

A Review of Codes of Ethics in the United States and Ethical Dilemmas Surrounding the Native American Graves Protection and Repatriation Act (NAGPRA)

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Abstract : A growing number of studies related to human remains in Korea highlight the need for developing professional ethics codes and laws that govern disposition and treatment of human remains. In order to provide models for developing ethics codes and regulations relevant to the field of biological anthropology in Korea, the current paper presents a review of ethics codes in the United States related to the procurement, curation, and study of human remains. In the first half of the paper, we provide a full treatment of ethics codes of major professional organizations, including code definition, development, and revision. The latter half of the paper is dedicated to discussions of ethical issues surrounding a United States federal law, the Native American Graves Protection and Repatriation Act (NAGPRA), and a high-profile case of the Kennewick man, the Ancient One. These two examples will demonstrate the difficulty in anticipating ethical issues and unintended misconduct in the course of research. NAGPRA and the Kennewick Man further emphasize three simple yet important take-home points for biological anthropologists and other professionals working with human remains: 1) to be reflective about potential ethical issues related to their research, 2) to be collaborative and encourage involvement of descendant communities at all stages of research, and 3) to be respectful of different worldviews of death between (sub)cultures. Finally, we close our discussion with possible sources of ethical conflicts in Korea to help prepare biological anthropologists as more excavations of human remains take place in Korea.

Keywords : Ethics, NAGPRA, Bioarchaeology

Introduction

Korea's rich history is reflected not only in its cultural heritage sites, unique architecture, music and arts, but also by the skeletal remains of ancestors. While preservation and protection of important sites and the arts is well accepted in Korea, focus on the ethical treatment of human remains is in its infancy. In the United States, bioarchaeologists, archaeologists and forensic anthropologists have

struggled for decades to come to terms with how to treat the remains of ancestors, particularly of those buried thousands of years before Europeans arrived at the Americas in the 15th century. While new laws help protect Native American graves, few laws in the United States currently exist to protect the remains of other marginalized groups, such as slaves and the poor. On the other hand, "protection" of ancestral remains may mean that scientists are not allowed to study the remains, resulting in missed opportunities to glean information for time periods poorly represented by cultural artifacts. Efforts to study the past whilst safeguarding the dignity and spiritual nature of human remains are complex and fraught with controversy in nearly every country. What is dignity and how is it preserved? Are all excavations and skeletal analyses inherently disrespectful?

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Is respectful treatment of the dead a universal human right? Who “owns” the rights to the remains? The goal of this paper is to provide some insight into some of the ethical issues scientists in the United States have tackled, no matter how ineptly, as a means to shed light on the growing need for formal ethical principles and foundations for the study of human remains in Korea.

1. The value of studying human remains and increasing studies on human remains in Korea

The study of human skeletal remains enables biological anthropologists to reconstruct the diet, social status, occupation, demography, and health status of past peoples [1,2]. Skeletal remains also provide insights into adaptive successes in response to new environmental stresses. While the authenticity and reliability of historical documents and other cultural artifacts may be dubious, skeletal analyses offer an objective, independent source of information that is less subject to cultural manipulation and historical revision [3].

The study of earlier human populations is beneficial to contemporary people as new information is yielded from novel technologies introduced to the field of skeletal biology. The most direct example of this is forensic anthropology—the application of skeletal biological principles to legal problems. Advances in methods of skeletal age, sex and stature estimation developed on archaeological samples come largely from forensic research on large documented skeletal samples, or reference samples, designed to increase the accuracy of personal identifications of skeletal remains [4,5]. Further, methods once thought to be useful have been proven erroneous by validation studies using reference samples [6]. This self-correcting aspect of the scientific method is what justifies long-term/permanent procurement of human skeletal collections [5,7]. By re-studying the skeletal collections, future generations of scientists could make new discoveries with more advanced technologies and methods than their predecessors [5,8]. Under appropriate curation, human skeletal collections are a never-ending source of scientific exploration.

For the past two years, there has been an exponential increase in a number of publications on studies involving human remains in Korea. The papers published in international and regional peer-reviewed journals, book chapters, theses and dissertations in physical anthropology, human

gross anatomy, paleoparasitology and ancient molecular biology include studies on mummified and skeletonized human remains from Korea [9-16]. However, despite the rising interest in scholarly activity, there is a lack of provisions, regulations, and laws that govern research involving human remains. One of the few current Korean laws where human remains can fall under legal protection is the “Funeral Services Related Act [17]”.

Under Section 2. Funeral Methods of Burying, Cremation, Replacement, and Aerial Sepulture of the Funeral Services Related Act, Article 12. Handling Unidentified Human Remains states that when unidentified human remains are found, including both skeletonized or fresh bodies, the responsible jurisdictional district office is required to make a public announcement looking for family or relatives of the remains [17]. If the remains are unclaimed after 60 days of the official announcement in public, they are cremated or buried at a specific burial site by the district officials unless medical schools request to use the remains in their research (Article 12. Offering Unclaimed Human Bodies in the Human Body Dissection and Preservation Act [18]).

Within this law, the regulation that may act to protect archaeological skeletal remains can be found in Article 34, under Section 6. Maintenance and Restriction Order on Funeral Facilities and Rectification Order [17]. The article states that an unidentifiable burial can only be preserved if the burial is deemed to have historical or cultural value by the evaluation committee for burial and grave preservation [19]. However, it is unclear as to whether the regulation guarantees preservation of unknown human remains or whether it is only the grave or grave goods themselves that are protected. Moreover, proper procedures concerning how to treat human remains in respectful and ethical manner is missing from the laws.

An ethical statement concerning human remains can be only found in “the Human Body Dissection and Preservation Law”. Article 17 briefly touches on the subject with a simple statement, which mandates human bodies to be treated with respect and care until they are returned to, or cremated by, the responsible party [18].

