Preserving Native American Heritage, Indigenous Rights, and Dignity in Paleogenomic Research

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ANTH 2310 Autumn 2020

For hundreds of years, the relationship between archaeology and Indigenous peoples has been painful and its effects long-lasting. Early European settlers and archaeologists would rob their graves, steal their remains, study them, put them on display, and exploit them despite the trauma being caused. The Native American Graves Protection and Repatriation Act (NAGPRA) is a landmark piece of legislation that lays out guidelines for Native American grave extraction and repatriation, or the returning of remains and artifacts. Existing literature on the potential and the harm of these processes conclude that the morally admissible way of handling Native remains in archaeology is by following the lead of Native populations. Protecting the integrity of Indigenous research is deeply entangled with history and imperialism. Indigenous people have been subject to genocide, discrimination and patronization in their own land. Thus, making strides in the collection and protection of Indigenous DNA may be important for people to reconnect to that land, their ancestors, and each other, but it is incredibly dangerous. This essay investigates the methods, dangers, and effects of paleogenetic DNA research, the implementation of NAGPRA and its efficiency, and the importance of protecting tribal heritage.

Paleogenomic Research

First and foremost, a discussion about the ethics of Indigenous DNA collection requires the context of what DNA collection is, and why it is important. DNA is often sampled, under ethical conditions or otherwise, and its genome sequencing is studied. It is known that the collection of DNA contributes to genetics studies that are useful in studying rare diseases and informing on individual or population ancestry. It is also used when studying human remains in archaeology to create a broader picture of human history by connecting it to social evolution patterns. However, Krystal S. Tsosie warns in a TED Talk of genomics research "promising... interchangeability of ancestral and personal identity… [and] legitimizing and biologically reifying claims to Indigeneity that really shouldn't be made" (Tsosie, 2020). Because of the sensitivity of Native representation, this kind of research can be inconsiderate of present Indigenous contexts.

This field has had particular difficulty, however, in navigating a mutually beneficial relationship with Native American communities and their remains. Krystal Tsosie, Rene Begay et al. note in their piece titled "Generations of genomes: advances in paleogenomics technology and engagement for Indigenous people of the Americas" that:

> Scientists have analyzed genomes of current-day and ancient Indigenous peoples to connect them to a broader narrative of human dispersals out of Africa and into the Americas [4–7]. These studies have challenged Indigenous peoples' beliefs about their origins, for instance, by suggesting they are not originally from their ancestral lands. Further, past sampling portrayed Indigenous peoples as isolated groups, leading to problematic notions of racial purity (using local ancestry estimation methods) and conflations of biological classifications of race [8,9] with sociocultural and political designations of Indigeneity [10,11]. (Tsosie, Begay et al., 2020)

These implicit consequences of Indigenous DNA collection are often not valued before science. Because Native American occupation of North America dates back millennia, studying ancestral remains may provide deeper knowledge into ancient migration patterns and lifestyles. However, according to Joan L. McGregor in "Population Genomics and Research Ethics with Socially Identifiable Groups," Native American communities have values that they fear "will [not] be respected in the course of research. Further, they worry that the collected tissues and DNA

will be commercialized" (McGregor, 2007). Because of a lack of authority over DNA study and ancestral DNA collection held by Indigenous groups, publications or results of studies can be published without their consultation and uproot cultural systems of Native determination.

How can we strive for the most ethical standards of DNA research? An article titled "Chaco Canyon Dig Unearths Ethical Concerns" by Katrina Claw et al. delves into the ethics of a previous ancestral Chacoan DNA analysis. She writes that even though there was no evidence to connect the remains to specific modern tribes, "AMNH [American Museum of Natural History] and the authors had an ethical obligation to consult with local tribes… because the oral histories and traditional knowledge of many Southwestern tribes already exhibit strong ties to Chaco Canyon" (Claw et al., 2017). This claim supports Tsosie's notion of cultural claims versus scientific ones; while cultural affiliation—a provision of NAGPRA—can be somewhat "determined" scientifically, so much more cultural context and information can be gained through the partnership of local Native communities. Jennifer Wagner et al. go further into how research of this nature can be done in the most humane and respectful way in the article "Fostering Responsible Research on Ancient DNA" by five rules:

