

# GENETICS, CULTURE AND IDENTITY IN INDIAN COUNTRY

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## **Seeking Culture and Identity in DNA**

It seems it is still a widely unquestioned belief that culture and the identity to be derived from culture (similar to beliefs about race) have biological bases. This can be seen as advances in genetic research are used or proposed for use in detecting evidence of such socialization whether in living people or in human remains. There has been at least one proposal that DNA testing be used to determine the “identity” of Native Americans (General Assembly of the State of Vermont) and DNA analysis has already been undertaken in an unsuccessful effort to prove “cultural affiliation” of ancient human remains (Montana; Stockes). This is a trend that harkens back to the nineteenth and early twentieth centuries’ eugenics movement whereby some scientists and other eugenicists attributed social degeneration such as crime and slums primarily to biological causes. A contemporary and perhaps more sophisticated form of eugenics similarly seeks to use DNA to support or deny a person’s or a group’s claims to cultural and political rights.

While there are medical and other benefits to be derived from some types of genetic research, this paper proposes that attempting to use DNA analysis to determine the presence of culture and cultural identity is to entertain (whether knowingly or not) racist ideology. I will briefly summarize the two cases mentioned that illuminate the political and cultural implications for tribes that accompany what may be a growing movement to use DNA analysis to determine who is and is not genetically “Indian.” I will briefly discuss how the use of DNA analysis to determine who does and does not have legitimate political and cultural authority undermines the very concept of what it is to be a tribal nation. Because tribal governments today are overwhelmingly concerned with tribal nation-building, such a trend in the use of genetic research should be alarming.

## **DNA Analysis and the Cultural Affiliation of the Kennewick Man**

9,000 year-old remains, often referred to as the Kennewick Man, were found in 1996 in the shallows of the Columbia River in Washington State within the historical landbase of tribes including the Confederated Tribes of the Umatilla Indian Reservation, the Colville Confederated Tribes, the Wanapum Band, the Yakama Nation and the Nez Perce Tribe. Since the unearthing of the Kennewick Man, these tribes have opposed the study of the Kennewick Man and have sought jurisdiction over his bones for immediate reburial, as is consistent with their spiritual beliefs.

In 1996, eight prominent anthropologists filed a lawsuit in federal court for the right to study the bones of the Kennewick Man. While the press widely misinterpreted scientists' comments and reported that the Kennewick Man was of European descent, scientists' observations are that the Kennewick Man has features dissimilar to those of American Indians and even described his features as *European-like*, but speculate rather that he might be linked to populations from Polynesia and southern Asia (Lee, 1999). Scientists speculate that research on his bones could help revise previous theories about where some of the ancestors of U.S. tribal people originated.

Consistent with the Native American Graves Protection and Repatriation Act (NAGPRA), the U.S. Department of Interior has conducted studies to determine the cultural affiliation of the bones, in order to determine if the tribes have authority over the disposition of the remains. While Interior examined geographical, kinship, biological, archaeological, anthropological, linguistic, oral tradition and historical information to make its determination in September that the bones be handed over to the tribes, DNA analysis was also attempted for the purposes of determining cultural affiliation. While analysis was unsuccessful in that scientists were not able to extract DNA from the bones due to their age and to mineralization, conducting the tests resulted in the destruction of not inconsequential amounts of bone and this offended the tribes. DNA testing was ordered because extensive physical examination by a team of scientists working for Interior failed to come up with sufficient evidence to determine cultural affiliation with tribes living today as is required by NAGPRA. Secretary of the Interior Bruce Babbitt explained that while it would be much easier to determine affiliation with today's tribes of bones that are 3,000 years old, for example, "when dealing with human remains of [the antiquity of the Kennewick Man], concrete evidence is often scanty, and the analysis of the data can yield ambiguous, inconclusive or even contradictory results." (Department of Interior, September 25, 2000). Therefore, Interior viewed DNA analysis as a possible alternative to prove cultural affiliation.