The lack of detailed nationwide or provincial laws concerning both documented and undocumented human remains in Korea creates a grey area in terms of disposition and “ownership” of bodies and skeletons. Given the multi-disciplinary nature of human remains research, these laws should be far-reaching and include specific guidelines for

anatomical gifts (e.g. body donations for medical school dissection), donated skeletal and pathological collections, archaeological collections and forensic cases. This is typically accomplished by the collective scientific community conveying regulations and best practice standards to lawmakers [20]. More importantly, a human skeletal collection serves as a focal point where a number of professionals from diverse disciplines with different technical training, experience, and ethical traditions work together [21]. In order for these diverse professional groups to operate in harmony, there is an urgent need to establish an institutional tool, a ‘code of ethics’, with respect to treatment of human remains for research in Korea. As demonstrated below, the creation of ethical standards or codes is not without tension, yet the efforts in the United States may serve as models for Korea.

What is a Code of Ethics?

1. Definition, purpose and function of a code of ethics

A code of ethics is an institutional guideline that reinforces ethical conduct among professionals, and governs their behavior based on moral values that a particular professional discipline and culture uphold [22]. The reasons for establishing a code of ethics are to: “1) define acceptable behaviors; 2) promote high standards of practice; 3) provide a benchmark for members to use for self evaluation; 4) establish a framework for professional behavior and responsibilities; and lastly, 5) to have a vehicle for occupational identity, and a mark of occupational maturity [23]”. In other words, by defining professional behavior, a code of ethics not only functions to dissuade people from acting unethically by outlining general procedures for violation of ethical conducts, but also to promote a sense of pride, tolerance, and responsibility of scientific communities [22].

2. What does a code of ethics include?

According to Alfonso and Powell [20], a code of ethics can be generated “only when the particular duties of a group of professionals have been determined”. Thus, general principles included in a code of ethics can vary depending on the nature of the work and the moral values and particular culture of a certain discipline. In the United States, codes of ethics among academic units are typically estab-

lished by committees within the respective major professional organizations. The principle organization for anthropology is the American Anthropological Association (AAA), which recently updated its code of ethics in 2012 [24]. Two principle anthropological subfield organizations, the Society for American Archaeology (SAA) and the American Association of Physical Anthropologists (AAPA), base their codes of ethics largely on that of the AAA. The seven basic principles in the AAA code are grounded in the common sentiments of ‘do no harm’ and moral responsibility. However, the code also conveys the concepts of stewardship, accountability, prevention of commercialization of study materials, public education and outreach, intellectual property, public reporting and publications, and records and preservation, and training and resources. The following paragraphs summarize the seven principles identified by the AAA Ethics Task Force [25].

The principle that the AAA code prioritizes is that anthropologists should avoid doing harm to the subject under study, whether it is humans, animals, material objects or the environment. Whether the nature of harm is direct or indirect, and physical or psychological, any research that has potential to negatively impact the study subject should be discontinued, no matter the perceived importance of the new knowledge. In the context of biological anthropology, for instance, anthropologists working with skeletal collections from archaeological contexts should make every effort to maintain long-term conservation of the collection [26]. In some cases of particularly sensitive remains, this can include a moratorium on destructive analysis (e.g. histology, DNA, cross-sectional analysis).

Professional honesty and integrity is at the heart of any code of ethics, and the second AAA principle concerns research transparency. This refers to full disclosure of the intention, nature, results and potential impacts of research to the study participants, co-investigators, funding agency, publisher, affected institutions and interested laypersons. Early and clear communication concerning authorship, financial interest disclosures and ownership of research data will reduce conflicts and tensions when the results are ready to be published. When disclosing research results is considered to be inappropriate, such as for the purpose of maintaining anonymity of the participants, then the reason for this needs to be made clear early in the process.

Third, informed consent with the participants or the responsible party for the subject material is required for

nearly all research of living human subjects in the United States. Such studies require evaluation and clearance by an Internal Review Board, or IRB, at the host institution. An outline of the research purpose, methods, expected results, possible impacts and sponsors of the research should be clearly presented to potential participants or their agents (e.g. parents or other legal caregivers) to ensure human subjects are well-informed of the risks and benefits of their participation [25]. At this time, it is not required to obtain informed consent from Native American tribes affiliated with skeletal collections, though consultation is highly recommended (see the NAGPRA section).

Fourth, anthropologists should balance potential competing obligations among collaborating or interdependent parties from various backgrounds, including employers, funding agencies, students, collaborators and research participants. Any conflicting ethical issues raised among these parties should be considered and negotiated at the outset as part of the research design. Thus, co-authorship and data sharing should be acknowledged properly. When conflicts arise, obligations to research participants should be prioritized.

The fifth principle further emphasizes the responsibility of anthropologists to balance the dissemination of research results with its potential consequences. This may be a very difficult ethical decision. For instance, consider a situation in which a biological anthropologist working on a particular skeletal collection discovers a high prevalence of venereal syphilis. In this situation, the biological anthropologist should make a careful decision whether or not to publish it and release this information to the descendant communities or families. Given the social taboo associated with this particular disease, release of this information may gravely impact living descendants. On the other hand, the finding may be significant in that it demonstrates that the treponeme bacteria was affecting populations earlier than previously known, or is the first found in a particular geographic area, thus changing the scientific understanding of its spread across time and space. The sensitivities of certain infectious diseases, warfare-related trauma, cannibalism and other conditions or activities should be strongly considered prior to dissemination (e.g. See critiques of *Man Corn: Cannibalism and Violence in the Prehistoric American Southwest* [27] by McGuire and Van Dyke [28], Dongoske et al. [29], Kantner [30], Reinhard [31], Chacon and Mendoza [32]). Further, the use of photographs of Native American human

remains as scientific “evidence” in publications and public presentations is highly contested given that there are different perceptions and acceptable thresholds regarding the discussion and visual representation of ancestors [33].

