal remains, one of the bodies still retained soft tissue and adipocere that prevented the remains from fully disarticulating. The sight and odor were more unpleasant than typical remains bagged for processing. Jokes were made about the surprise that processors would receive when they open the bag.

Many of the research participants are generally funny people. Much of the humor presents as banter and inside jokes. It is difficult to say whether this humor serves as a detachment strategy as it the same humor used in other venues that do not involve

exposure to human remains. However, the humor stands in contrast to the typically somber dialogue encountered, or expected, at funeral homes or other contexts where death is encountered from the perspective of the bereaved.

The efforts put forth to remain detached when working with dead bodies highlights the necessity to do so. Attitudes toward death and the responses evoked by exposure to human remains are strongly influenced by long standing cultural norms. In the U.S., the dead body represents a cessation of life, grief and mourning, the expectation of elaborate mortuary rituals, and an event and object to fear. The corpse is embodied with long-standing, historically and culturally influenced perceptions—or habitus—that challenges objectivity and the ability to achieve a "clinical gaze."

There are times when ARF personnel are unable to remain detached, and powerful attitudes toward death infiltrate their experience. For instance, the bodies of young donors elicited reactions from several of the participants. Participants appeared to recognize the relative sadness associated with the loss of a young life compared to the deaths of older individuals. Young bodies also appeared to cause some participants to reflect on their own mortality as though the similarity in age served as a reminder. Likewise, donors who reminded participants of someone they love—a parent or a child—seemed to cause some participants to reflect on the mortality of people they love. The corpses of young or familiar body donors serve as symbols of the fragility of life and the inevitability of death.

Unclaimed and unidentified remains also caused some participants to reflect on their feelings regarding such deaths. Some participants reported feeling sadness at the

thought of dying alone and having no family or friends to acknowledge their deaths. Other participants reported sadness at the thought of not knowing a family member has died. Unclaimed and unidentified remains represent a deviation from cultural norms that suggest the dying should be comforted and the dead memorialized. Identifying unidentified remains, for some participants, appeared to be a fulfilling aspect of work at the ARF and in forensic anthropology. This serves as an example of how attitudes toward death, specifically the importance of memorializing the dead and comforting the bereaved, influence ARF personnel.

Several participants indicated that they are uncomfortable in situations where it is necessary to correspond with donors' families. Donors' families seem to personalize the donors, shifting them from specimens to people. Witnessing the grief and loss associated with death weakens participants' ability to remain clinically detached and forces death from the abstract realm to the personal. However, donor families who do not express grief counter expectations and deviate from cultural norms. Conversely, other participants found correspondence with donors' families to be fulfilling as they felt they were able to provide comfort to the family during a difficult time. In these scenarios, ARF personnel facilitate an important function of traditional mortuary rituals.

Similarly, the context in which human remains are encountered influences one's response to the remains. Facilities like the ARF and forensic centers are free from cultural expectations regarding sentimentality. Hospitals and, especially, funeral homes are symbolic of sickness, dying, and mourning. When conducting intakes at funeral homes, a tension exists between the purpose of the ARF personnel's visit and that of the

bereaved. Participants reported that they simultaneously acknowledge the sadness and loss associated with the death of an individual and the scientific contribution of the individual's remains.

Desensitization

Literature that discusses cadaver research or the "death care industry" often suggests that researchers are able to cope with the nature of their work because they become desensitized (Montross 2007; Quigley 1996). Desensitization, like detachment, suggests that ARF personnel are not influenced by cultural attitudes toward death, especially those involving sentimentality. Participants were asked how they felt about the suggestion that working with human remains causes one to become desensitized to death. Death was purposely not defined as to allow participants to interpret the definition and the question individually. Participants' responses reflect a range of opinions.

> JH: I think so. Some of the work that I've done in particular, I think, makes it very difficult to be as sensitive as perhaps I would have been if I were a banker.
>
> Taylor: Desensitized to me when you first said that sort of sounds like it has a negative connotation, but it doesn't really have a negative connotation… maybe just the nomenclature would be like 'I get used to things.' But you know I think people do. I think if you don't get at least used to it or at least get somewhat desensitized to it, I don't think people could stay in the field. Whether they're forensic anthropologists or forensic pathologists or death scene investigators anybody that gets bothered by it or is so sensitive to it all the time, I don't think you would be successful in this job.
>
> RWT: You do become desensitized…there's no way to get around it. And in some regards it's good and in some regards it's bad. It's good in a way because, with your experiences, you can deal with the more difficult situations that are not the norm a lot better. Where someone that's just fresh out and just starting would not be able to handle that situation. It's bad because sometimes you forget that

> people you're working with don't think the same way you do and then you're not able to empathize with their difficulties.

The participants who agree offer that the work requires detachment and desensitization in order to cope with the work and to remain objective—an important quality of scientific and medicolegal investigation. Taylor relates that the word 'desensitize' has a negative connotation and prefers to think of the coping strategy as a process of accustomization. Suggesting that one becomes desensitized to death is to suggest that one has no empathy for the loss of life. Rebecca also offers that desensitization can result in insensitivity, not just to death or exposure to human remains, but to the needs of those who may be more sensitive.

Other participants disagree with the idea that exposure to human remains desensitizes one to death.

> Casey: No…I think I can still appreciate that total sense of loss that loved ones have but even though I'm not directly experiencing it with every case that I see.

> RM: I don't believe that all, no. The people who I work with and I've dealt with for all these years—20, 25 years—you know they're still emotional about these things… you do the job because that's what your job is and it's a necessity… But it doesn't desensitize you, doesn't make you anymore callous. It doesn't make you not care about people around you who die. No, not at all. You know, in reality it might make you more sensitive because you're around it so much. And I would actually disagree with that statement because I think it sensitizes you even more to death and to the loss and the grieving the people have around you because you see it on a daily basis. You see how it affects people…

Both Casey and Dr. Mann relate that they are not desensitized to the grief associated with the loss of life. Dr. Mann argues that the opposite occurs, that one becomes more sensitive over time. This sensitivity, according to Mann, results from

continued exposure to and a deep understanding of the grief and loss associated with death.

Other respondents agree in some aspects and disagree in others.

> KS: I don't agree completely with that statement. In my experience, it has taught me that it is a natural process. We get old and we die. But it does not take away my sensitivity to it just because I know that we get old and we die or sometimes accidents happen and we die. It doesn't take away my sensitivity to it or my ability to mourn or be sad about it. I do think that, especially if it's someone that's near and dear to me, or if I'm talking with somebody and they're relaying, or they're telling me that they've had a loved one die, I'm still very sensitive to it… I am somewhat desensitized because you have to go in and you have to do a job and you can't be emotional about it.
>
> Dana: Are we calling death the loss of the person or just the death as a part of life?…It has definitely not desensitized [me] to losing anybody in my life—losing that soul and that personality, and that—the living portion of that body. Desensitized me to the process of death, yes, I'm sure it has desensitized me.

The range of opinions regarding desensitization further demonstrates how death is interpreted differently when viewed personally versus abstractly. Participants who agree that desensitization occurs are referring to death in the abstract—death represents cessation of biological functioning and the corpse as a scientific specimen. Furthermore, desensitization operates as a cultural norm in the medical and scientific communities. However, those who disagree are referring to personal death. Personal death involves the loss of life of someone to whom we relate, the grief associated with the loss of a loved one, and empathy for others' loss.

Repression and Rationalization

Chapter II traced the history of attitudes toward death and shows that death has become secularized, medically controlled, rationalized, bureaucratic and socially isolated beginning in the mid-19th century. With these changes, came fear and anxiety regarding the topic and a subsequent repression. Death in modern U.S. society is not openly discussed or visible. The dying are confined to hospitals. The dead are hidden in morgues, coffins, and graves.

Evidence of such repression was evident during this research. Locations where the dead are examined, stored, prepared for mortuary rituals, or disposed of are mostly hidden. While funeral homes are obvious, the spaces where bodies are prepared are hidden. Morgues are located in discreet corners of hospitals. The ARF, obscured with a privacy fence, is inconspicuous. ARF trucks used to transport bodies are unmarked.

Most participants indicated that there were some limitations to what they can discuss and with whom. Participants cited others' discomfort with discussing death as a reason for this limitation. Most participants also reported that death was not openly discussed among their families. This reflects the idea that death and dying are not topics openly discussed; rather, they are topics considered taboo.

Contemplating Mortality

Literature regarding exposure to human remains suggests that, in a society where death is repressed, working with human remains causes one to become aware of or

confront their own mortality (Montross 2007; Quigley 1996). Participants were asked to comment. Again, responses varied.