> (1) formally consult with communities; (2) address cultural and ethical considerations; (3) engage communities and support capacity building; (4) develop plans to report results and manage data; and (5) develop plans for long-term responsibility and stewardship. (Wagner et al., 2020)

These rules all aim to empower Indigenous people in the study of their heritage. It holds genetic research to a standard that could help minimize the margin for foul play, and may also work to mitigate risk to "third party" victims, like families or communities as a whole (McGregor, 2007).

NAGPRA

NAGPRA, created in 1990, is known as a monumental piece of Native rights legislation. The National Park Service defines NAGPRA as the recognition of the value of ancestral remains and the ownership of those remains held by tribes, as well as premises for their repatriation (National Park Service, 2019). NAGPRA is historic in that it sets forth some specific, albeit imperfect, provisions with respect to the autonomy of Native communities. It has been challenged on numerous occasions, and it could be said that it does not do enough to protect Indigenous communities or hold the attention of major museums. Stephen E. Nash and Chip Colwell note in their article "NAGPRA at 30: The Effects of Repatriation" that "The problems and limits of NAGPRA are made clear in studies that speak to the tangle of museum records (Bruchac 2010) and the ways in which repatriations are crosscut by notions of blood, kinship, and identity (Kelsey & Carpenter 2011, Kirsch 2011)" (Nash & Colwell, 2020, as cited in Bruchac 2010, Kelsey & Carpenter 2011, & Kirsch 2011). For example, there are still many museums and other federal agencies that are not always fully compliant with NAGPRA (Nash & Colwell, 2020). This shows that while thousands of remains and artifacts have been successfully repatriated under the law, the breadth of its efficiency still has limits.

Archaeology began as a flawed field, and those harmful sentiments have not been eradicated completely. There was little regard to ownership—early European archaeologists were literally robbing graves until the early 1920's, as extraction methods became more advanced and strategic. It was common practice for museums to be secretive about the artifacts they held, as well as how they were sourced. Colorado's own museums have come under fire for unethical practices in the past, including the Denver Art Museum (DAM) and the Denver

Museum of Nature and Science (DMNS). Colorado is home to multiple native lands and tribes. In the case of the Zuni War Gods, detailed in Chip Colwell's piece titled "Curating Secrets: Repatriation, Knowledge Flows, and Museum Power Structures," ceremonious objects held sacred by the Zuni were being "found" or "legitimately" bought by individual collectors and giving them to museums. However, as Colwell goes on to write, "[they] had to insist that they could only be sold 'at the purchaser's risk and with the stipulation that they are not to be publicly displayed for ten years.' Such an approach was common, she noted, explaining that museums...were keeping the War Gods out of public view" (Colwell, 2015). This air of secrecy is a product of an idea NAGPRA and Native communities have been trying to address for centuries: ownership cannot be *taken*. Archaeologists and museums often viewed these objects as public goods—things to be studied for the greater purpose of science. What they deny is the rich, deeply profound history that ceremonious artifacts hold for Native tribes. There is a detachment between culture and science that is the field of archaeology's job to connect. Colwell notes that "the curators [assume] that 'the time will come when ceremonialism will break down to the point where such figures can be safely displayed'" (quoted in Colwell, 2015). Thus, there is also a level of understanding and common ground that is missing between museums and the peoples they display.