Sixth, anthropologist should protect and preserve their records or data collected from the field or collections. This means that biological anthropologists should clearly communicate how the data collected will be stored, and what persons or agencies will have access to them. Confidentiality of the participants should be maintained unless there is a prior agreement for release that is specified in the informed consent. Data protection is required for both digital and paper media [25].

The last ethical principle that the AAA emphasizes is awareness of ethical obligations to all professional relationships by maintaining a safe, supportive and transparent working environment. This pertains to the multiple roles that biological anthropologists have—researcher, collaborator, mentor, public official, etc. Biological anthropologists should conduct ethically sound research that does not compromise or undermine the integrity of the discipline. Anthropologists must refrain from manipulating data, fabricating results or plagiarizing the work of others by properly acknowledging students or other collaborators who provided intellectual contributions, and teach their students how to conduct ethical research. Anthropologists also have an obligation to report ethical violations, particularly those involving study participants, students or other vulnerable individuals or groups [24].

In the absence of sufficient federal or state legislation regarding disposition and treatment of humans remains in Korea, biological anthropologists and other related professionals must develop a set of ethical standards that self-regulate their activities and create universal best practices. As Alfonso and Powell [20] eloquently state, “since anthropology itself is the incarnation of cultural encounters, the development of a code of ethics in the discipline is a must... The absence, therefore, of an explicit code of ethics in biological anthropology is not only paradoxical but also shocking”.

Developing a Code of Ethics

1. Developing a code of ethics: Where to start?

As acceptable ethics and morals are culturally different,

a code of ethics is also a cultural construct [20]. Therefore, one set of ethics can neither be labeled as right or wrong, nor predict all the possible problems that might occur in the course of scientific research [20,21,34]. In this respect, “learning ethics is so much more than memorizing facts—it is an abstract topic shaped by questions that may not have answers, which requires participants to step outside of their comfort zones and question everything around them [21]”.

Many academic texts are devoted entirely to the development of codes of ethics [35,36]. The publications by Barnett [37], Bowen [22], and Downs and Swienton [38] are useful for forensic anthropological contexts. In addition, Blau and Ubelaker [39] discuss ethical dilemmas in anthropology that may occur on multiple levels, including expert credentials, interpretation of evidence, research and publications, and personal ethical dilemma, during research involving human remains. For bioarchaeologists and museum professionals, a book edited by Cassman et al. [40] provides thorough guidelines for establishing a code of ethics and museum policies and curating human remains in ethically acceptable manner. The publication of the United Nations Educational, Scientific and Cultural Organization (UNESCO), *Human Remains and Museum Practice* [41], provides comparative reviews of ethical treatment and national laws regarding human remains in England, Australia, United States and other parts of Europe. Similarly, the code of ethics developed by the International Council of Museums (ICOM) [42] provides general guidelines in proper handling and curation of human remains.

2. General rules of thumb

As explained by Bowen [22], there are three general rules that should be considered in developing a code of ethics. It is important in the early stage of code development to reach “a mutual agreement regarding moral principles, the requirement of science pertaining to technology and information sharing, and legal requirements [22]”. Bowen [22] further states that developing a code of ethics should be “a practice of the profession as a whole”, not a reflection of the majority opinion. Yet the agreement should be made in a way that conveys individual’s personal morals with respect to ethical issues. Thus, during this course of agreement phase, sensitive and controversial issues should be rigorously discussed and need to be addressed in the code.

The second rule is to establish a code that is not too spe-

cific or too universal. Although the rule of thumb for ethics codes is that contents of the codes should be inclusive, Bowen [22] states that a code as general as “do not steal” will not be useful for specific situations. On the other hand, detailed codes are more difficult to revise. Therefore, a code of ethics should be created in a way to represent “the unique components of the group’s functions [22]”, and yet still be malleable to incorporate changes when necessary.

Nevertheless, there are both general and specific types of codes of ethics developed in professional fields, such as forensic science, for its own function. These can be termed as “broad models” and “detailed models” [37]. An example of a code of ethics based on a broad model is the one established by the American Academy of Forensic Science (AAFS). The AAFS code is purposefully broad given that forensic science has a number of subfields of specialized professionals. Therefore, the function of the AAFS code is to show the organization’s support to its subfield professionals who abide by the code, and to provide minimal guidelines on what actions to be taken if there is violation of the provision of the code of ethics (refer to Section 5. Rules and Procedures under Article II. Code of Ethics and Conduct, American Academy of Forensic Sciences [43]).

Alternatively, the code of ethics established by the California Association of Criminalists (CAC) [44] is an example of a detailed model. This type of ethics code functions as a bridge between scientists and the law [22]. Such codes contain very detailed language and include a wide variety of punishments that practitioners could face if violations occur. Such specific codes require the professionals to clearly identify their roles and duties in the forensic society, and both ‘proscribe’ and ‘prescribe’ certain types of behaviors to those professionals who abide by the code [37].

Third, Bowen acknowledges that ethical dilemmas are difficult to anticipate. Ethical issues occur not only from bad intentions, but also from unintended consequences of particular decisions, actions or opportunities. Therefore, this justifies a broad model code that is sufficiently broad and flexible to accommodate novel ethical issues as they arise and anticipate potential issues in the future. A well-established code of ethics is the one that promotes continuous discussion and reflection, and provides “ethical guidance for the whole profession, and ... make[s] basic ethical values of the group clear” [22].

Ideally, a code of ethics should also include procedures and actions to be taken when allegations of unethical con-

duct or conflicts of interests are reported [20]. Once a code is created, there may be a committee that monitors the application of the code to ensure it is effective [20,22,37]. However, in the field of anthropology in the United States, there is no overarching oversight board to which unethical behavior can be reported or adjudicated. Most professional organization codes do not include a specific procedure concerning what to do when unethical behavior is observed. The AAPA code specifically states that there is no adjudicating committee to investigate allegations of unethical behavior, except for a few cases considered as absolute necessity [26]. The aforementioned AAA code of ethics is based on an educational premise, and takes no role in adjudicating allegations of ethics violations. In contrast, the AAFS code of ethics does have “teeth” in that there is an ethics committee that hears charges of ethical misconduct among its members. Those found to be in violation of ethical codes may be censored or stripped of their membership.