> KS: I think that that is very true…When I went to the internship at the morgue that really caused me to contemplate my own mortality and how fragile life is… It caused me to think that it can happen at any time.
>
> Casey: It truly reminds you of how quickly you can die even when you are healthy and making good decisions. So I would say that yes it does; it certainly does make you more aware of your own death—potential death. And, it also, I think, makes you very comfortable with the idea that death is coming. I will talk about death probably more easily than others…. there is a sense of familiarity about it that enables me to kind of prepare for it and not be afraid to talk about it.
>
> Taylor: It does actually, yeah. But to me it made it all feel a lot better…. Yeah, it definitely helped me confront the fact that 'hey, this is going to happen, but it's going be okay. It's not scary anymore.'

Both Casey and Taylor offer that working with human remains has caused them to confront or contemplate their own mortality but the result of the contemplation has resulted in decreased anxiety.

Other respondents disagree with the suggestion that working with human remains causes one to confront his or her own mortality.

> JH: I find it maudlin. It's probably not true at all. I think that it's more poetic to say that it does than it doesn't but as scientists we have an objectivity that should distance us away from any sort of thing like that so I don't think it actually does that; at least it does not for me.
>
> YJ: No, that's not for me…I regard the bodies at the facility…from the objective point of view...

Both Hefner and Jeong disagree and argue that scientific objectivity shields against such emotional reactions.

Some respondents felt that they could not say whether they think about their impending deaths more than those who do not work with human remains as they have no basis for comparison.

> RM: I'd have to read the studies to know whether or not we think about our own deaths more than anybody else…I'm not sure that it makes you think about your death more or your own mortality more than anybody else.

> WB: I've worked with this all my life. I don't know, if I didn't work with it, whether I would think about it or not. I'm not so sure that I think about it more than people that don't.

Participants' opinions and experiences regarding the suggestion that working with human remains forces them to contemplate their own mortality vary greatly. Those who disagree with the idea suggest that emotional responses stand counter to scientific objectivity. Those who agree argue that exposure to human remains highlights the fragility of life. Those who agree also offer that confronting their own mortality eases anxiety regarding death and allows for a sense of preparedness.

Public Interest

Participants relate that, while friends and family are uncomfortable discussing death, the "gruesomeness" or "gore factor" of the facility is not likely to offend others suggesting that many Americans show an interest in death but only as an abstract concept. As discussed in Chapter II, American curiosity with death and dying is evidenced by the popularity of plastination exhibits, forensic television shows, and increasing enrollment in forensic science programs. Likewise, Americans seem fascinated with Dr. Bass and the ARF as evidenced by Bass's popularity and book sales.

Participants were asked to explain why the public seems so fascinated with forensic science and the ARF.

> Morgan: The big forensic wave that we're in now, the only reason that I can think of was CSI. I don't know when it started; it's got to be 7 years by now at least. That's got to be the movement that started it.
>
> KD: I give talks to high school kids and junior high kids and I talk about the ten-fold increase that we've had in donations in the late 90's and its direct correlation with the boom in CSI shows and forensic shows and Dr. G medical examiner and all those shows. And I think those kinds of shows, reality and non-reality, have really fueled the fire in forensics.
>
> Taylor: I was out a conference in Albany New York last year about a year ago and a pathologist got up and said 'this isn't new.' It's new because Facebook is new and Twitter is new but this isn't new and anybody who's alive in here who's at least forty remembers that there was a television show called Quincy…. People have always been fascinated by this whole medical legal aspect of science and detective work and how that all plays into the going from the unknown to the known.
>
> Alex: I guess that just unknown, weird, taboo—I guess that's interesting to people. And it's particularly taboo the fact that…they're laying out on top of the ground. That's not very normal…. other than seeing somebody in a coffin I'd never seen a dead person before I came to the facility.
>
> Jordan: I guess it's kind of like a taboo. It's one of those last few topics that we haven't really talked about as much in prior social circumstances…We don't really like to talk about the dirty things. And so I think that it kind of has that morbid curiosity aspect to it….But in this particular area I think it was the weirdest circumstance of people having that general morbid curiosity but then all of a sudden it was given the face of the sweetest, most gentle good ol' boy you've ever met in your life. I mean he could sell matchsticks to the devil. He could talk anybody into anything. So Dr. Bass is the most perfect vehicle and spokesperson for anything so he could even sell East Tennessee on death.
>
> Casey: I think people are naturally curious of death.
>
> MM: I think that's human nature… And that's what this place does…it fuels that. And the media would turn it into Knoxville Chamber of Horrors if they could because they think that that's what sells.

> RG: I think everyone is fascinated with death even if they hate to talk about it…I think everyone has some kind of fascination with it. I don't know why. I guess it's because everyone will die so you kind of wonder what's going to happen to you. And people also tend to romanticize things.
>
> RWT: I think that the fascination with the facility is that the average American person does not have any interaction day to day with death. We are completely shut off from it. We are told don't do anything; don't touch the body. So when you're told 'no, no, no,' you're always curious.
>
> WB: We are not a culture of death. When somebody dies, they cover the body up with a sheet; put it in a black disaster bag. You go to the…morgue, and you can't visit the morgue usually. Then you go to the funeral home…but you don't go back in the embalming room…And so this whole thing is covered up; you don't see it….I think people want to know what's going on but are not allowed to see it.

Many participants began discussing public fascination by citing the media with responsibility. These same participants, in explaining the media's role, offered that Americans are curious about death, some qualifying that curiosity as natural or morbid. Furthermore, several respondents argue that curiosity about death is a result of limited personal exposure to death and dying as death is very much hidden, even taboo, in American society—at least in real life. Participants' explanations evoke Gorer's 1955 essay on the "pornography of death." The "pornography of death," according to Gorer, is a phenomenon where the repression of death led to fascination with media representations of violence. Public interest in forensic anthropology when juxtaposed against a perceived death taboo seems novel. Participants argue that such curiosity is not new only more apparent. Understanding and rationalizing death as an abstract event lessens anxieties associated with the repressed phenomena.

Feminization of Forensic Science

The gender make-up both at the ARF and the University of Tennessee–Knoxville (UTK) Department of Anthropology is overwhelmingly female. According to the UTK Department of Anthropology web page, 40 anthropology graduate students identify having a general concentration in physical or biological anthropology. Of those 40, 36 are women and 4 are men for a female to male ratio of 9:1. Of the 40 students with a concentration in biological anthropology, 28 specifically use the word "forensic" in the descriptions of their research interests—24 women and all four men. Thusly, the ratio of women to men in biological anthropology at UTK with a specified interest in forensic science is 6:1 (Figure B-3).

The ratio of women to men at the ARF became apparent very quickly. Out of the 15 graduate students with which I regularly interacted with to conduct my research at the ARF, 13 are women and two are men. With only two men involved, the majority of my interactions were with women. Upon conducting preliminary research, I discovered that there is anecdotal evidence (which I will discuss further) suggesting that this ratio is seen in other undergraduate and graduate forensic anthropology programs both nationally and internationally. Moreover, similar ratios can be seen in other forensic fields both academic and applied. What is the scope of the feminization of forensic anthropology? And why? Literature that discusses the feminization of forensic science discusses forensic science in general which is a very broad classification. The participants in my research are biological anthropologists who have research or applied interests in forensic anthropology.

An article by Max M. Houck, forensic anthropologist known for familiarizing the phrase "CSI Effect," discusses the scope, but also contrasts the prevalence of women in forensic science with the continued shortage of women in other science, technology, engineering, and mathematics (STEM) fields. Women in undergraduate programs pursue non-forensic sciences at lower rates than men. Houck's article cites a National Science Foundation Division of Science Resources Statistics survey reporting the rates of male and female bachelor degree seekers in STEM and non-STEM fields and shows that women account for 32% to 47%—depending on the discipline—of non-forensic science majors. Female representation in non-forensic science decreases as the academic level increases and again at university faculty levels (Houck 2009). Despite the gender gap seen in traditional STEM academic pursuits and careers, women comprise 78% of the students in accredited forensic science programs in the United States (Houck 2009). This phenomenon is not unique to the U.S., however, and can be seen throughout the world. For instance, in the United Kingdom, 67% of students in forensic science programs are women (Houck 2009). This is also mirrored outside of academia. Sixty-seven percent of the members of the American Academy of Forensic Science are women (Finnegan 2012) and forensic laboratories are staffed by a female majority (Houck 2009). However, it is important to note that the ratio of female to male AAFS members decrease at higher levels – there are a higher percentage of women at the student level than the trainee and associate levels. Furthermore, thirty-five percent of American Board of Forensic Anthropology Diplomates are female which is not representative of the percentage of women forensic anthropology students or professionals (Williams 2012).

