

Adventures in the Gene Pool

What's the real value of genetic evidence in determining who we are? Many commercial tracing services now offer customers the opportunity to explore their genetic ancestry. But that's by no means the same thing as providing them with an identity.

by Carl Elliott

Last fall, the North Carolina public school attended by my 13-year-old nephew, Walker, instituted a new dress code. Girls can't wear midriff-baring tops or short skirts. Boys must tuck in their shirts, keep their shoes tied at all times, and wear belts with their pants. The code is enforced with military discipline, and snap inspections are conducted in the hallways. Girls are lined up and asked to raise their arms in the air, like criminal suspects, to ensure that their belly buttons can't be seen. Casually dressed boys are ordered to tuck in their shirts. A few weeks ago, after being subjected to a particularly humiliating hallway inspection, Walker decided to make a fashion change. He now wears only knee-length, American Indian "ribbon shirts" to school—as a tribute, he says, to his American Indian ancestry. So far, the baffled school administrators have left him alone.

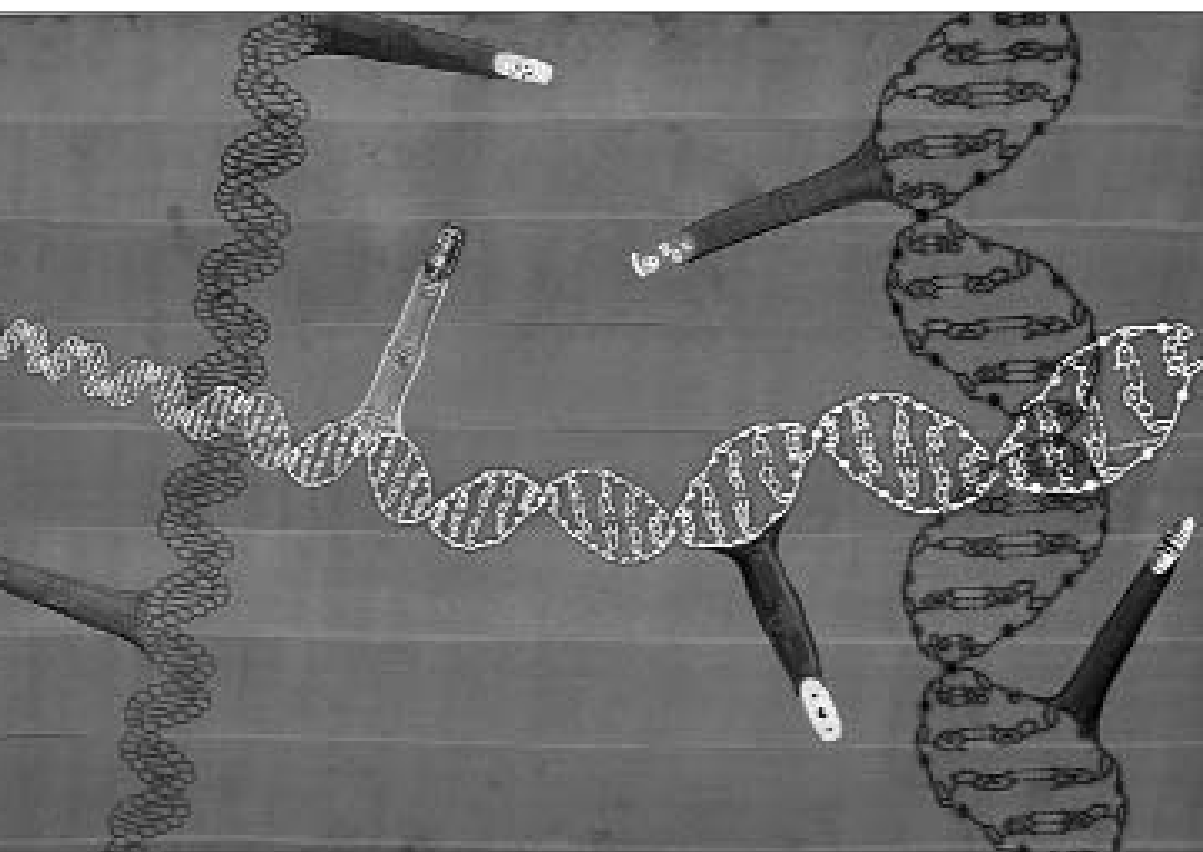
Does Walker have American Indian ancestry? He wears his ribbon shirts half in protest and half in jest, but under other circumstances his genetic ancestry might be a matter of great significance. In the segregated South, for instance, your genetic ancestry decided which restrooms you could use and which schools you could attend. For countries such as Israel and Germany, a displaced person's genetic ancestry helps determine whether he or she has the "right of return."

For the U.S. Bureau of Indian Affairs (BIA), genetic ancestry is one marker of whether you count as an American Indian. Many American Indian tribes require members to have a certain "blood quantum." How much American Indian ancestry do you need before you can break the dress code in a North Carolina public school?