3. Revising a code of ethics

Any code of ethics should be considered a living document and requires regular revisions to accommodate new challenges within a field (e.g. decision-making based on new available technology or participant subgroups), and making a code more feasible and enforceable. For instance, the initial establishment of the AAA code of ethics in 1967 [20] has undergone four major revisions. The most recent version is the culmination of a very thorough and thoughtful revision that started in early 2009 and finished in October 2012. To initiate the revision effort, the AAA Ethics Task Force established and publicly announced four main revision goals to anthropological community [25]: 1) To emphasize every anthropologists’ responsibility to engage in an on-going process of ethical thinking and practice including ethical dilemmas; 2) to help faculty members and their students in teaching and learning about the foundational concepts of ethical conducts; 3) To be helpful to anthropologists in cases when they have to make decisions regarding ethical issues; and lastly 4) to ensure that the code is sufficiently flexible to adapt to diverse circumstances and adjust to the wide range of contexts of anthropological practices.

In order to fulfill these four goals, the AAA employed a very proactive revision strategy. The AAA Ethics Task Force reached out to current anthropologists and students

in anthropology to incorporate their comments and suggestions into the revised code. As a facilitating medium for communicating among these senior and young academic professionals, the AAA utilized social networking services, such as the AAA blog (<http://blog.aaanet.org/>), Twitter and Facebook. During the period of the AAA ethics code revision, active discussions about the subject matter in graduate-level classroom were not uncommon.

4. Teaching ethics

Concepts of professional ethics and moral values are not something that anthropologists were born with, or naturally learn throughout the course of their life. Relevant codes of ethics should be part of the education received by biological anthropologists in their training [21]. Ideally, a semester-long course fully dedicated to ethics and ethical issues raised from real-world research situations should be mandatory training for graduate students in anthropology. Recommended readings for anthropology students who regularly work with human remains in the United States include universal standards for moral and ethical value judgments and the international human rights and humanitarian laws, established by the United Nation (UN), United Nations Educational, Scientific, Cultural Organization (UNESCO) and the World Health Organization (WHO) [45]. The universal standards include the Universal Declaration of Human Rights [46], and, most recently, the United Nations Declaration on Rights of Indigenous People [47] to name a few. For region-specific ethical treatment of the remains in conflict scenarios, it is best to consult the code of conduct of a specific professional group of the relevant region. In the case of biological anthropology in the United States, the major documents that anthropologists should be aware of include the aforementioned codes of ethics developed by AAA, AAPA, AAFS, and SAA.

The SAA has established an excellent teaching tool called “Ethics Bowl” (<http://www.saa.org/AbouttheSociety/AnnualMeeting/EthicsBowl/tabid/193/Default.aspx>). Established in 2004, university graduate and undergraduate students from around the United States compete against other university teams by addressing hypothetical ethical dilemmas in archaeology. The teams debate the cases during the SAA annual meetings and a winner is chosen. The cases from past ethics bowls are posted on the SAA website and provide excellent material to teach students how dilem-

mas arise and can be handled using ethical principles.

5. Beyond the codes

No code of ethics tackles the problem of who controls, or “owns” ancestral human remains. Consequently, none of the codes of ethics holds the decision-making power concerning the excavation, curation, study and final disposition of human remains. In the United States, this power has historically been firmly situated among the anthropologists who work in universities and museums that are funded by the federal government. Decisions to excavate graves were often based on a perceived ethical foundation. This may include “salvage” archaeology of an ancient cemetery or burial mound threatened or disturbed by looting or construction activity. The excavating archaeologist or biological anthropologist (or their institution) was then, by default, in charge of the remains and determined if and how they were curated, what research was conducted, and if and where the remains were reburied. However, the ethical decision to preserve human remains created tension with living descendants of the remains, such as Native Americans who were denied any decision-making power and whose sense of responsibility to the remains of their ancestors was of little import to the anthropologists. For decades Native Americans rebelled and protested this power differential and eventually helped create a federal law in 1990 that, while suffering from various ambiguities, provides some specific guidelines for the treatment of Native American graves, human remains and ceremonial artifacts. This law, the Native American Graves Protection and Repatriation Act, or NAGPRA, is not the first of its kind, as Australia initiated the Aboriginal and Torres State Islander Heritage Act in 1984. However, issues raised during the development and enactment of NAGPRA do serve as case studies for Korea concerning how to treat the remains of ancestors of living citizens whose cultural values may differ from the scientific establishment.

Native American Graves Protection and Repatriation Act (NAGPRA)

NAGPRA represents a culmination of ethical efforts of U.S. biological anthropologists, archaeologists, museum professionals, Native Americans and the federal legislative

body to protect, preserve and return human remains and funerary objects that are affiliated to Native Americans [48, 49]. It arose as a means to quell the tension between the western science-traditional belief dichotomy, and demonstrates how the involvement of descendant communities in skeletal analysis moved from “ethical imperative to legal mandate” [50]. Learning about NAGPRA provides insights into how ethical issues surrounding NAGPRA are raised as unintended consequences, and what effort has been made by academic and descendant communities and policy makers to solve these issues.