Despite the broad acknowledgement and discussion regarding the feminization of forensic science, there is little in the academic literature that addresses the topic. Most of the data supporting the scope and rationale are anecdotal. In a 2008 interview for *The Guardian*, Sue Black, professor and department head of Anatomy and Forensic Anthropology at the University of Dundee and lead forensic anthropologist to the United Nations forensic team in Kosovo, notes that 95% of her students are female (Bindel 2008). Likewise, in a 2008 Associated Press article concerning women in forensic science, Dana Potter investigated employment and academic trends in Virginia. Potter reported that, between 2005 and 2008, 36 out of 47 new hires at Virginia's Department of Forensic Science were women. Furthermore, in 2008, the Virginia Commonwealth University forensic science program awarded undergraduate degrees to 33 women versus 11 men while 20 women versus two men received graduate degrees.

Research participants with knowledge of and experience in forensic science in an international setting presented similar anecdotal data. Yangseung Jeong, when asked about his thoughts on the trend, responded: "…I was wondering about that. There are almost all females here [UTK] and it's…the same in Korea . . ."

Dr. Robert Mann, director of the Forensic Science Academy of the Joint POW/MIA Accounting Command's Central Identification Laboratory (JPAC-CIL), teaches at universities in Thailand and Vietnam. Dr. Mann offers that, over the last decade, his classes have become 80%-90% female. He details recent enrollment trends:

> …I've got 22 students this fall semester… I think six are men. I had another class a year ago or so, and…there were 19 students in there and 18 were women. And most of the people that we see come through that apply for [the] Forensic Science Academy and apply for positions to work here [JPAC], I think, in the past ten

> years…predominantly have been women—somewhere around maybe 75 to 85% are women.

Dr. Mann elaborated on both the international nature of the trend and the presence of women in a professional setting:

> In Cyprus, up until within the past year, they had eight forensic anthropologists in the country of Cyprus that I know of and all eight were women. And they just hired, within the past year, a man. So there's nine on the staff and eight of them are women.

The prevalence of women in the academic and applied field of forensic science and the juxtaposition of this prevalence with the continued lack of women in other STEM fields is a topic that warrants investigation. Despite the fact that the prevalence of women in forensic science is a commonly observed phenomenon, when asked for an explanation, most respondents began their answers with statements indicating uncertainty—long pauses, followed by "I don't know, " or "I'm not sure," followed by a variety of presumed explanations. While many women and men see the phenomenon as empowering for women and as an important "in" for women in science, the explanations provided were greatly influenced by deeply rooted, negative gender stereotypes. Many of the explanations echoed the justifications for exploiting women as unskilled factory laborers during WWII and in *Maquiladoras* during border industrialization citing, for example, attention to detail and patience—traits commonly associated with women—as reasons for women's success in the field. These explanations were based on gender stereotypes and used to justify paying women lower wages (Honey 1984; Iglesias Prieto 1997). Female *Maquiladora* workers, for example, received much lower wages than men

because managers assumed that the women's income was supplementary to their male, breadwinner spouses.

"Soft" or "Hard" Science

Explanations for the feminization of forensic anthropology rely on the assumption that women have an aptitude for "soft science" while men are better suited for "hard science." Forensic anthropologist Sue Black offers that women are more proficient than men at "people-based subjects" (Bindel 2008). Respondents also referenced the expectations concerning gender and "hard" versus "soft" science:

> Morgan: Anthropology is more of a social science…the smarter guys I went to high school with all went into engineering or something engineering related. And I don't know what the gender ratio is in the hard sciences—women are dominating there too or not—but I could imagine that, if men are dominant in engineering fields and the medical ones, that the anthropology gender ratio thing is a result of the guys being somewhere else. From childhood I've been told that women are language based and men are math based. So, and I don't know if that's true or not if it still holds nowadays.
>
> KD: My husband and I joke about this. One is that females don't have the drive and intelligence to be in hard science fields and that's why so many of us are in social science or "soft science" fields. And so my husband often makes fun of me and says I'm just a soft scientist….Do I think it's because women are not as smart as men? Absolutely not. I think that's a copout by men who maybe don't feel as able to deal with what we deal with.

Similarly, Kate Spradley offers a counter response:

> KS: I don't consider it a soft science, either. And, if you look at people that come from Johns Hopkins with an anthropology focus, they're not a soft science either. We're not a soft science….My favorite thing that I do in forensic anthropology is to collect a lot of metric data and run a lot of multivariate statistical tests. That's what I enjoy the most. So that's not a soft science to me. To me that is not just about caring for the dead either.

Anthropology is still generally considered a social science. Social science is often pejoratively referred to as "soft" science. While there are certainly problems with the designation and terminology that warrant further discussion, the concern here is with how biological and forensic anthropology are interpreted. As many argue, biological and forensic anthropology methods are very rigid scientifically. But in waging an argument about whether it is a "hard" or "soft" science, we ignore why an argument exists. While the "soft" versus "hard" science debate existed prior to the feminization of forensic anthropology, feminization complicates the debate.

We Wanted to Be Doctors…

Many respondents suggested a link between forensic science and "traditional" STEM sciences, specifically medicine and pathology. These respondents indicated that they were originally interested in medicine and pathology but were drawn to biological and forensic anthropology by a host of factors.

> Alex: A lot the people in the department—we all started off in medical. We wanted to be doctors, and I don't know what happened there. I don't know if more males that are interested in similar things will go in that direction or what. Females are more research-oriented in this [academic] kind of direction. I don't know. But it seems like a lot of us have a similar story. A lot of us started off in pre-med in anthropology and perhaps going to be a medical examiner.
>
> Jordan: I wanted to go to med school and be a pathologist…but I'd kind of fallen in love in anthropology.
>
> Dana: "My original major was pre-med….I always had known I wanted to be a doctor but I didn't know what kind and through middle school and high school I kind of thought I wanted to do forensic pathology . . ..Once I started working more and more with bones and volunteering at the research facility, I quickly realized that I was more interested in bones than soft tissue."

> KD: I started out as pre-med…until I took an osteology class…and it was at that point that I realized that I like the bones. I like everything about the skeleton – it was kind of like a light turning on.
>
> RWT: I was biology pre-med. It was recommended as part of the premed program to take anthropology…I just really liked the class and kind of fell into it and I took multiple anthropology classes after that and shifted over….My whole interest for wanting to go into medicine was for pathology….I really like biological anthropology because I like anthropology and I like biology and human anatomy and how I could mesh the two.

Each of the respondents related their initial plan to go to medical school, many to focus on pathology. Somewhere in the course of their educational pursuits they were introduced to anthropology, an introduction that lured them away from their original career plans. It is relevant to note that many of the respondents credit exposure to anthropology or anthropological knowledge as a catalyst for their interest in anthropology and forensic science and subsequent change in academic majors and career paths.

Gender stereotypes

The following explanations reflect respondents' opinions on gender traits that lead women to choose forensic anthropology as a discipline. Because the topic is so often discussed in the anthropology department, it was difficult to assess if the respondents were answering with what they believe to be true or if they were offering explanations that they had heard others provide.

Many respondents asserted that women are more patient than men when dealing with slow or tedious processes:

> Alex: I do think a lot of it is that females are more willing to spend more time doing something….But, I don't know if females are just more willing to stick out with something that takes a lot longer.
>
> Jordan: I personally think that we have the intelligence and the patience to deal with a lot of the detailed work but it's not like doctors don't.

Similarly, respondents indicated that women pay greater attention to detail than men:

> MM: …I've talked to other colleagues that say 'you know, forensic science: it all has to do with the meticulous nature of an investigation.'

Murray Marks elaborates on his experience with field trainings held at the ARF:

> MM: …I've taught people over at the facility—eleven years of FBI agents—and it's about half male and half female….We've got a grave here and you need to look at the surface first….everybody's down on their hands and knees looking for a cigarette butt; they're looking for an imprint of a shoe or boot….I can walk up the hill for a minute and come back and the guys have stood up and are leaning on their shovel and they're like 'okay, we're over this.' The females have an attention to detail that men don't have. That's been proven with…facial recognition studies where women see stuff that men are completely oblivious to….Women have, like I said, a little bit a greater attention to detail and they see things that men don't see.
>
> RG: …women are really well detail-oriented which is really important when you're trying to find things that could be an hour-to-hour change or a day-to-day change"…

Samantha Glass, a supervisor in latent prints at the Virginia State Forensics lab, in an article on women in forensic science offers: "women are…more detail-oriented" (Potter 2008).

Another common rationale for the feminization of forensic science suggests that women are willing to work for less money than men.

Alex: [Women] will spend a lot more time doing research in a particular area and make less money….I really feel like that, perhaps, a lot of guys that have similar interests—there were more guys in anthropology when I was an undergrad—went off to do something that made more money.

Jordan: The notoriety and the financial benefits that you might get doing the same level of science in other fields, you're going to get a lot more of those social rewards if you're a doctor, you are going to get a lot more money for the time and effort put it.

Dana: We just don't get paid that much money so guys have moved out of it, they go to the fields that have more money in it, and more established and have a reputation

Morgan: There still does seem to be the idea that men are supposed to be the breadwinners and the women will end up having kids and will end up not really following their college career or whatever they did in college. They're going to end up being housewives or something of a minor profession—something that doesn't bring in as much as the guy. Could be the reason that guys aren't interested in anthropology because they may have this instilled thing that they have to make money because they can't really bring anything else to a relationship so that could be a reason they're not really interested in going into academia or anthropology.