### **DNA Testing to Determine "Native American Identity"**

A Representative of the General Assembly of the State of Vermont has sponsored a bill to "establish standards and procedures for DNA-HLA testing to determine the identity of an individual as a Native American, at the request and expense of the individual." The legislation was initiated with magnanimous intent by the Western Mohegan Tribe, which is situated along the New York and Vermont borders. Having already contracted for analysis of their own DNA, the Mohegans initiated the legislation, in part, to "help other Indian people" who, like the Mohegans, may lack adequate genealogical documentation and who cannot therefore prove their ancestry to the satisfaction of others (TallBear [2]). Due to the fact that they did not sign a treaty with the U.S. government and due to the lack of genealogical documentation, this group has encountered trouble trying to document lineal descendancy to Mohegan ancestors in order to gain state and federal recognition. They have also been accused by other tribes in the state and by state officials of falsifying genealogical records. In answer to the accusations, Mohegan members underwent DNA-HLA testing to prove their genetic link to related tribes, at least one of which is a federally recognized tribe in Wisconsin.

The Representative from Vermont put forth the legislation as a vaguely worded document in anticipation of legislature committee politics. The ambiguity of the legislation resulted in misinterpretations that the legislation was meant to *require* DNA analysis to prove an individual's tribal affiliation. Therefore, there were accusations from other tribes in the state that the Representative was enabling "genocide." However, the Representative specifically intended that the legislation would secure for the Vermont Department of Health, rule-making authority for developing standards for testing in the case that individuals choose to do such testing (TallBear

[1]). The Representative's reasons for backing the legislation also included the relatively benign intent of antagonizing Vermont's governor who is against tribal recognition in any form in the State of Vermont and who is a political rival. However, the Representative may not have considered the possibility that his legislation, if enacted, might increase public acceptance of such measures and would therefore increase the likelihood of subsequent laws requiring such testing, thereby bringing to fruition the discrimination feared by his detractors.

Related to this, there are indications in the Representative's commentary, despite his generous intent, that he does not distinguish between individuals being biologically descended from tribal people and the importance of cultural and political continuity and self-determination that is at the heart of what it is to be a tribe or a tribal nation:

[DNA-HLA] Markers would be the last word on saying you're an Indian. You wouldn't be perpetrating fraud.

The Western Mohegan, while they do not have a reservation, do claim a historical landbase and physical and cultural continuity within the area of that landbase. However, the proposed legislation is concerned with proving biological authenticity in the DNA of Mohegan and other individuals from affected tribes. For what other reason would such proof be sought than to imply political and cultural authority?

### **The Racial Politics of DNA Testing**

In the Kennewick Man case, the U.S. Department of Interior undertook "scientific inquiry" that implied that culture could be genetically detected. In the Vermont case, proposed legislation implied that Native American identity could be genetically proven. However, a total culture, specific cultural practices, and the identity implied in cultural affiliation are not passed from parent to child, from generation to generation through DNA. Rather, immersion in a culture helps construct an individual's identity and cultural practices must be actually *practiced* in order for cultures to adapt and thrive through the years.

In the case of the Kennewick Man, given the absence of anthropological and archaeological evidence of cultural affiliation, it was a wholly unscientific effort for Interior and the involved scientists to seek and assume that "cultural affiliation" could be concluded in the DNA of the remains. Even if DNA analysis had been viable and we could say with some confidence that the Kennewick Man shared genetic markers with a specific group or groups of people, the results would tell us nothing about the absence or presence of any cultural relation to present day U.S. tribes or to any other people(s).

In the Vermont case, I don't believe the legislation that sought Native American *identity* in DNA was simply a problem of semantics. The Chief of the Western Mohegans and the Vermont state representative who sponsored the legislation both referred in interviews to "identity" as being a matter of having either the appropriate paperwork or having done conclusive DNA testing. While the bill was killed in the last legislative session and while it was sincerely intended to benefit tribes, there are serious implications to be considered if one understands that the proposed legislation may be a precedent or an indication of overtly racist laws and policies to come—laws and policies based in assumptions that a person's culture and identity are chiefly biologically determined rather than being socially constructed.

Scientists, policy-makers, and others who advocate that genetic testing be used to determine culture or identity, imply a eugenics-like belief that genetic markers are synonymous with culture and somehow guarantee cultural continuity. It does not help advance the efforts our society has made to guard against racial discrimination if DNA analysis had been viable and the results were used to assert cultural and legal authority over the remains of the Kennewick Man or on behalf of living people. Whether such authority would be asserted on behalf of scientists seeking freedom of scientific inquiry, or whether on behalf of tribes seeking to safeguard religious freedom, embracing DNA analysis as proving or disproving tribal cultural affiliation or “Native American identity” has its roots (whether consciously or not) in racial ideology. Such ideology assumes that cultural characteristics—like racial characteristics—can be detected biologically and are, therefore, determined biologically. However, genetic markers do not indicate cultural affiliation or identity or the absence of cultural affiliation or cultural continuity as might the presence of specific cultural practices, institutions, and governance or, in the case of remains, anthropological and archeological evidence that reveals specific cultural practice and artifacts.