1. What is NAGPRA?

According to the National Park Service of the U.S. Department of the Interior, NAGPRA is applicable to all Native American burial objects and human remains that are found in federal lands and housed in any institutions receiving federal funds. One notable exception is the Smithsonian Institution, which houses thousands of human remains and funerary objects but is governed by the earlier National Museum of the American Indian Act (NMAIA) of 1989, 20 U.S.C. 80q. According to the National Park Service [51]:

“NAGPRA provides a process for museums and Federal agencies to return certain Native American cultural items—human remains, funerary objects, sacred objects, or objects of cultural patrimony—to lineal descendants, and culturally affiliated Indian tribes and Native Hawaiian organizations. NAGPRA includes provisions for unclaimed and culturally unidentifiable Native American cultural items, intentional and inadvertent discovery of Native American cultural items on Federal and tribal lands, and penalties for noncompliance and illegal trafficking. In addition, NAGPRA authorizes Federal grants to Indian tribes, Native Hawaiian organizations, and museums to assist with the documentation and repatriation of Native American cultural items, and establishes the Native American Graves Protection and Repatriation Review Committee to monitor the NAGPRA process and facilitate the resolution of disputes that may arise concerning repatriation under NAGPRA”.

Essentially, NAGPRA governs the entire process regarding disposition of Native American cultural items and human remains from their initial recovery, to documentation, to final repatriation. A general procedure for how NAGPRA operates can be summarized as follows. When human remains are excavated on federal lands, the site

should be dated to determine if it is pre- or post-European contact—this period is marked by the 15th century. If pre-contact, or determined to be a historic Native American site, an inventory of the artifacts and remains and consultation with federally recognized tribes must occur. Further analysis depends upon the willingness of the affiliated Native American tribe(s) to allow scientific study of the human remains.

Complying with the Declaration of Human Rights of the United Nations (1948), NAGPRA gives Native Americans rights to perform indigenous religious ceremonies, and to access sacred objects if it is part of their traditional culture (following in part the American Indian Religious Freedom Act of 1978). Thus, NAGPRA stands as a “human rights statute and reconciliation” that prevents objectification and desecralization of Native American skeletal remains as collectibles, and that provides the descent communities the rights to full access of their ancestral remains [49]. While NAGPRA directives may sound simple and straightforward, there have been a number of thorny issues raised since its enactment in 1990.

2. Unintended consequences?

The most problematic issues surrounding NAGPRA is how ownership of the human remains is determined [3,52] and *who* can claim the human remains. The problems are fundamentally derived from vague definitions in the law that could be interpreted in multiple ways [50]. It is unanimous among biological anthropologists, archaeologists, Native Americans and general public that the lineal descendants or close family/relatives are prioritized for the disposition of the human remains [3,5,20,52]. However, the burden is on the tribe(s) to prove, with a preponderance of evidence, that they are culturally affiliated with the skeletal remains. Unfortunately, it is these very terms, “cultural affiliation” and “preponderance of evidence”, that have been the most problematic [52,53].

“Cultural affiliation” is defined by NAGPRA as “a relationship of shared group identity which can be reasonably traced historically or prehistorically between a present day Indian tribe or Native Hawaiian organization and an identifiable earlier group (25 USC 3001. SEC. 2. DEFINITIONS. (2))”. The definition raises a question concerning how tribes can demonstrate “shared group identity” with remains that are hundreds or thousands of years old. Exacerbating the

issue is a lack of clear acceptable criteria to make these links. In 25 USC 3005. Section 7. Repatriation, NAGPRA regulations state that “the requesting tribes can show cultural affiliation by a preponderance of the evidence based upon geographical, kinship, biological, archaeological, anthropological, linguistic, folkloric, oral traditional, historical, or other relevant information or expert opinion”. This means that “both biological and humanistic evidence” can be used as proof to establish the ancestor-descendant relationship [52]. Moreover, not all Native American groups can claim their potential ancestor’s remains. It is only ‘federally recognized’ tribes that are allowed to make a claim of the remains, further reducing the possibility that a descendant community will benefit from repatriation.

The ambiguously phrased “preponderance of evidence” is especially challenging for biological anthropologists and archaeologists because NAGPRA does not instruct or guide what form(s) of evidence should be preferred to determine cultural affiliation, or whether all forms of evidence should be weighted equally [3]. Of all types of evidence, the use of Native American oral traditions has been particularly subjected to harsh criticisms by anthropologists because they are believed to be mutable over time. Nevertheless, to most Native Americans, oral traditions, legends and myths, rather than scientific input, have been known to be what really construct their worldview. As Walker [5] states:

“Some indigenous people reject the epistemology of science, at least as it applies to their history and cultural affairs, and instead they prefer to view the past as it is revealed through traditional ways of knowing such as oral history, legend, myths, and appeal to the authority of revered leaders. For people with this perspective, scientific research directed toward documenting the past is... potentially culturally subversive...”

Given that biological anthropologists have ethical responsibilities to respect the different worldviews by other cultural groups, while, nevertheless, striving to reveal invaluable scientific knowledge, negotiating both biological and humanistic evidence is a major challenge [5,50,54]. For example, when multiple lines of evidence, including humanistic (e.g. oral tradition) and biological evidence (e.g. DNA), support the cultural affiliation of the remains to a certain Native American tribe, then there is little debate [3]. However, when the conclusions of biological and historical evidence are contradictory to the oral traditions of a certain Native American tribe(s), then it can create a contentious

battle over the remains and regression to the science and tradition dichotomy [3,5].

3. A high profile controversy: The Kennewick Man

This issue of determining a descendant-ancestor relationship is exacerbated when the human remains cannot be affiliated with any of the existing federally recognized Native American tribes. One high-profile example that encompasses all the issues aforementioned is the case of the Kennewick Man—or the Ancient One. In 1996, an exceptionally well-preserved skeleton was discovered along the Columbia River in Washington State. Originally studied as a forensic case by a local anthropologist, James Chatters, radiocarbon dating established the remains are 9,300 years old, and therefore fell under the NAGPRA regulations. The U.S. Army Corp of Engineers had jurisdiction over the federal land on which the remains were found and took possession of the skeleton. Five Native American tribes produced a claim and requested repatriation of the remains. One of the tribes was not federally recognized so was unable to make a legal claim.

