

Faya-Largeau, Chad November, 2005. Spencer Wells and Pierre Zalloua walk through a market with Haoua, the mayor of Faya-Largeau, while Pierre explains how genetics can help reveal events in human history. Photo by David Evans, courtesy of the Genographic Project.

https://doi.org/10.1017/S0940739109090109 Published online by Cambridge University Press

International Journal of Cultural Property (2009) 16:183–187. Printed in the USA.
Copyright © 2009 International Cultural Property Society
doi:10.1017/S0940739109090109

COMMENTARIES

Editors' note: In spring 2007, the transcript of the forum discussion was sent to all of the panelists for their review and approval. That summer we invited a number of people—several of them individuals who had been invited to attend the Chacmool Conference but were unable to do so—to contribute essays to be published as commentaries on the forum proceedings or the topic of the forum itself. We made a concerted effort to seek people from a wide range of backgrounds and perspectives; however, not everyone responded to the invitation. It took another full year, until late summer 2008, to gather and edit the commentaries, with several glitches along the way. But, as a result, this special section includes seven stimulating essays from scholars who are passionate about the topic and the issues it raises.

Response to Decoding Implications of the Genographic Project

Spencer Wells*

Theodore Schurr**

In late 2006, Julie Hollowell and George Nicholas organized a panel discussion on the Genographic Project at the Chacmool Archaeology Conference on "Decolonizing Archaeology." A co-author of this article, Theodore Schurr, was contacted but could not attend because of a scheduling conflict. Nevertheless, we are pleased to have the opportunity to comment specifically on the transcript from that discussion.

The Genographic Project is a major international effort to obtain and analyze population genetic data from thousands of individuals originating from different parts of the world. We are working with indigenous and traditional human populations that retain the clearest context for the historical events that have contributed to the current genetic patterns—who ideally have lived in the place where they live now, with minimal admixture from surrounding populations. Our goal

*National Geographic Society; Genographic Project. Email: lmcneil@ngs.org

**Genographic Project; Department of Anthropology, University of Pennsylvania. Email: tgschurr@sas.upenn.edu

https://doi.org/10.1017/S0940739109090109 Published online by Cambridge University Press

is to elucidate the relationship among genetic, linguistic, cultural, and historical data from these areas.

To accomplish this goal, we are surveying segments of DNA for sequence variants (i.e., genetic markers), which are anthropologically interesting because many of them cluster together in specific lineages within human populations. Because of the specific inheritance mechanisms of the mtDNA (maternal) and Y chromosome (paternal), we can trace these mutations through human families from the present to the distant past with a relatively high degree of accuracy. We can also reconstruct patterns of human movement through geographic areas by tracking the spread of these lineages in different human groups.

In attempting to understand how humanity populated the world, the Genographic Project will characterize genetic variation in different human groups. However, it is not designed to assign anyone to a racial or ethnic category, or to tell anyone who he or she is. As clearly explained on our web site (www.nationalgeographic.com/genographic) and through our public outreach,[1] we study a small fraction of the genome—less than 2%—which is useful for tracing ancient migratory paths. We do this with a clear understanding that DNA is *not* the sole determinant of identity and explain this fact to *all* of our participants.

It has also been suggested that genetic research such as ours is rather speculative, which it is not. Like all science, we weigh the evidence for and against a particular hypothesis and make a judgment as to its validity using objective statistical methods. This process does not mean that the results are set in stone—as with all science, new data may force a reinterpretation of one's initial conclusions. This, after all, is why the Genographic Project was organized—to generate more data for the sake of improving our understanding of human history. The methods that we use, including control of the samples and modes of participation, are guided by local preference, regionally approved review boards, and an ethical framework, and have been vetted by the scientific community. Furthermore, our results, like those in other fields of research, are only published after undergoing thorough peer review.

Another important issue raised by certain members of the Chacmool panel was the possibility that genetic results may contradict a person's traditional beliefs about ancestry and origins. We do not and have *never* disputed that a risk of deviation or contradiction may exist for certain participants. It is crucial to be open about this possibility, and we explain it in our outreach and relationship building prior to any sampling. We again mention this risk during the explanation of the project in the field and include a statement to this effect in our informed consent form, which is tailored according to local and regional input. This is the very nature of informed consent—to fully inform a project participant of any potential or perceived risk to ensure that the decision to participate is fully voluntary.

In this respect, although genetic data do not reveal a person's entire history, they do reveal a part of it. If members of a particular group believe that they have always lived in the place where they live today, then a story that tells of an ancient migration from Africa may contradict this viewpoint. We reiterate to potential participants

https://doi.org/10.1017/S0940739109090109 Published online by Cambridge University Press

that the project is entirely voluntary. If such information is unacceptable to them, then they have the option not to take part in the study.

However, the many Genographic participants, including more than 30,000 members of indigenous and traditional groups from around the world, *do* want to understand more about this aspect of their history. Their participation reflects the fact that all Indigenous peoples do not hold an identical view of genetic research and demonstrates both the desire and the ability of these individuals to construct a more nuanced understanding of their history, one that takes into account both traditional beliefs and scientific evidence.