### **The Common Politics of DNA Analysis and Blood Quantum**

While it is beyond the scope of this paper to undertake an in-depth analysis of the use of blood quantum first by the Bureau of Indian Affairs and now by tribal governments to determine tribal citizenship, this common practice must be mentioned. For, if the use of DNA analysis to determine cultural affiliation is troubling because of racist implications, the use by tribes of blood quantum to determine eligibility for citizenship cannot be ignored. It seems clear that DNA analysis for such a purpose is not a new political concept, but simply reinforces a historical practice of the U.S. government—a practice that many tribal governments have yet to abolish even though tribes possess the authority to do so. Most federally-recognized tribes still retain a requirement that a certain level of blood quantum (ranging from ½ Indian blood to 1/32 Indian blood) must be demonstrated by potential members. This common practice reflects the widespread belief that the key to being an authentic member of the tribal nation or tribal community lies in the amount of Indian blood one possesses rather than in the non-racial requirements that nation-states and ethnic communities commonly uphold to determine membership. Such requirements did exist before European and American colonization; they include being born within the tribal community, long-term residence within the tribal nation or community, the assumption by a person of cultural norms such as language, religion and other practices, and/or being the spouse or the offspring (whether natural or adopted) of a tribal member.

### **Anti-Science Sentiment in Indian Country**

As background for understanding the political and cultural implications of genetic research and technologies for tribes and for understanding why tribal discussion of genetic research is difficult, one must understand the political climate in which science and technology are viewed in many tribal circles. There is much reluctance to consider, research, and openly discuss emerging technologies and scientific developments. I suspect this is due, in part, to feelings of intimidation and perceptions that science and technology are much too difficult to understand. However, there is also an increasingly widespread belief among Indian people that to entertain ideas about the benefits of science and technology is to be anti-traditional. For example, Russell Means, one of the founders of the American Indian Movement eschews any value in Western science:

We still have respect for the earth. We have traditional knowledge and values that are superior to anything in Western, “scientific,” industrialized culture.

This belief springs from an influential ideology within and without Indian Country that categorizes Indian people as “traditionalist” or as “assimilationist;” at stake is the moral high ground (TallBear [3]); Tano, et. al). This ideology inhibits productive discussion about many issues, including genetic research that is a growing in influence in everyone’s life and must therefore be considered in tribal policy-making. Genetic technology, like technology generally, are portrayed by self-described traditionalists as anti-traditional, anti-spiritual, and as the earth destroying work of the White man. Rather than evaluating which technologies or types of scientific inquiry might be consistent with tribal cultural and spiritual tenets and can be useful for accomplishing the educational, health, and economic, and other development goals of tribal communities, anti-technology and anti-scientific sentiment are significant political platforms for many Indian activists and politicians today (TallBear, 2000 [3]).

### **Tribal Control of Genetic Material**

Based on perceptions that tribes are disempowered in the scientific arena—perceptions that are compounded by historical remembrances of colonial exploitation by policy-makers, educators, and scientists—tribes express much suspicion that the scientific establishment cannot be trusted with the genetic resources of Indian people. Given this history, promises by researchers and even contracts and professional codes of ethics do little to alleviate suspicion. While many Indian people claim no ownership of their own genetic material, they are still wary of losing control of that material to potentially exploitative science. This profound pessimism is understandable. But it also inhibits tribal decision-makers from recognizing the power that they do have to aggressively advocate policies and develop alliances and regulatory infrastructures necessary to ensure tribal control of genetic material. Through such policies and alliances, tribes can influence the direction of genetic research so that it is more in line with tribal cultural tenets and so that it benefits Indian people.

While I believe that the Vermont legislation is misguided in its search for identity in DNA, it does reflect a positive example of how a tribe might seize control of genetic research involving tribal members. The Western Mohegans, unlike many Indian people that have expressed opinions about genetic research, explicitly support tribal peoples participating in genetic research *if* Indian people will benefit and *if* tribal individuals or tribal groups retain ownership of genetic material used for analysis. This tribe paid for its DNA testing and retains ownership of the genetic material used in that analysis. Ron Roberts, Chief of the tribe, has also voiced his support of genetic research involving Indian people if Indian people retain control of their genetic material and if such research seeks to cure or alleviate the symptoms of diseases such as diabetes that plague Native Americans.