In September 1996, the Army Corps of Engineers decided to repatriate the Kennewick Man to the Confederated Tribes of the Umatilla Indian Reservation [55-57]. However, Chatters [58] concluded that the skull showed more European cranial features than Native American features. Later, in 2000, Chatters amended his conclusion and stated that the Kennewick Man exhibited biological morphology that resembles East Asian and Polynesian populations that sometimes share same skeletal features with those of Europeans but still not those of Native Americans. As a result, Chatter's claims enabled other communities, such as the Asutru Folk Assembly, a traditional European pagan religion, as well as the Polynesian heritage activist Faumunia, to join the fight for the Kennewick Man [52].

A few years later, eight anthropologists—including Drs. Bonnischen, Brace, Gill, Haynes, Jantz, Owsley, Stanford and Steele—filed a lawsuit against the U.S. Army Corps of Engineers in order to halt repatriation [52]. They pointed out that [3,5]:

- 1) Equating pre-1492 antiquity with “Native American” is problematic;
- 2) The study of these ancient remains would be of major benefit to the United States; and

3) The scientists' civil rights were being denied by the Corps' actions.

Just as Native Americans insist their rights for religious freedom as their justification for claiming the human remains, these anthropologists set forth their rights to study the scientifically invaluable source of information and the rights of next generations to have access to the ancient remains in the future.

During the course of the nine years of the legal battle involving a number of different stakeholders over the Kennewick Man, a series of studies on biological [52], archaeological [56,59], historical, and traditional information [60] was conducted in order to determine the “cultural affiliation” of the Kennewick Man under NAGPRA (consult [61, 62] for a more extensive list of studies conducted on the Kennewick Man). The results of the studies indicated that there was no definitive evidence to relate the Kennewick Man to the requesting Native American tribes. Information gained from geographical evidence and oral traditions was considered insufficient to support any of the proposed descendant relationships [52]. The results of the studies also helped exclude those non-Native American groups who claimed the remains.

Finally, in 2004, the Ninth Circuit Court of Appeals concluded that there was no recognizable relationship between the requesting Native American tribes and the Kennewick Man, based on the absence of substantial evidence to support their claim [63]. The court further emphasized that the Kennewick Man was too ancient for *any* cultural affiliation to existing Native American tribes [63]. As of 2014, the Kennewick Man is housed at the Burke Museum at the University of Washington for more scientific research, and is still the legal property of the U.S. Army Corps of Engineers.

4. Ongoing ethical issues

Although the case of the Kennewick Man seems to be legally settled, it still leaves us with two unresolved ethical issues. These issues include: 1) the failure of NAGPRA to privilege the life of living people they study when conflict occurs; and 2) the current inability of NAGPRA to grant equal rights for repatriation claims to federally unrecognized Native American tribes [52].

The failure to privilege the life of the living descendants is at direct odds with typical ethics convention, such as that

of the AAA [24], which states:

“III. A. 1. Anthropological researchers have primary ethical obligations to the people, species, and materials they study and to the people with whom they work. These obligations can supersede the goal of seeking new knowledge, and can lead to decisions not to undertake or to discontinue a research project when the primary obligation conflicts with other responsibilities, such as those owed to sponsors or clients”.

This broad statement indicates that respect should be given to the different values and worldviews of the descendant communities even if they conflict with scientific views. In the case of Kennewick Man, however, the oral traditions and geographic heritage of Native peoples who occupied the land where the remains were found were arguably not considered as substantial evidence. If the oral traditions or the myths that have been handed down for generations define the identity of the particular cultural group, then should not scientists respect that and incorporate them into their final conclusion? If so, then would the conclusion of the scientists still be scientific? As Buikstra [52], Ousley et al. [3] and many other scholars have pointed out, it is challenging for biological anthropologists to reconcile both qualitative and quantitative measures for their final conclusions and decision making in the repatriation context.

The second ethical legacy of the Kennewick Man case is “its failure to acknowledge the existence of authentic descendant groups that have either failed to receive or rejected federal recognition [5]”. In the AAPA comments on Department of the Interior’s revision of NAGPRA regarding the disposition of culturally unidentifiable human remains, Clark Larsen argued that it is the “ethically problematic aspect of NAGPRA... [to deny] the right to make decisions about repatriation to non-federally recognized tribes simply because they lack federal recognition [64]”. Larsen further stated that NAGPRA privileges those few Native American tribes—564 tribes [65]—who have the “money and political clout” to be federally recognized. Walker [5] also lamented that “the omission is especially unfortunate for the many federally unrecognized descendants in California and the eastern United States where the vagaries of the colonial process allowed the government to avoid giving Indian tribes the rights of self-determination that go along with federal recognition”. In response to this problem, two leading anthropological associations, AAPA and SAA, suggested coalitions of federally non-recognized and rec-

ognized tribes as an effective solution so that those federally unrecognized Native American groups could become eligible to claim human remains in future [66]. Nevertheless, whether or not the legislative body has accepted this suggestion is in question.

Coupled with the problems of disposition and ownership of culturally unaffiliated human remains, in 2010, the U.S. Department of the Interior officially announced a new NAGPRA amendment to grant some degree of rights to claim such unaffiliated remains to federally non-recognized tribes. In the Federal Register, Volume 75, Number 49 (Monday, March 15, 2010), the Office of Secretary, the U.S. Department of Interior summarizes the new rule as the following:

“In brief, this rule pertains to those human remains, in collections, determined by museums and Federal agencies to be Native American, but for whom no relationship of shared group identity can be reasonably traced, historically or prehistorically, between a present day Indian tribe or Native Hawaiian organization and an identifiable earlier group. These individuals are listed on inventories as culturally unidentifiable Native American human remains. The rule requires consultation on the culturally unidentifiable human remains by the museum or Federal agency with Indian tribes and Native Hawaiian organizations whose tribal lands or aboriginal occupancy areas are in the area where the remains were removed. If cultural affiliation still cannot be determined and repatriation achieved, then the Indian tribe or Native Hawaiian organization may request disposition of the remains. The museum or Federal agency would then publish a notice and transfer control to the tribe, without first being required to appear before the Review Committee to seek a recommendation for disposition approval from the Secretary of the Interior. Disposition requests, which do not meet the parameters of the rule, would still require approval from the Secretary, who may request a recommendation from the Review Committee”.