LMJ: It's also been discussed that, perhaps, in the forensic field, you don't go into it for the money, and maybe the males have some sense of need to make money, earn a living, above and beyond what is really of interest to them.

KD: It may come down to society's expectation of men earning a respectable wage whereas, women, historically, work and do for whatever we're paid and anthropology definitely is not a high paid field.

YJ: My conclusion is physical anthropology is not a job to earn big money so males don't want to contribute because, especially in Korea, I think the same in America, but in Korea, males are responsible for a family, males should earn money and support their families and so there's the basic interest [for] males [to] earn money.

Potter's 2008 article also addresses the notion that women are willing to earn less and mirrors the idea that there is less money in forensic science than other science careers and men desire and are expected to pursue lucrative jobs.

Another common rationale involves the expectation that women serve as caretakers and that caring for the dead is an extension of that role:

> Jordan: In general there's a lot of aspects of death and decay that, I guess, culturally have been relegated to women regardless, so maybe it is not seen as weird that we would be caretakers or vehicles of dealing with death.
>
> MM: …someone said, 'well, it's a maternal thing' in that here you have this unknown and there's a skeleton and a woman comes in and gives it's an identity. I'll nurture you; I'll give you an age and a sex and an ancestry or race or whatever you call it and I'll help that along.
>
> EK: We're actually talking about this in my forensic genetics class last week and I think…it's a lot because females are typically seen as the caretakers: the people who are supposed to take care of the family and the dead. And so, while we're trying to have more male positions and being scientists or PhDs, it's still kind of a female role, which kind of bothers the feminist in me.
>
> RWT: …I think that you're now going back to who deals with household death, the grotesque stuff, the nasty—who, 99% of the time, changes the diaper? Who's the one who cleans up the throw-up? Who's there when the kid's sick? It's usually the females…with women you have a little more compassion when it comes to dealing with any type of issue and they are usually in the caregiver role…
>
> WB: Maybe the nurturing aspect? I don't know. That's what my wife says: 'well, they're concerned, they raise families.'

Again, it was difficult to ascertain if the respondents were answering based on what they believe or relating explanations that they have heard others provide. Some respondents were clear in not prescribing to the idea that there is a relationship between forensic anthropology and caring for the dead:

> KS: when people say that it really—makes me very mad. I really don't feel that's the case at all for me, anyway, and I don't think it is for other people as well.

Both the literature and respondents list flexibility to care for family as a draw to forensic science in applied and academic settings:

Potter's respondents from Virginia State Forensics Lab report that applied forensic science offers "stable hours are better suited for those who want a family" (2008).

Alex: You are never more flexible [to start a family] than you are in grad school.

Similar to the idea that women pursue forensic science careers because of their societal roles as caretakers is the idea that women pursue careers with the desire to help others and see forensic science as a venue for such. Potter's article on female forensic scientists at the Virginia State Forensic Labs reflects a common desire to help others as motivation to enter the field. Moreover, Potter suggests that altruism provides compensation for the decreased salary (2008). Max Houck's 2009 article also cites improving society and helping others as motivators for women's choice of careers.

Like the opposition to the relationship between forensic science and caring for the dead, Dana professed opposition to idea that women pursue forensic anthropology for "compassionate reasons."

> Dana: I don't necessarily agree with the stereotype that we're in it for compassionate reasons. That just kind of pisses me off. I'm not in it for compassionate reasons.

The above explanations for the feminization of forensic science rely on outdated gender stereotypes that, historically, have been used to justify gendered labor inequity in both the types and quality of jobs available to women and the pay they receive. The idea that women are more patient and have the ability to pay greater attention to detail was

used to justify the use of women as unskilled factor workers—jobs that paid less than skilled labor. Patience—and a tolerance for mundane, boring, and repetitive tasks—was also associated with decreased intelligence. A justification for women earning less—either for the same jobs as men or for jobs traditionally staffed by women—is the idea that women do not need to earn as much as men because they are not primary earners. This idea corresponds with the image of women as caretakers who have the innate desire and capacity to care for others but also require flexibility in their responsibilities outside the home in order to care for their families.

Emotional academia

Another rationale, which seems to contradict explanations that suggest men are better suited for "hard science," offers the explanation that women are accepted into graduate programs because they perform better academically.

> MM: Males can't compete academically. If we had a hundred applicants for the forensic anthro program—and you know I've been out of it for a couple of years now—but, 90 of them were female. And the ten males that did apply couldn't compete. Their letters weren't as good, or as strong; their GRE's weren't as strong; and their GPA's weren't as strong.
>
> KS: …We had 65 applications to our graduate program over the past two years and I would say that, in those applicant packets, there were maybe five or six men. And I can tell you that, it's not a lot, but all else being equal, their test scores…scores were not as competitive with all the females.
>
> JH: …I think that there are a lot of students in forensic anthropology, a lot of students very interested in forensic anthropology. And a lot of students—males and females—a lot of students apply for Masters and PhD programs. Because a lot of students are applying for it, then they have to go to an objective means to weed out and narrow down the search quickly. I know at some schools—some of

> the bigger schools for selection, some of the bigger schools that are selected by students that have these kind of legacy programs—resort to GRE scores first for the initial weed, and then they look at GPA for the next, and then they go to references and letters of intent. And so when you have a large number of people applying for a program—and I think that coming out of undergraduate and into graduate program, females are at a much more mature level at that point anyway and…I think that they look a lot better on paper. Okay, so then what happens is the search committee is left with a pool of students that is made up of a majority of females.
>
> WB: It's because girls are smarter than boys. Now, I don't mean it meaning that they are smarter, but they make better grades. And the way the system is set up now to get in graduate school, we're admitting only those with the highest grades and the highest grades are girls. I don't think this is right, I mean not that I want to keep any girls out, but I think that there are really good people who are A- or B+ who would be good in the field but they just can't compete with these A+ girls, you see, who get all the positions.

This justification begs the question: If women are performing better academically, why do they still account for such a small percentage of graduate students and professionals in traditional STEM fields? The rationale is also based on unfounded gender stereotypes. Here, the assumption is that women perform better academically because they are more mature emotionally and developmentally at an age when most students are earning bachelor degrees and navigating through the graduate application process. Rather than crediting women for their academic success, this idea suggests that men—or boys, as some respondents referred to males as boys in this context further illustrating the belief that men are less emotionally mature at this stage—are not posing as competitors for reasons unrelated to actual scholastic proficiency.

Several dangers exist with this justification. First, it ignores the fact that women were not allowed the same access to education or careers as men until fairly recently. To gain entry into male dominated fields, women had to perform better than their male

counterparts just to receive the same, or less, acknowledgement. Second, the idea that women are more emotionally mature and thus perform better academically is based on social and cultural norms that rationalize, foster, and accept emotional immaturity in men. Finally, there is some sentiment that accepting more women into programs is unfair to men who, because they lack the same emotionally maturity as women, are unable to perform as well.

Caryl Rivers and Rosalind Chait Barnett discuss the alleged decline in academic performance among males in their article "The Myth of 'The Boy Crisis'" (2006). Among reasons listed for the decrease in boys' academic performance are female teachers who presumably have a bias in support of their female students, curricula that focus on verbal skills—which males are still (questionably) considered to be less proficient in—and boys' innate hyperactivity. Rivers and Barnett indicate that the real "crisis" is found among the poor and ethnic minorities who have lower test scores, GPAs, and graduation rates. White, upper–class males are performing at least as well as white, upper-class females and they still outnumber females at Ivy League institutions (Rivers and Chait 2006).

While the idea that more advanced emotional maturity among females is used to explain why female applicants to forensic graduate programs perform better than males academically, the same trait is credited with affording women better skills with which to handle the demands of forensic work

Alex: …Females can handle this kind of stuff.

> RWT: …I don't know why, but I feel like we have a—we're better able to handle those difficult situations than men. And overall—I'm not saying that every person's that way because there's some great physical anthropologists, especially forensic anthropologists that are male, I'm not saying that it's everyone but—it just seems that to me that we're better able to deal with that…we just seem to be able to separate and be able to deal with it over a long term.

These respondents posit that women have an emotional maturity or resilience that better equips them to cope with handling human remains. While they never directly address emotional competency, the idea that women are more resilient was often implied. Female participants also suggested that women are better able to handle situations considered "gross." Emotional competency is simultaneously used to downplay academic performance and to underscore some innate capacity to handle the "emotional" aspects of forensic work.