I'm not aware of any American Indian ancestry on our side of the family, but the matter is more complicated for my brother Hal's wife, Lisa. Lisa has never been a member of an American Indian tribe, nor (to her knowledge) has anyone in her family. But like many Southerners, Lisa grew up with stories of American Indian ancestors. Her grandmother and great-grandmother had dark skin and hair, and faces that did not much resemble those of the Ulster immigrants who settled our part of South Carolina. Her great-grandfather, who was rumored to be part American Indian and who lived to the age of 107, sold salves and poultices, sometimes in the "colored" part of town. Some people in Lisa's family said they might be Cherokee, but Lisa's great-grandmother always said they weren't. According to her, they were just ordinary "swamp Indians."

Yet Lisa recalls that there was always something funny about the way people in the family acted when questions of ancestry came up. Many of them didn't really want to





A Train (2001), by Frank Moore

talk about their heritage at all. Unlike many Southerners who proudly claim American Indian ancestry against all evidence to the contrary, Lisa's family always seemed slightly embarrassed at the prospect and would become defensive and anxious when Lisa asked about it. Often, they'd change the subject. For many years, their reaction left her puzzled.

A few years ago, while I was digging around in some old sociological studies from the 1940s and 1950s, I came across a paper by a scholar named Brewton Berry. Berry grew up in Orangeburg, South Carolina, and in 1945 he published an article called "The Mestizos of South Carolina." *Mestizos* was the term he chose to describe multiracial groups that did not quite fit the rigid, race-based caste system of the Jim Crow South. These groups went by different names, many of them meant to be insulting, in different parts of South Carolina—Redbones, Red Legs, Buckheads, Coppershanks, Marlborough Blues, or, most commonly, Brass Ankles. Most white South

Carolinians of the day suspected that Brass Ankles had black ancestors somewhere in their past, and as late as the 1940s and 1950s many South Carolina counties operated special segregated schools—neither white nor black—solely for Brass Ankle children. (In 1931, the Charleston playwright and novelist DuBose Heyward, better known as the librettist for *Porgy and Bess*, published a play called *Brass Ankle*, which dealt with a white family's accidental discovery of its black ancestry.) Toward the end of Berry's paper, I read something that made me think of Lisa. Speculating about the origins of the mestizos, Berry said that many were probably descended from American Indians who had managed to avoid forced immigration and who were known to have lived for generations in the South Carolina swamps. He also listed a number of names associated with mestizo families, one of which was Sweat. Sweat was the maiden name of Lisa's great-grandmother.

Most Americans, and even many Southerners, believe that Southerners come in two varieties, white and black. Yet groups

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that don't quite fit either mold have been living in the South for centuries, often in isolated communities: the Melungeons of Tennessee, the Turks of Sumter County, South Carolina, the Guineas of West Virginia, the Issues of Virginia, the Cubans of North Carolina, and the Redbones of Louisiana and South Carolina, among others. Stories about the origins of these groups often include tales of lost colonies, gypsies, marooned sailors, or foreign soldiers. Many of the groups were said to have some American Indian ancestry, and anthropologists in the mid-20th century called them *tri-racial isolates*. The term *tri-racial* was meant to indicate a mixture of European, African, and American Indian ancestry. It's rarely employed anymore, partly because of skepticism about the usefulness of the concept of race, partly because it's a category that, if taken seriously, would probably include almost all Southerners. In the new, post-segregation South, there seems to be no commonly accepted term for such groups. They're called *Metis*, or *multiracial groups*, or *mixed-ancestry groups*, or simply *the little races of the South*. In the days of Jim Crow, what distinguished many of them was their insistence that they were really white, though whites insisted that they were really black.

Last summer, when Lisa was doing some Internet research on her genealogy, I put her in touch with a company called Family Tree DNA, which advertises itself as "America's first DNA-driven genealogical testing company." Family Tree DNA offers commercial genetic testing to subscribers who want to trace their genetic ancestry. Among their services are genetic tests for Jewish ancestry and American Indian ancestry. Customers send the company information about their family background and a sum of money ranging from \$200 to \$500, and Family Tree DNA sends them a DNA testing kit with which to take a cheek swab that can be used in genetic analysis. After matching the customers' DNA with

various databases collected by population geneticists, Family Tree DNA will tell them what the results reveal about their ancestry. Lisa decided to take the test for American Indian ancestry, and she sent off her swab in June.

Family Tree DNA is only one of many new commercial genetics and genealogy services, including Oxford Ancestors, Relative Genetics, and GeneTree, that are often used by people like Lisa who are curious about their ancestry but have run into dead ends with ordinary written genealogies. Some happy customers, including African Americans who are looking for their African roots, have given glowing testimonies to the press. Pearl Duncan, a writer in New York, collected DNA samples from her family and used a University of Arizona lab to trace her genealogy back (she believes) to Ghana. "I felt like a person stuck in limbo for so long," Duncan told *The New York Times*. "But now there's no doubt in my mind. When I got confirmation, I was elated, overwhelmed, grateful, even a little cocky because I finally knew."