In other words, whenever culturally unidentifiable Native American remains are found, Native American tribes or Native Hawaiian organizations living in the same area where the remains were found hold the right to claim ownership of the remains, solely based on their shared residency on the land. What is particularly notable in the new NAGPRA amendment is that, in this process, federally non-recognized Native American groups have the second priority to claim the ownership, if none of the federally

recognized Indian tribes or Native Hawaiian organizations agrees to accept control over the remains [65,67]. In the revised NAGPRA, Section 10.11. Disposition of Culturally Unidentifiable Human Remains states that “(2) If none of the Indian tribes or Native Hawaiian organizations... agrees to accept control [of the culturally unidentifiable human remains], a museum or Federal agency may: ... (ii) upon receiving a recommendation from the Secretary or authorized representative (A) Transfer control of culturally unidentifiable human remains to an Indian group that is not federally-recognized...” [68]. This new rule is quite contrary to the previous NAGPRA that required a proof of a cultural link to a specific tribe prior to repatriation of the remains.

After the new amendment of NAGPRA was finalized, anthropologists became increasingly concerned that the Native Americans’ right to claim culturally unidentifiable remains may open a door to repatriation and re-interment of thousands human remains, and therefore result in permanent loss of invaluable sources of scientific information [69]. Colwell-Chanthaphonh [70] counters this argument that there are more than 116,000 culturally unaffiliated skeletons and approximately one million associated funerary objects that “have sat forgotten—unvisited, untouched, unstudied—in the collection for decades”. Colwell-Chanthaphonh [70] further elaborates his argument that the museum or federal organizations have “ethical obligation to address the fate of these remains”. Therefore, it is only through the process of finding a cultural link to living Native American tribes, including consultation with relevant stakeholders, that those unidentified remains and related funerary association covered with dust on the museum shelves are revisited and their fate could be determined.

5. Positive impacts of NAGPRA

Since NAGPRA was passed in 1990, there have been two extreme views about the law: At one extreme, there are Native Americans who want universal repatriation of Native American human remains—even culturally unaffiliated remains. On the other extreme, there are biological anthropologists and related professionals who hold a negative view about NAGPRA, because they believe that the law was designed to always benefit Native Americans and would eventually make the field of biological anthropology and archaeology extinct by permanent loss of remains and

artifacts from the past.

However, the scholarly impact of NAGPRA is unclear. For example, Weiss [8] has argued that osteological studies involving Native American remains have decreased in *American Journal of Physical Anthropology* (AJPA) during the 15 years of the post-NAGPRA period compared to 15 years of the pre-NAGPRA period. In contrast, the survey of Colwell-Chanthaphonh [70] on the proportion of research on Native American remains in the AJPA and *American Antiquity* (AA) during 1985 ~ 1939 and 1990 ~ 1996 has revealed an opposite conclusion. In support of Colwell-Chanthaphonh’s survey results, Killion and Molloy [71] explains that osteological studies on Native American remains have always been a very small portion of the whole anthropological research publication, and NAGPRA has, in fact, no major effect on the number of published research on Native American remains. Further supporting this argument, Buikstra [52] discovered that there was no decrease in the studies of Native American remains because of the enactment of NAGPRA: The summary statistics on the number of NAGPRA reports and academic publications related to Native American human remains in the two journals between 1999 and 2003 showed stable proportions of studies involving Native American remains when compared to the pre-NAGPRA period [52].

NAGPRA has provided two major positive impacts to the field of anthropology. First, NAGPRA promoted more thorough documentation of skeletal collections and Native American funeral objects, and enabled anthropologists to create a more systematic database. The most widely used field manual, *Standards for Data Collection from Human Skeletal Remains*, edited by Buikstra and Ubelaker [72], is one of the biggest achievements that NAGPRA brought about for the rejuvenation of human skeletal biology [73]. The database, Osteoware [74], is designed to store and share these standardized data.

Second, the positive impacts of NAGPRA are not only on the academic disciplines, but also on general perceptions of Native American tribes on scientific studies using their ancestors’ remains. A large portion of Native Americans now believe that archaeology and bioarchaeology are beneficial to the preservation of Native American cultures [75], and some Indian tribes, such as the Hopi, Zuni and Maricopa, have been continuously interested in, and actively engaged with, the analysis of affiliated skeletal remains [75-77]. Moreover, a growing number of Native American

anthropologists demonstrate that Native Americans do not always prefer traditional beliefs over science [78].

Other Potential Sources of Conflicts to Consider

1. Different worldviews of death, ethical dilemmas, and human rights

Despite the positive impacts of NAGPRA in promoting collaborative work between Native American descendant groups and scientists, scientists have not been entirely free from conflicts that arise because of different value systems between two (sub)cultures. Traditionally, most ethical dilemmas are derived from different worldviews on death and respect for the dead, because there are a variety of different ways of showing respect to human remains between cultures, and even within the same cultural group [5,20,48]. Thus, what has been previously considered as respectful mortuary practices may change over time and space. This is true, for example, of Native American tribes in North America.

Native American tribes who approve the scientific study of human or cultural remains may request tobacco or other tokens be included with the human remains to satisfy the spirits. This is facilitated by consultation with the Native American representatives and mutual respect between the tribes and the scientists. Changes over time in burial practices among the Chumash in California ultimately permitted three decades of respectful collaboration with a biological anthropologist. The biological anthropologist, Phillip Walker [5], assisted the Chumash in repatriating the skeletons of their ancestors from a number of universities and museums and curated them in an underground ossuary at his institution, the University of California at Santa Barbara where scientific study continues. This is mutually agreeable given that the ossuary is on Chumash ancestral land and the remains are stored appropriately according to Chumash directions yet readily available for approved scientific study.

