

Does a Pie Chart Change Who You Are?

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23andMe's senior director of research, Joanna Mountain, says she's long wondered how recreational DNA testing affects our thinking about genetic differences. This is more than a mere academic concern. More than 30 million people have spit into vials or swabbed their cheeks in an ongoing search for family, history, and identity that has transformed America into a nation of seekers in recent years, and 23andMe's database contains about a third of them. We test to find genetic relatives and to get those little ethnicity pie charts that promise to tell us how Irish, Korean, or Nigerian we are. But, as I reported on the industry for my book, [*The Lost Family: How DNA Testing Is Upending Who We Are*](#), I found myself wondering whether these pie charts are bringing us together or driving us apart. This is a question with special resonance at this moment, as we wrestle with how race leads to disparate experiences in matters of policing, pandemic-related health outcomes, and countless aspects of daily life in America.

When 23andMe was founded in 2006, its primary goals were to offer consumers access to their own genetic information so they could better manage their health, and to create a vast database of genomic information for research. It didn't set out to help people explore their ethnic and racial identities, but over time it became clear to Mountain that this was part of the work it was doing. In 2008, the company debuted something called Ancestry Painting, which attempted to show customers' ancestral mixes by dividing their chromosomes into crude geographic categories—Africa, Asia, and Europe—based on the technology available at the time. “It was very disturbing for me because it aligned closely with the big three racial categories,” says Mountain, who holds a Ph.D. in genetics and was formerly a professor at Stanford. She worried such a simplistic breakdown might reinforce people's notions of essential biological difference along racial lines.

But in time, the company's results improved, becoming more refined. Mountain started hearing more and more stories about consumers discovering unexpected ancestral stories, including ones that crossed the color line, and she wondered what effect such results might be having. When consumers discovered this diversity within themselves, would that make them more flexible in how they thought about race? Meanwhile, 23andMe was studying this diversity as well as the legacy of historical constructions of race. In 2015, 23andMe population geneticist Kasia Bryc, along with Mountain, Harvard geneticist David Reich, and others, [published a study](#) from the company's consumer data revealing that close to 4 percent of those who identified as white Americans had at least 1 percent African ancestry, consistent with an African ancestor within the last 11 generations or so. (In Southern states like South Carolina and Louisiana, about 12 percent of whites had 1 percent African ancestry or more.) The work prompted Henry Louis Gates Jr. [to observe](#), “What hasn't been confirmed until now is how many self-identified ‘white’ women and men are walking around today with recent ‘hidden’ *African* ancestry in their families—you know, white people, who, at least according to the old, notorious ‘one-drop rule’ of the Jim Crow era, would have been considered legally ‘black.’ ”

Research is demonstrating the importance of how we frame discussions of genetic difference. In [DNA Is](#)

[*Not Destiny*](#), cultural psychologist Steven J. Heine shows that American subjects who tend to believe that genes determine life outcomes also tend to be more bigoted toward Black Americans. “Thinking about genes as underlying essences and having racist thoughts seem to go hand in hand,” he writes. But if the way we approach such questions can doom us, it can also save us. Heine points to more research showing that when we focus on our sameness, we do better, as in his study showing that adults prompted to consider genetic commonalities are more likely to offer environmental explanations for racial stereotypes.

We don’t yet know what impact the technology of DNA testing is having on attitudes about genetic difference. Mountain helped [design a study](#) conducted by Northwestern University that found one-third of Americans believed that genetics “totally” determines racial identity, and she hopes future collaborations can gauge whether DNA testing causes this belief to grow or shrink. Beyond this, research on the topic is in the early stages. A 2014 [study](#) out of Columbia University found that having subjects read a newspaper article about genetic ancestry tests appeared to “magnify the degree, generality, profundity, and essentialness of the racial differences people perceive to exist,” but additional work suggests that the effects are not so clear-cut. Professor Anita Foeman of Pennsylvania’s West Chester University, who studies people’s experiences of ancestry testing, told me she thinks the technology is opening up much more complex and sophisticated conversations about race. In one talk I watched, she put up pictures of a diverse range of people and invited the audience to speculate on who matched a particular pie chart. The blond woman was part Asian, according to testing, while the child of Indian immigrants had European ancestry. It was impossible to predict, which was exactly Foeman’s point—the genomics age can’t help but blow up our neat categories.

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