Media

Literature on the topic cited popular media as an explanation for women's desire to pursue forensic science; however responses varied regarding the exact role media plays. Forensic procedural dramas and reality shows often feature female forensic scientists. Max Houck suggests that women are encouraged to pursue degrees and careers in forensic science based on the female representation they see on television (2009). While Houck offers this explanation in terms of female empowerment fostered by the presence of women in leadership roles, many of the female characters in forensic procedural dramas serve secondary roles—both as characters and actresses—and are very sexualized.

Similarly, contributors to Potter's 2008 article cite television representation as a factor in their career choice. However, Potter suggests that women are attracted to the "glamorous" aspects of the field where female forensic scientists on shows like CSI "don revealing blouses and always have makeup jobs fresh out of a beauty salon" (2008: 2). Potter and her respondents suggest that women are attracted to the field because there is a degree of sex appeal associated with it.

In addition to television, popular authors such as Patricia Cornwell and forensic anthropologist-turned-popular novelist Kathy Reichs provide strong female forensic anthropologists to serve as role models. Murray Marks cites Kathy Reichs as a major influence because of her popular and academic appeal.

Charging media with responsibility for women's interest in forensic science is concerning given the underlying assumptions. This explanation relies on the assumption that women are heavily influenced by media and will sheepishly conform to the standards set forth even when making decisions regarding education and career: a single television show has the power to dictate the career choices of thousands of women. Ascribing such weight to the persuasive power of media also undercuts the academic rigor of biological anthropology programs and the academic role models to which women see as true trailblazers in their field. Finally, suggesting that women are attracted to forensic anthropology because of the glamorous and sexy characters they see on television serves to damage the academic and personal integrity of female forensic scientists.

Again, participants in this research are biological anthropologists, many of whom have a focus in forensic anthropology. Not a single female respondent cited media as a

reason for her interest in forensic anthropology. Instead, most discussed specific classes, professors, field schools, or even moments in time that served to ignite their scientific curiosity. Furthermore, respondents reported that the work and research conducted at the ARF is not glamorous. The ARF is no place for salon hair or revealing blouses.

Historical Perspective

A reference to the history of anthropology is enlightening when explaining how women came to dominate forensic science. In an interview for *American Chronicle*, Dr. Elizabeth Murray, forensic consultant and biology professor, offers that the anthropological community has historically been more accepting of women (Lambers 2011). Several respondents share similar insight:

> Jordan: I think, because women entered science through the back door in a lot of ways, anyway —yeah, it just took us a while to get here. I think that we—this was an area where we made up our own rules, and kind of found our own footing.
>
> RWT: … it's a field that we feel that we can succeed at and become a high level in without as much of the difficulties as some of your other main–stream professions…And we've had some strong physical female anthropologists early on that have set those standards saying females can do this job and do it well. So I think, for females, it's an attainable thing so you feel encouraged because you have had people who have paved that way for you…
>
> WB: When that [feminization] first started, I thought, 'you know, Margaret Mead has helped this.' Margaret Mead in the '50's and '60's was probably the best–known American women for a ten–year period. And we had very few women interested in anthropology at that time. And, all of a sudden, you get more and more coming in. And I thought, women see that this is a field that they can get in because here's one of the really—probably, the best–known American woman was Margaret Mead. Everybody knew who Margaret Mead was. And I thought, that's a way to get known, and you know you can get a job.

> JH: You have this rebound from these forensic anthropologists who were initially taking [as graduate students] nothing but men, who were all in school with a bunch of men… I think there's a historical aspect to it and I think it, like many other things in forensic anthropology, can all be kind of traced back to Earnest Hooton. He was an advocate for women in the field and that's why he allowed Alice Brues to sit outside of his classes. He couldn't let her in because she wasn't allowed at Harvard; but he allowed her to sit outside the classroom door and listen to his lectures and later on he was able to give her a PhD.

Dr. Murray Marks offers what he believes is another appeal for women, an appeal that has perhaps been influenced, historically, by women's presence in the anthropological community:

> MM: One of my colleagues in forensics, in the board, says: 'power.' I mean what woman wouldn't love going to a crime scene and all these detectives, and all these plain–clothed types and even uniformed officers are male. A woman comes in and—the Red Sea parting. So, it's power and women are attracted to that.…You know, you're a professor or you're a doctor and, my gosh, look at the power that you do wield in that. So it's whether you're walking into a crime scene or with mega law enforcement, FBI, or like I said, the courtroom to wow people.

Like forensic anthropology, the mortuary industry has seen an influx of women. Women account for 61% of mortuary science students. This number is likely to increase as the number of women in mortuary science programs increased 71% from 1996 to 2008 (Farrell 2008). The National Funeral Directors Association (NFDA) holds a NFDA Professional Women's Conference in support of the growing number of female funeral workers. Mortuary science curricula, while requiring courses in psychology of death and dying and grief counseling, are also heavily focused on chemistry and human anatomy and physiology. Perhaps mortuary science appeals to women in the same way as forensic science.

There is no question that women dominate the field of forensic anthropology. The debate centers on why. Are women more attracted to forensic anthropology or are men less interested? Many of the explanations provided by research participants may have some truth and inform part of the story. Women may feel a sense of security in knowing that they are pursuing a profession that is welcoming to women. However, many of the explanations are based on negative stereotypes that have been referenced to exclude women from certain professions and justify wage inequality.

When interacting with the women at the ARF, I noticed a sense of pride in them when they discussed their work and an air of pride as they conducted activities at the ARF. They seemed to have a sense of power. Dr. Marks credits power as an alluring feature of forensic science, but discusses it in terms of hierarchical power: authority over men, other professionals, or a jury. That type of power may exist and may be appealing, but forensic anthropology also has cultural power.

Attitudes toward death play a role in the cultural power. Because Americans continue to regard death, dying, and the corpse as taboo subjects, those who work so intimately with the dead are viewed as deviant. However, American society appears to be fascinated by death, taboo and deviance, and forensic science. Women in forensic anthropology are, perhaps, capitalizing on this fascination. Furthermore, in dominating a discipline that seems very unfeminine—working outdoors, kneeling in mud, and sifting through decomposing human tissue—female forensic anthropologists are, perhaps, turning their backs on traditional professional gender roles.

Women who participated in this research did not credit media with igniting their interest in forensic anthropology. However media, through glamorizing and sensationalizing the discipline, have afforded forensic anthropologists with tremendous cultural capital. Forensic anthropologists have attained a "rock star" status. Working with human remains at the ARF provides women the opportunity to simultaneously be academics, scientists, and social deviants who wield cultural capital. Separately, each role holds power; together, that power is immense.

Finally, the feminization of forensic anthropology is quite apparent; however the reasons behind the phenomenon are not so easily understood. The reasons offered in literature and by participants to explain the feminization of forensic anthropology are varied and guided by gender stereotypes. However, the cultural capital associated with the discipline combined with women's previous success in the field appears to be the prominent factors that attract women to forensic anthropology.

Chapter V: Conclusions and Future Directions

Limitations

For my research, I assisted with operational tasks at the ARF associated with the body donation program. My familiarity with many of the students and staff allowed me to develop a rapport rather quickly. But I was concerned that my familiarity would also prevent me from approaching my research with complete objectivity. I was concerned that, since I had already been to the facility and participated in many of these tasks, I would take for granted the nature of the work. I tried to always be aware of the bias I carried with me.

My research and the dissemination of the results are also limited by confidentiality practices. Not only do many of the participants wish to remain anonymous, the identity of donors' must be protected. Concerns for donor confidentiality prevent me from fully disclosing many relevant details.

I was also concerned that participants would not trust me and view my presence with suspicion given the fact that, technically, I am one of them: a graduate student in anthropology conducting research for my Master's thesis. I am not a stranger; rather, I know their committee chairs and department head. I was concerned that participants might be afraid to be honest for fear of repercussions.

Similarly, given the public interest in forensic anthropology and the "taboo" nature of handling human remains, I had concerns that participants would be suspicious that I was looking for macabre character traits and control their responses accordingly. Of great concern to me as a potential limitation is the fact that all participants are

anthropologists and are familiar with ethnographic research methods. I felt that their knowledge of anthropological methods could allow them the ability to manipulate their behavior and interview responses more effectively than non-anthropologists. However, I hoped that their understanding of research would cause them to contribute sincerely.

I attempted to control for trust issues in the interview schedule—when interviews were conducted and the order in which questions were asked. I conducted interviews after I had nearly completed participant observation. Working with participants in the field fostered relationships and allowed me to demonstrate my intentions. Interviews began with general questions and gradually became more personal (Appendix A-1).

Conclusions

Attitudes toward death in the United States have evolved over time. Prior to the Civil War, death was a public and collective event as families, neighbors, and communities tended to deathbeds, prepared the corpses, and coordinated the funerals. Advances in science and technology led to the medicalization and rationalization of death where death and dying become phenomena to control and were removed from the public realm to the private (Ariès 1974; Elias 1985; Farrell 1980; Hayslip and Peveto 2005). As a result, death has become hidden and secret. With such repression comes fear and anxiety. Fears and anxieties about death and dying led to a perception of the topics as taboo. There are still many indications of the taboo status of death, dying, and the corpse yet there also appears to be a public fascination with death but only in the abstract. Society's curious with abstract death, dying, and the corpse functions as a response to

taboo and as a means of easing anxiety through understanding the processes of death, dying, and decomposition.