Other Native American tribes see an unresolvable conflict between their value system that emphasizes humanistic traditions and history, and the scientific study on their ancestors' remains. Some Native American groups reject the scientific view of their history. Biological and genetic

evidence indicates North American Native Americans migrated from North Asia between 20,000 to 14,000 years before present (B.P.) [79], yet many Native Americans state their ancestors were always in North America, born of the soil, wind and water. Thus, science can offer them nothing of value, only pain and repression.

Some Native American groups, such as Native Alaskans, Native Hawaiians, the Zuni and the Hopi, believe that their ancestors have a continuous lifecycle that interacts with the descendant community even after they are dead. Therefore, the acts of excavating the ancestral remains from the ground and treating them as material objects for laboratory analysis are considered harmful to the spirit of their ancestors [5,52,80]. Those Native American groups further believe that profane harm to the bodies and spirits of their ancestors will also negatively influence the well-being of the descendant communities due to the disturbed ancestral spirits. When confronting such conflicts, what would be a best way to proceed one's research while satisfying the descendant groups? Or should an anthropologist even force to continue his/her research despite such a clash between different worldviews on the dead?

2. Resolutions for the ethical issues and conflicts

Most anthropologists argue that the best way forward in bioarchaeology in the United States is to actively consult Native Americans concerning what questions they find important about the past and to involve them directly in archaeological projects. For instance, a productive collaboration between biological anthropologists and Native Americans is the case of Dr. Karl Reinhard and the Omaha Tribe in Nebraska. Although the tribe initially requested the repatriation of the remains, Reinhard and colleagues developed a research agenda designed to correct some misrepresentations of Omaha culture and history, and could benefit the lives of the Omaha people in the present and future [31].

Another important point is that despite the variety of different ways and traditions to show respect for the dead, and different concepts of death, biological anthropologists should not regard such different worldviews as right or wrong based on their value judgment. The dichotomized view of western science versus traditional beliefs should not be used to justify that one is superior to another. As Bernard [81] eloquently states, "Biological anthropologists

should not only embrace cultural relativism, the unassailable fact that people's ideas about what is good and beautiful are shaped by their culture", but also have responsibility not to interfere with basic human rights.

3. Relevance to biological anthropologists in Korea

The dichotomized view of western science versus a traditional belief system as we have seen in the case of Native Americans is a useful concept for Korea where, as Kang [82] states, traditional cultures with several thousand years of history coexists with western culture that entered about four centuries ago. Since then, Korean society has encouraged and educated the public to think and act based on western philosophies and rationalization. Nevertheless, many of the social systems in Korea are still based on traditional culture, characterized by hierarchical relationships [82].

One of the most deeply embedded traditional beliefs in Korean society is filial piety for ancestors and parents [83]. This is based on Confucianism, which had been the longest and most far-reaching national religion and philosophy during the Joseon Dynasty, spanning from the late 14th ~ late 19th centuries. Even in the 21st century, it is not uncommon to see remnants of many Confucian ideas still persisting in Korean society. Particularly, the concept of death in Confucianism is somewhat similar to that of the aforementioned Native Americans. In Confucianism, one's death is still considered a continuation of the lifecycle that the dead ancestors maintain their reciprocal relationship with their descendants. Therefore, the well-being of ancestral spirits guarantees the descendants' well-being in life. Any harm to the physical body of the dead parents/ancestors by animal activities or weather is considered as disrespectful because of their irresponsible care for their ancestors. Anticipating future ethical issues, this Confucian belief is one major potential source of conflicts that may arise between biological anthropologists and Korean people concerning permanent procurement of human remains for scientific research.

Nevertheless, not all ethical dilemmas in Korea will be based on a conflict between science and Confucian tradition. As in other cultures, there is internal heterogeneity in the worldview of death among Korean peoples. This may be caused due to a wide variety of religions practiced in Korea, including Protestantism, Catholicism, Buddhism,

and Shamanism with different concepts of death-related rituals. Aside from religion, it may be different individual views regarding discussion and treatment of the dead that can vary from a taboo topic to a well-researched scientific agenda. Moreover, for some people, intertwined with capitalism, ancient human remains may be seen as something with commercial values directly related to tourism and profits. These are only a short list of possible sources where ethical conflicts may occur. Despite the difficulties to anticipate, biological anthropologists should become familiar and up-to-date with any socio-political or economic situations/conflicts of the relevant region associated with the human remains in preparation of potential clashes of different moral values.

Conclusion

This paper examined ethical issues and dilemmas related to the scientific study of human remains in both forensic and bioarchaeological contexts. Codes of ethics are imperative to scientists working with both ancient and contemporary remains, though with varying emphases. Forensic anthropologists analyze contemporary known individuals (or individuals who can be personally identified). Here we recommend that language from international law, particularly the U.N. Declaration of Human Rights be used as a backdrop for more context-specific language when building a code of ethics.

Some of the most powerful and far-reaching efforts to mitigate long-term ethical issues related to the treatment, ownership and study of human remains extend beyond codes of ethics and become legislation. Although it may seem that ethical problems surrounding NAGPRA is only pertinent to the United States and not relevant to Korea, there are some important parallels concerning the spiritual concepts of death, ancestor care and the tension between traditional practices and contemporary scientific views. We anticipate tensions similar to those cases of the United States will appear in Korea as more excavations take place (either for primary scientific pursuit or as "salvage" work to prevent desecration of remains by contemporary construction activity) and anthropologists should be prepared. Moreover, the case of the Kennewick Man demonstrates that codes of ethics and federal laws have grey areas or gaps such that unpredicted ethical dilemmas still arise that

must be navigated. We have sought to introduce useful sources of information and guidelines to promote the importance of ethics training and developing codes of ethics in the field of biological anthropology in Korea. In the long run, learning ethics and establishing a code of ethics will further advance and strengthen the field of biological anthropology and related disciplines in Korea.

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