### **DNA Analysis and the Risks to Tribal Cultural Authority**

In addition to perceptions that Western science is exploitative, those Indian people who oppose genetic research and DNA testing have stated various cultural reasons for their opposition. One well-publicized and oft-stated objection is that human remains are sacred and should not be disturbed. If remains are unearthed, they should be immediately reburied without being desecrated by study. This is a strongly held belief among many tribes today and is shared by peoples all over the world. (UNESCO).

Some tribes have cultural inhibitions on giving blood and, therefore, on giving genetic material (Dukepoo, 1998; Liloqula). Objections have also been voiced to the quantification of human life,

including attempted patents of human cell lines and the production of commercial products (Dukepoo, 1998; Dukepoo, undated). There are Indian people who have objected to the alteration of human genetic material and who perceive such an act as the result of incredible arrogance and a desire on the part of scientists to play God.

Indian people have also expressed suspicion that DNA analysis is a tool that scientists will use to support theories about the origins of tribal people that contradict tribal oral histories and origin stories and this perceived by some as presenting a risk to the integrity of tribal religions. Perhaps more importantly, the alternative origin stories of scientists are seen as intending to weaken tribal land and other legal claims that are supported in U.S. federal and tribal law (Harry and Dukepoo). As genetic evidence has already been used to resolve land conflicts in Asian and Eastern European countries, this is not an unfounded fear.

### **Conclusion: Balancing Tribal Cultural, Political and Scientific Self-Determination**

Crucial to balancing tribal cultural integrity with scientific self-determination, is figuring out how tribal governments and tribal individuals collectively negotiate control of genetic resources. The Western Mohegan case is one example of a tribe believing that it is possible to participate in genetic testing and/or research for the benefit of Indian people while retaining such control. While there are complex enforcement issues to be dealt with and potential conflicts between collective and individual rights, tribal governments, research and advocacy organizations, and concerned individuals must rise to the challenge.

Tribal activists, scientists, scholars, and political leaders should actively engage in regional, national, and international conferences, educational forums and policy discussions regarding the direction and regulation of genetic research. Such participation will inform tribal policy and help build tribal capacity to take a politically effective stand against potentially exploitative and discriminatory uses of science. Recent developments in genetic research provide an important opportunity for tribes to debate the hegemony of Western perspectives on science and technology in an increasingly global, yet economically and educationally disparate world. Such debate by tribes will be a welcome alternative to assertions that all within “Western” science is antithetical to tribal world-views. Tribal participation in this debate also provides an important opportunity for tribal people to take a global leadership role in tackling questions that do not only concern our own peoples, but that may also concern peoples around the world who share various similar ethical and cultural mores. For example, what are the rights of scientists versus the right of peoples to maintain the integrity of their spiritualities? How do tribes interpret and how have we practiced science traditionally? Is there guidance to be had for contemporary scientific inquiry in traditional tribal scientific practice and tribal analytical frameworks? How are tribes accepting, adapting, and rejecting distinct technologies based on our specific cultural practices and religious philosophies and what guidance is there for our policy-making related to genetics? While it is beyond the scope of this paper to undertake detailed discussion, there are obviously considerable benefits to be had for tribal intellectual inquiry, community development, and institution-building through tribal participation in the genetics debate.

Finally, to cling to a genetically deterministic understanding of who is Indian is to undermine the concepts and the development of tribal nationhood and tribal political, cultural and scientific self-determination. As tribes seek to build the governing infrastructures and the educational, cultural, and economic institutions that will increase tribal capacity to govern and to be self-determining, we Indian people should reassess our own prejudices and racial ideology that we have adopted as Americans. Such a reassessment will also aid tribes in positively influencing the direction of

genetic research and in helping diminish its negative impacts. It is one matter for tribes, scientists, and government to look for cultural affiliation in cultural artifacts or for cultural identity in cultural practice and in voiced assertions of that identity. However, there are no concrete answers in DNA about cultural affiliation, cultural identity, or about the morality or justice of any one decision regarding the fate of ancient remains and claims to cultural and political autonomy and rights. Even with DNA analysis, Indian people, scientists, and lawmakers are still left looking for answers that lie in the “imprecise” sciences of ethics, religion, and legal jurisdiction.

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