In fact, this project has important implications for anthropological and archaeological research. It is helping to advance the field of anthropological genetics by adding new, high-resolution data that identify new lineages and their subbranches from different parts of the world, which, in turn, illuminate aspects of human movement and contact over the past 150,000 years. By understanding the distribution of genetic lineages across geographic areas, their ages in those locations, and the mutational processes that generated the different branches of the human genetic tree, we can more clearly understand the relationship between genetic data and archaeological evidence for human inhabitation and movement (e.g., whether certain genetic lineages or markers correspond to the emergence of an archaeological culture).

The project also has relevance for current work in the Americas regarding the origins of the First Americans, from both indigenous and scientific perspectives. The project can help address questions concerning the timing and process of the initial settlement of the New World, the history of specific regions of North America (e.g., the Northwest Coast), the expansion of language families (e.g., Algonquian), and establishment of trade networks (e.g., between the American Southwest and Mexico). Data generated by the project may further be useful in establishing the relationship between past (prehistoric and protohistoric) and present indigenous populations in the Americas.

Along these same lines, it should be stressed that the DNA evidence obtained through this study relies on context for its proper interpretation. That is, we must consult the geological, climatological, ethnographic, linguistic, archaeological, and historical evidence to gain the most complete understanding of our genetic results and what they indicate about human history and migration. This process, in turn, necessitates that we discuss the results with project participants to understand their perspectives on them, as well as other researchers who have expertise in the previously mentioned areas, to obtain the most accurate picture of human movements and interactions. As such, the project is inherently collaborative.

A related assertion is that genetic results that contradict traditional beliefs could be used to undermine land rights claims. If true, this would, indeed, be a concern. We are well aware of this issue and understand its sensitivity to Native American communities across North America. Indigenous and traditional peoples in places such as the United States and Canada have a long history of poor and shameful

https://doi.org/10.1017/S0940739109090109 Published online by Cambridge University Press

treatment at the hands of government entities, and land that belonged to their ancestors has been taken in the past. However, DNA was not responsible for these injustices; social policies based on racist ideology were. The fault lies not in our genes, but in our society.

In this regard, DNA alone cannot aid or undermine advances that have been made by indigenous groups over the past century. No Native American tribes, for example, define membership solely on the basis of an individual's mitochondrial DNA or Y-chromosome haplogroup status. To do so would be to ignore the other 99% of the genome, which also provides information about individual and human history, as well as written records and oral traditions, which contain the same kinds of details. Such DNA markers tell you about some of your history, but they don't completely define who you are. Moreover, to the extent that DNA says anything about land rights, all genetic evidence supports the view that the ancestors of Native Americans were the first people to enter the New World.

On a somewhat different note, the Genographic Project has been compared to the ill-fated Human Genome Diversity Project (HGDP). However, the two projects are quite different from each other. The Genographic Project is anthropological, nonmedical, nonprofit, and nongovernmental in nature. It does not involve the patenting of genetic data or the creation of cell lines for other research projects. In fact, this project is both a scientific and educational outreach effort that has learned from many of the mistakes made by HGDP organizers and other prior research projects, and we continue to work toward undertaking the project with the highest ethical and legal standards.

It is also important here to clarify the intent and nature of the Genographic Project Legacy Fund (https://www3.nationalgeographic.com/genographic/legacy_fund). The Legacy Fund is a grant-giving entity that supports community-led language revitalization and cultural heritage projects. Grants are available to *all* indigenous groups, regardless of whether they have participated in the project or not. To date, some 30 awards have been made to indigenous and traditional groups from around the world, including the Americas, and we anticipate that this number will continue to grow over the course of the project.

In summary, the Genographic Project is an iterative initiative, and we are open to improving our work through best practices. We are genuinely amenable to addressing valid concerns and incorporating ideas for improving the execution of the project and, indeed, have demonstrated this commitment during our research in Alaska.

Furthermore, we have reached out to opponents of the project to discuss their concerns. In June 2005, we met with the Indigenous Peoples Council on Biocolonialism (IPCB) at the National Geographic's main office in Washington, DC, and later through Cultural Survival, during the May 2006 meeting of the United Nations Permanent Forum on Indigenous Issues (UNPFII), where our team listened to concerns but was not given the opportunity to speak substantively. In an effort to address many of the concerns raised at the session, we subsequently sent answers to

https://doi.org/10.1017/S0940739109090109 Published online by Cambridge University Press

approximately 50 questions presented at that meeting to the board members of Cultural Survival. Since this time, neither the UN nor its related offices, nor the World Health Organization (WHO), with whom we sought to explain our work, have raised any questions about our goals and methods.

Ultimately, differences of opinion about the Genographic Project may be related to one's view of genetic research. That is, they may concern not the details of *how* we are conducting the project, but rather in *whether* we should be conducting it at all. It is a conflict between certainty and probability, tradition and investigation, belief and knowledge. While science can't define who you are, it can help you to understand more about yourself, including your ancestry. We understand why some people may not want this information, but we also hope that they understand why many people do.

ENDNOTE

1. Public outreach in North America includes the mailing of project materials (maps, pamphlets, consent form, explanatory letter, etc.) to native communities, email and telephone conversations with tribal leaders and administrators, personal visits to Native American (U.S.) and First Nations (Canada) communities, presentations to tribal councils (U.S. and Canada), and interviews for native radio and television programs and native newspapers.

https://doi.org/10.1017/S0940739109090109 Published online by Cambridge University Press