Attitudes toward death at the ARF appear to simultaneously reflect and deviate from these dominant, contemporary cultural norms. Attempts to remain detached and view through a clinical gaze indicate that popular attitudes toward death influence those involved at the ARF. ARF protocol protecting the identity of body donors also protects ARF personnel from interpreting donors as the persons they were while living. Likewise, euphemisms obscure and soften realities. Bodies are not corpses or cadavers; rather they are body donors.

Most participants when discussing the public's fascination with forensic anthropology describe handling human remains as taboo. By stating that handling human remains in the context of the ARF is taboo, participants indicate that they interpret their work through the lens of traditional attitudes toward death. These traditional attitudes restrict handling human remains and promote luxury funeral practices where bodies are embalmed, casketed, and buried.

Another indication of how experiences at the ARF are influenced by culturally prevalent attitudes toward death is reflected in participants' discomfort corresponding with the families of donors. Several participants indicate that they are uncomfortable in situations that involve donors' families. They cite the awkwardness and unpleasantness of viewing grieving behavior as a source of their discomfort. Participants indicate a conflict with the expectation that they simultaneously be objective and empathetic.

The context in which human remains are encountered heavily dictates if or how attitudes toward death influence ARF personnel's experience. Personnel were far more likely to have emotional or sympathetic reactions when picking up remains from funeral homes where they had an association with grief and mourning. Likewise, the presence of family members impacted the context. However, encountering remains at forensic centers or morgues removes the association. Similarly, the ARF is an environment where traditional customs related to handling remains or grieving behavior have been reinterpreted according to clinical norms.

The variance in which attitudes toward death present at the ARF highlight the dichotomy between understanding death as abstract versus personal. When body donors are encountered in environments where grieving behavior occurs or is expected to occur or ARF personnel know personal histories of donors, the donors are more humanized and the deaths more personal. Likewise, if ARF personnel identify with the human remains or associate them with a loved one, the deaths possess a personal quality. Distancing strategies serve to prevent personal associations.

Conversely, when human remains are encountered in environments free from cultural associations and the donors retain their anonymity, death is understood and experienced in abstract manners. Death as an abstract phenomenon allows for objectivity. Participants who agreed with the idea that exposure to human remains desensitizes one to death were referencing abstract death. Participants who disagreed were referencing personal death.

While cultural symbolism associated with human corpses makes the handling of corpses taboo, the use of cadavers in scientific research is not a novel phenomenon. Generally speaking, there appears to be a shift in attitudes toward human remains based on the prevalence of interest in forensic science both in education and the media. Whether this shift indicates a novel response to fear or a change in attitudes is unclear. I expected participants to report that their work with human remains had forced them to confront or contemplate their own mortality. However, only two reported such contemplation and both offered that understanding death decreased their anxiety and allowed them comfort.

The context of the ARF is in its own way clinical. A large factor in determining one's ability to cope with exposure to human remains is the context in which the remains are presented. If the deceased is someone we knew, and perhaps watched die, we feel emotionally attached. Funeral services allow us to view the dead as they were in life—embalmed for preservation, colored with cosmetics, and positioned as though they are taking a nap. Remove personal affects, identity, and the context in which we mourn death, and we are able to detach ourselves adequately enough to conduct research. While the corpse in this latter context becomes a scientific subject, subjectivity is not lost. Circumstances surrounding death or other variables may elicit some emotion even from the most experienced researchers. Although the context in which death is viewed is different, and the treatment of the dead deviates from cultural standards, the cultural tools with which we as a society cope with and detach ourselves from death are still employed. Researchers and personnel at the ARF are simultaneously objective scientists influenced

by and products of the sociocultural norms that dictate acceptable reactions to human remains and the circumstances surrounding death and dying while the dead body is simultaneously a material object and an embodied symbol. They are also able to justify their work at the ARF by underscoring the important contributions of forensic science to law enforcement, victims of homicide, mass disaster, and human rights violations, and the families of victims.

Future Directions

The scope of this thesis research is limited to mainstream Anglo-American attitudes toward death at the ARF with the exception of one outlier: a Korean male. Further insight would be gained by incorporating a broader scope of analysis and including a discussion of attitudes toward death in culturally diverse populations. Further research on attitudes toward death and dying could also benefit from including other facilities similar to the ARF such as the programs at Texas State San Marcos and Western Carolina University and other academic and applied fields that involve working with human remains.

Inclusion of the perspectives of body pre-donors and donor' families would provide an additional dimension. Their perspectives would inform the reasons people choose to donate, how attitudes toward death influence their decisions and their experiences, and how donors' families feel about donation. The inclusion of donors and donors' families would also provide further insight into the public's opinion on forensic anthropology.

Finally, the analysis the feminization of the forensic anthropology would be strengthened with more data. Quantitative data from academic programs and professional organizations would indicate the true scope. Qualitative data from women in field would provide further insight regarding the reasons for the trend. Qualitative from men in forensic science and other affiliated disciplines such as law enforcement could also show the impact feminization—how women are perceived and how the discipline is perceived.

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Appendices

Appendix A: Supporting Documents

Appendix A-1: Interview Schedule

- Describe your personal background.
    - Where are you from originally?
    - What type of town (urban, rural, demographic)?
    - What was the socioeconomic position of your family?
    - What was the religious affiliation of your family?

- Describe your academic background.
    - What types of schools did you attend prior to college?
    - What universities have you attended and what were your academic interests?

- What led to your interest in forensic anthropology/human decomposition studies?

- Describe your professional experience.
    - Trace your professional career.

- Did you have any academic or professional experience involving exposure to human remains prior to your involvement at the ARF?

- When did you first become involved with the ARF?
    - How long have you been involved?
    - In what capacity were you involved?
    - Have you been involved with research projects at the facility? Explain the experience.

- What specific ARF tasks/activities were you involved with?

- Describe your initial reaction to each task.

- Describe your reaction upon subsequent exposures.

- Do you have correspondence with donors' families?
    - Describe

- What aspects of your work (specifically at the ARF) did you find fulfilling?

- Did you find any aspects of your work or specific situations to be difficult?
    - How did you handle those difficulties?

- Were there any tasks that you preferred to avoid?
    - Which tasks?
    - Why?

- How did you handle those tasks?

- Were you able to discuss your work with friends and family?
  - How did they react?
  - Were there any topics that you were unable to discuss?

- How would you compare experiences involving exposure to human remains in other contexts (forensic cases, human rights work, etc.) to exposure at the ARF?

- Prior to your involvement at the ARF had you had any personal experience with death/loss of a loved one?
  - How has that experience influenced your experience at the ARF?

- Did you have any personal experience with death during or after your involvement at the ARF?
  - How has that experience influenced your involvement at the ARF or vice versa; how has your involvement at the ARF influenced how you experienced those situations?

- Have you ever had a near-death experience (illness, accident or trauma)?
  - Has that had any influence on your experience?
  - How?

- What were your feelings regarding body donation prior to your involvement at the ARF?

- What is your personal experience regarding body donation?
  - Have you known anyone or known of anyone whose remains were donated to science?
  - Do you know anyone who plans to donate his or her remains to science?

- What are your current feelings regarding body donation?

- What are your wishes regarding the treatment of your remains?

- Literature which discusses working with human remains suggests that exposure to human remains desensitizes you to death. How do you feel about that statement?

- Literature which discusses working with human remains suggests that exposure to human remains forces you to confront or contemplate your own mortality. How do you feel about that statement?

- Why do you think there is such public fascination with forensic science and the ARF?

- How would you explain the male to female ratio at the ARF and in forensic anthropology?

Appendix A-2: Participant Information

The following roster briefly describes the participants' affiliation with the ARF. The dates of their involvement have been excluded to protect the identities of those who wish to remain anonymous.

- Alex: former ARF graduate assistant and current graduate volunteer
- Casey: former graduate volunteer and researcher
- Dana: former volunteer
- Jamie: current ARF graduate assistant
- Jordan: current ARF graduate assistant
- Morgan: current ARF graduate assistant
- Taylor: former volunteer
- Murray Marks: former Associate Director of the ARF, ARF graduate assistant and researcher
- Lee Meadows Jantz: current Coordinator of the ARF and former graduate assistant and researcher
- Robin Gee: current graduate volunteer and researcher
- Kate Driscoll: current ARF graduate assistant
- Erin Knapp: current graduate volunteer
- Rebecca Wilson Taylor: current Assistant Coordinator of the ARF

- Kate Spradley: current faculty at the Forensic Anthropology Center at Texas State and former ARF graduate assistant
- Joseph Hefner: former Assistant Coordinator of the ARF
- Yangseung Jeong: current ARF graduate assistant
- Robert Mann: current director of the Forensic Science Academy of the Joint POW/MIA Account Command's Central Identification Laboratory (JPAC-CIL) and former ARF graduate assistant
- William Bass: Founder and former Director of the Anthropological Research Facility

Appendix A-3: Body Donor Packet

Forensic Anthropology Center, University of Tennessee, Knoxville
Body Donation Program Policy

The donation of a person's body after death is a tremendous gift. We are grateful for everyone who expresses an interest in body donation. We appreciate your attention to the following.