Chip Colwell writes another piece investigating Indigenous-researcher relationships and the effects of repatriation titled "Can Repatriation Heal the Wounds of History?" In it, he discusses the importance of "healing" at the forefront of the repatriation efforts. NAGPRA, while it does not lay out as detailed guides for ethical research, it does protect Native and Indigenous graves and artifacts in regards to ownership. Repatriation is the practice of returning artifacts to their tribes through a process called cultural affiliation alongside other scientific denotations. It helps determine the origins of remains in order to return them to that tribe or a tribe most closely affiliated. Native communities have had to fight hard to petition for repatriation, and do not always win. There is a much deeper meaning and power behind repatriation, as Colwell suggests: "the early adoption of healing as an implicit goal… situates repatriation closer to institutions such as truth and reconciliation commissions than with the simple return of stolen property" (Colwell, 2019). Thus, as history cannot be undone, there can be careful steps taken to ensure that Native communities are valued and empowered as the stakeholders of future research, rather than being an afterthought. Rick Hill, a Tuscarora Nation scholar says that "the museums' possession of our dead and our religious objects has become the main wound that exists between our peoples. The time for healing has come…" (quoted in Colwell, 2019). Hill identifying museums specifically as "wounds" provide a new perspective on the evolution of Native relations with archaeology. On an individual scale, people were primarily stealing objects from graves and ritual sites at first; now, that practice has been translated to a large, institutional scale with a federal framework tying into the issue. However, the significance and the complexities of this relationship cannot be summarized into a piece of legislation. The way Native populations have been treated in archaeology must be understood in the context of the beginnings of an entire country, rather than a side note in American history.

Preserving Global Heritage

Global heritage is what defines us, others, and the way we interact. Nearly every global institution or norm is shaped by history and the different paths humans have taken to get to where we are today. And as the world continues to globalize, much of this culture has given way

to technology and the new human experience. Recognizing, appreciating, and maintaining tribal and cultural heritage worldwide will be essential in grounding the next generations and connecting them to the past. The Ifugao people are an Indigenous community in the Philippines, and hand-weaving textiles is a tradition that men, women and children take part in. In an article titled "Saving Ifugao Weaving in the Philippines," Stephen Acabado and Marlon Martin explore this cultural practice and the significance of keeping it alive in Ifugao heritage. It was discovered through a combination of archaeology and the Ifugao oral histories that the rice terraces in the region, believed to be nearly 2,000 years old, were actually relatively recent (Acabado, Martin, 2020). This discovery proves how powerful scientific discovery involving the communities of study can be. The Indigenous Peoples Education (IPED) Center in this community serves as a way to display, learn, and appreciate important Ifugao creations (Acabado, Martin, 2020); and creating spaces like this can be transformative for Indigenous peoples to stay connected in an increasingly technological, individualized world.

Kristina Douglass' article "*Amy ty lilin-draza'ay*: Building Archaeological Practice on Principles of Community" tackles the effects of COVID-19 on the field of archaeology, and more broadly how archaeology can redesign itself as a community-inspired field. Douglass writes that "For archaeologists, the time is ripe to evaluate how a patron-client system weakens our ability to engage in rigorous archaeological science, which, I argue, must be equitable and inclusive" (Douglass, 2020). The framing of archaeology as pieces to be bought and sold and put on display is dangerously close to being opposite its purpose: to gain invaluable knowledge of the past. For most cultures, deep ancestral ties create their way of life, and have differing views on how to honor these ties. Putting artifacts in museums may keep them "physically safe" and serve as a way to teach others about different cultures. However, this cannot be confused with preserving global heritage, as that means something completely different across cultures. The purpose of a community-based approach to archaeology is to "improve the quality and equity of the science we produce and ensure relevant outcomes for living communities and future generations" (Douglass, 2020), and to do this, directly involving members of a community, seeking guidance from local leaders, and handling research findings with care and respect towards the people it will impact.

Paleogenomics and NAGPRA—two of the most critical advancements in Native American anthropological study—have changed the way many scientists must think of ownership, control and rights to science. It has exposed a facet of archaeology that desperately needs to be reconstructed, and that is the value of science over life. The only way that future study can be legitimate is if we can get a grip on how to create a more sensitive and inclusive method of study. Community engagement and developing a connection between researchers and Indigenous groups globally is the first step towards healing the damage of colonialism in all of its forms.

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