1. Unlike medical schools, we **do not** return remains to the family. The skeletal remains are a very important component to our research and teaching program. The first donation made to our program in 1981 continues to be studied by researchers today.

2. We reserve the right to decline donations of individuals who have some form of infectious disease such as HIV, tuberculosis, hepatitis of any kind, or antibiotic resistant infections such as MRSA, even if contracted after donation is arranged.

3. Donors with an infectious disease who still wish to donate may do so by choosing to have their remains cremated. We have a growing collection of cremains that provides an invaluable learning resource. People choosing this option should contact us prior to making arrangements. This allows us to work with the crematory involved to ensure the remains are not pulverized. The family must assume responsibility for the arrangement and cost of cremation.

4. We also reserve the right to decline a donation if our facility is at capacity. In case of denial by the University, alternate final arrangements should be discussed by the donor and/or the family.

5. We will arrange transportation to our facility if the deceased is located within the state of Tennessee **and** within 100 miles of Knoxville. Outside the state of Tennessee or more than 100 miles from Knoxville, the donor and/or the donor's family must make arrangements for the transportation of the body to our facility and assume responsibility for any associated costs.

6. We are unable to transport from a private residence or nursing home facility. The donor's family must arrange for transportation and assume responsibility for the cost. We will transport a body from a hospital, funeral home, forensic center, or some healthcare facilities that are within the geographic limits stated above.

7. We need to have signed donation documents or releases prior to transporting. This may be a faxed copy, but the original must be sent as soon as possible. Your donation paperwork will not be complete until originals are returned.

8. Pre-donor paperwork needs to be returned to the Forensic Anthropology Center at the time of completion in order for a file to be established. Changes of address or medical status should be sent to keep donor files up to date.

9. Pre-donor paperwork needs 2 witnesses to verify your signature, but does not need to be notarized.

10. We do not perform autopsies to determine cause of death on donations to our program.

If you have any questions or concerns that have not been addressed in this letter, please feel free to contact us at 865-974-4408 or donateinfo@utk.edu.

V8_2012

Forensic Anthropology Center, University of Tennessee, Knoxville

Body Donation Program Instructions for Donors

This packet contains all the forms required for registering with our body donation program; policy sheet, body donation document, and body donation questionnaire. Please feel free to contact us with any questions you may have.

Body Donation Document

A. Copies of the Form
   a. Three copies of the body donation document are provided to you. We need an original with a valid signature returned with your donation paperwork. The other 2 copies should be retained by you and/or your family for your records.

B. Signature Completion of the Form
   a. Top portion of the form is to be completed by the donor. The donor should be of sound mind and aware of the nature of our program at the time of signing.
   b. The middle portion is to be completed by two adult witnesses. At least one witness should be someone other than a close family member, guardian, or who exhibits a special care for the donor.
   c. A notary is not required for completion of this portion of the form.

C. Trauma Research request
   a. Knowledge of how trauma occurs is of significant interest to the biomedical and anthropological communities. Understanding trauma allows us to better interpret forensic case material and help us to work towards the prevention of such trauma in living patients. This would directly benefit the legal community and aid military personnel protective equipment needs.
   b. Please initial the statement at the bottom of the form if you are interested in participating in trauma related research. A donation will **only** be used for this type of research when initials are present and there is a need.

D. Simulation Center training (Graduate School of Medicine)
   a. Medical residents at the UT Graduate School of Medicine use cadavers occasionally to learn new medical procedures. The FAC and the Simulation Center are partnering to provide cadavers for temporary use for this training. The remains are then returned to the FAC.
   b. Please initial the statement at the bottom of the form if you are interested in participating in trauma related research. A donation will **only** be used for this type of research when initials are present and there is a need.

E. Special Requests
   a. We ask that you state any special requests you may have as to how we use your remains at the bottom of this document or on an attached sheet. We will make every effort to honor any requests.

Biological Questionnaire

A. Please complete this form to the best of your ability.
B. Information provided is needed for the completion of the Certificate of Death and contributes information for our research.
C. We ask that any changes of your statistical information be forwarded to us (ex. Name change, address change, significant health changes) in order for us to keep our record updated.

Acceptance into Program

A. Acceptance into our donation program will be determined once forms are completed and mailed back to us. Please see points 2 and 4 in the Program Policy Sheet.
B. You will receive a letter of acceptance and a donor card with contact information to carry in your wallet.

V8_2012

Forensic Anthropology Center, University of Tennessee, Knoxville
Body Donation Document

I, _____, do hereby dispose of and give my
(donor's name)
body, after my death, to The University of Tennessee, Knoxville, for use by the Department of Anthropology or its designee, for educational and research purposes. I request, authorize, and instruct my surviving spouse, next-of-kin, executor or the physician who certifies my death to notify The University of Tennessee, Department of Anthropology (telephone: (865) 974-4408), immediately after my death of the availability of my body.

Witness my hand and seal this _____ day of _____, _____, at _____.
(day) (month) (year) (time)

_____
Donor's Signature

_____

_____

Address

On this _____ day of _____, _____, signed this Body Donation Document in
(day) (month) (year)
our presence and we, as attesting witnesses, at the request of the Testator and in his/her presence and in the presence of each other have also signed this document.

WITNESSES:

Name: _____ _____
(Print Name) (Signature)

Address: _____

_____

_____

Name: _____ _____
(Print Name) (Signature)

Address: _____

_____

_____

_____ I wish for my remains to be used for trauma research/Simulation Center that will provide the foundation for training professionals in life saving techniques and in the construction of equipment that would enhance and/or prevent the need for these measures.

V8_2012

Forensic Anthropology Center
University of Tennessee, Knoxville
Body Donation Questionnaire

Please complete the following information by filling in the blank and/or circling an option.
If you need more space, additional sheets may be attached.
All of the information will be considered confidential.

Name _____ /_____ / _____ **Sex:** male___ female___
Last First Middle

Social Security #_____ —_____—_____ **Race:** White / Black / Hispanic / Other_____
(circle one)

Date of Birth_____/_____/_____ **Age** _____ **Place of Birth (city/state)**_____

Home Address _____

City _____ **County**_____ **State** _____ **Zip** _____

Phone Number_____ **Inside City Limits:** yes ___ no___

Mother's Name (include maiden) _____ **Place of Birth**_____

Father's Name _____ **Place of Birth**_____

Driver's License Height _____ **Weight** _____ **Recent Weight Loss:** yes ___ no___

Handedness: Right ___ Left___ **Shoe size** _____ **Blood Type** _____ **Hair Color**_____
(natural)

Marital Status: (circle one) Never Married Married Widowed Divorced Unknown Other

Spouse: _____ /_____/ _____ Living__ Deceased__ Unknown__
Last (include maiden) First Middle

Number of Children: _____

Highest Education Level (indicate number of years) **Military Service:** yes ___ no___
Elem/Second (0-12): _____ College (1-4; 5+): _____

Childhood Socio-Economic Status: (circle one) Lower Lower Middle Middle Upper Middle Upper

Usual (life-long) Occupation _____ **Business/Industry** _____

Residence History (list additional locations as necessary)

Childhood Hometown (0-15 years of age):
City _____ State _____ Start Date _____ End Date _____
City _____ State _____ Start Date _____ End Date _____
City _____ State _____ Start Date _____ End Date _____

Location as an Adult (any place you have lived for more than 1 year)
City _____ State _____ Start Date _____ End Date _____
City _____ State _____ Start Date _____ End Date _____
City _____ State _____ Start Date _____ End Date _____
City _____ State _____ Start Date _____ End Date _____

PLEASE CONTINUE ON NEXT PAGE

Version 5: 12_2009

Name _____ /_____/ _____
Last First Middle

Dental History – Check all that apply

- ☐ **Extensive Dental work**
- ☐ **Lower Dentures: When**_____
- ☐ **Upper Dentures: When**_____
- ☐ **Upper and Lower Dentures: When**_____
- ☐ **Partial Plate**
- ☐ **Braces**
- ☐ **Most/all teeth**
- ☐ **Bridge**
- ☐ **Gum Disease**
- ☐ **Dental Disease**
- ☐ **Other** _____

Teeth Missing

- ☐ **Few**
- ☐ **Many**
- ☐ **All**

Medical History (please indicate the approximate year for each). Please do not provide just a Doctor's name.

- ☐ Surgery (general) _____
- ☐ Fractures _____
- ☐ Auto Accident (traumatic)
- ☐ Spinal Injuries
- ☐ Open Heart Surgery
- ☐ Amputations
- ☐ Prosthetics (e.g. Hip or knee replacement)
  When:_____
- ☐ Plastic Surgery (indicate type and location) _____
- ☐ Cancer (type) _____
  Treatment: _____
  Length of Illness: _____
- ☐ Smoker If yes, how long?_____
- ☐ Alcoholism
- ☐ Diabetes Type:_____
- ☐ Other (Including childhood disorders) _____

Medical History (continued) – Please describe the above and any other information you feel may be important, including current medications, timing of injuries, the locations of traumatic injuries, or a family history of an illness, etc. Please attach additional pages as necessary.

Habitual Activities (i.e., jogging, repetitive motions, life-long occupation activities, etc.) -

PLEASE CONTINUE ON NEXT PAGE

Version 5: 12_2009

Name _____ / _____ / _____
Last First Middle

Eye Color	☐ Blue	☐ Green	☐ Gray	☐ Brown	☐ Hazel	☐ Other _____

Tattoo(s)	☐ Yes ☐ No	If yes,	Description: Body Location:	_____ _____
Body Piercing(s)	☐ Yes ☐ No	If yes,	Description: Body Location:	_____

Next of Kin Information

Name _____ Relationship _____
Address _____ Phone number _____
City _____ State _____ Zipcode _____ email: _____

Informant Information (if other than donor or Next of Kin)

Name _____ Relationship _____
Address _____ Phone number _____
City _____ State _____ Zipcode _____ email: _____

DO NOT CONTINUE IF YOU ARE A LIVING DONOR

Location of death (if applicable) **Date of Death** _____
Institution/Hospital _____
Address _____
City _____ County _____ State _____ Zip code _____

Thank you for taking the time to fill out this questionnaire.
If we can be of further assistance, please feel free to contact us.

Return completed forms to:
Dr. Lee Meadows Jantz
Department of Anthropology
250 South Stadium Hall, Knoxville, TN 37996-0720
email: donateinfo@utk.edu
phone: (865) 974-4408

Version 6:8_2012

Appendix A-4: Uniform Determination of Death Act

UNIFORM DETERMINATION OF DEATH ACT

Section
1. Determination of Death.
2. Uniformity of Construction and Application.
3. Short Title.

Be it enacted . . .

§ 1. [Determination of Death]. An individual who has sustained either (1) irreversible cessation of circulatory and respiratory functions, or (2) irreversible cessation of all functions of the entire brain, including the brain stem, is dead. A determination of death must be made in accordance with accepted medical standards.

§ 2. [Uniformity of Construction and Application]. This Act shall be applied and construed to effectuate its general purpose to make uniform the law with respect to the subject of this Act among states enacting it.

§ 3. [Short Title]. This Act may be cited as the Uniform Determination of Death Act.

Appendix B: Figures

Appendix B-1

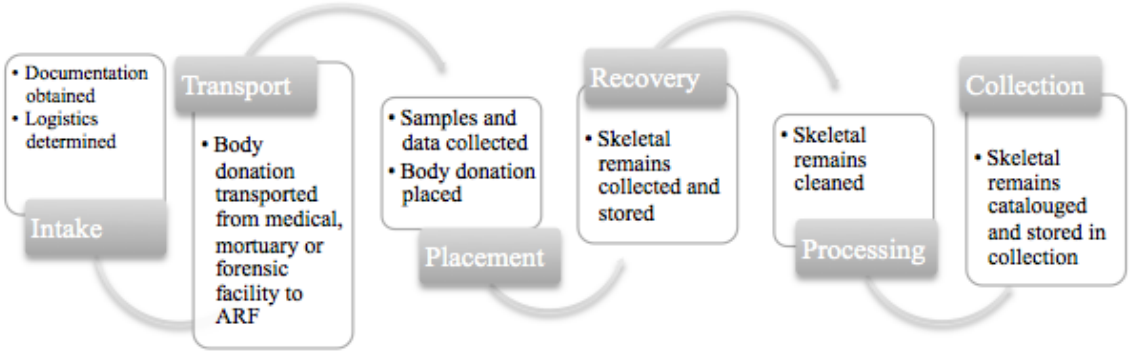

Figure B-1: Procedural Flowchart

Appendix B-2

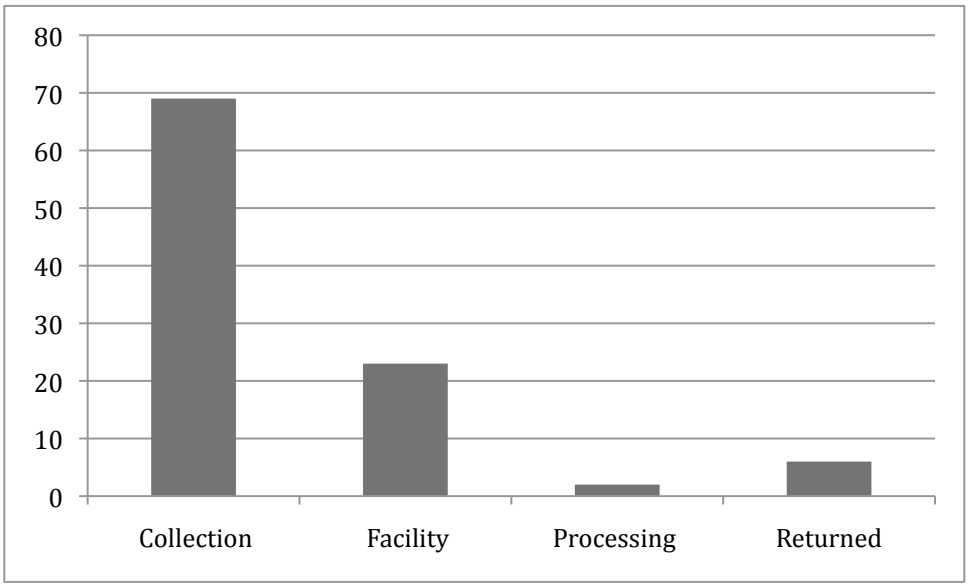

Figure B-2: Location of Remains

Appendix B-3

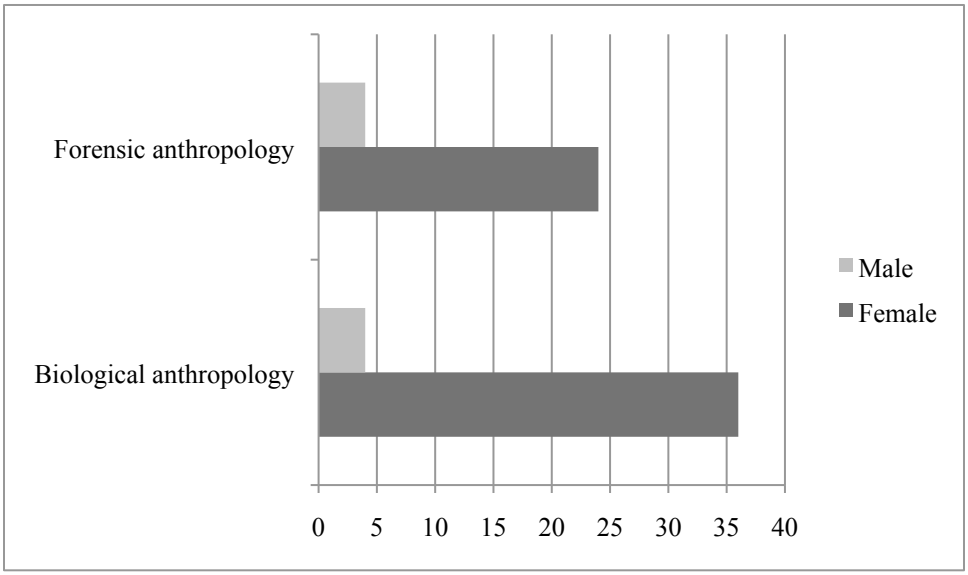

Figure B-3: Gender Profile of UTK Anthropology Graduate Students

Vita

Kiley Compton was born and raised in Knoxville, Tennessee. In 2004 she received a Bachelor of Arts degree in Anthropology with a minor in Psychology from the University of Tennessee, Knoxville. From 2004 to 2006, she worked as a volunteer at the Forensic Anthropology Center (FAC) and Anthropological Research Facility (ARF). In 2006, she began pursuing a Master of Arts in Cultural Anthropology focusing on medical anthropology, feminist anthropology, science and technology. During her tenure as a graduate student, she worked as a graduate teaching assistant for cultural and physical anthropology courses, a reproductive health counselor, and a domestic violence victim advocate.