Though the popularity of genetic ancestry tracing is growing, the question remains: Can the process really deliver what people are looking for? Commercial genetic testing services take advantage of two techniques that have been used by population geneticists for years. The first traces genetic markers on the Y chromosome. The remarkable thing about the Y chromosome is that, unlike other chromosomes, it's passed down virtually unchanged from father to son. My Y chromosome is the same as my father's Y chromosome, my grandfather's Y chromosome, and, for that matter, the Y chromosome of my father's two brothers, my two brothers, and all of our sons. By tracing markers on the Y chromosome, geneticists can follow one genetic line of a man's ancestry back for generations, from father to father to father. By matching markers on the Y chromosome with genetic databases, geneticists can often tell a man what part of the world his chromosome traces to. For example, my nephew Walker and I share the same Y chromosome,

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Three generations of Melungeons: William Mullins, his son Noah, and Noah's son Friend.

which contains a pattern of genetic markers known as the Atlantic Modal Haplotype. The Atlantic Modal Haplotype is quite common all over Western Europe.

For women, the story is slightly different. Women do not ordinarily have a Y chromosome, of course, but they do have mitochondrial DNA, which is present outside the nucleus of the cell and is passed down through maternal lines virtually unchanged from one generation to the next. Both men and women have mitochondrial DNA, but

only women pass their mitochondrial DNA on to their children. Like the Y chromosome, mitochondrial DNA contains markers that geneticists use to trace maternal genetic lineages. Thus, any person, male or female, can track his or her ancestry through his or her mother, his or her mother's mother, and so on back for generations.

The catch is that each of the two tracing techniques gives a person information about only one genetic branch of a family tree whose branches double in number with each preceding generation. I have four

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grandparents, two of whom are my grandfathers, but I share a Y chromosome with only one of those four ancestors. I have 128 great-great-great-great-grandparents, but again, Y chromosome tracing will track my genetic lineage back to only one of them. If I continue back in this way for 15 generations, I will have 32,778 ancestors, yet Y chromosome testing will still connect me to only one of them. The same goes for mitochondrial DNA testing. Even if Family Tree DNA were to identify my sister-in-law Lisa's mitochondrial DNA as "Native American," the service would be providing her with information about only one of thousands and thousands of her genetic ancestors.

When the information is so thin, why do people still care? Because in some cases that slender thread of information may be just what they need. One of the most famous cases of genetic sleuthing concerns the descendants of Thomas Jefferson and Sally Hemings. For years it was rumored that Jefferson had fathered at least one illegitimate child, and maybe more, by his slave mistress, Hemings. Generations of families descended from Hemings have grown up with the story that they are descendants of Jefferson. But for white descendants of Jefferson, many of whom belong to an exclusive genetic club, the Monticello Society, the thought that Jefferson could have fathered children with his slave has always been heresy. In 1997 Eugene Foster, a pathologist in Charlottesville, Virginia, had the idea of putting the claims to a Y chromosome test. He gathered DNA samples from various confirmed descendants of Jefferson's brother (whose Y chromosome would have been identical to Jefferson's) and from men who claimed descent from Jefferson through Hemings. Then he compared their Y chromosomes. Markers on the Y chromosomes of the descendants of one of Hemings's sons, Eston Hemings Jefferson, matched up almost exactly with those of Jefferson's confirmed descendants. So the ancestry claims of Eston Hemings Jefferson's descendants are now widely treated as valid. But to the dismay of descendants of another Hemings son, Thomas Woodson,

who also claim ancestry from Jefferson, the markers on their Y chromosomes did not match those of Jefferson's confirmed descendants.

An even more striking genealogy story concerns a tribe in southern Africa called the Lemba. In the mid-1980s, the English scholar Tudor Parfitt was in South Africa giving a lecture on the Falashas, or Ethiopian Jews. Most of the people in the lecture hall were white Jewish South Africans, but Parfitt noticed some black people, wearing yarmulkes, standing in the back of the room. When he greeted them after the lecture, they told him that they were Jews and that though they now lived in the northeast corner of South Africa, their people, the Lemba, had originally come from the Middle East. They invited Parfitt to visit, and he learned some suggestive things about them—for example, that the Lemba did not eat pork or porklike animals, that they circumcised their male children, and that they kept one day of the week holy. Eventually, geneticists in South Africa and England looked at the Lemba's Y chromosomes. One study found a much higher than expected frequency of markers ordinarily associated with the "Semitic" people of the Middle East (i.e., Jews and Arabs). An even more interesting study, conducted by Mark Thomas and his colleagues in London, compared the Y chromosomes of the Lemba's priestly caste, the Buba, with those of the Cohanim, the Jewish priests said to be descended from Aaron, the brother of Moses. Geneticists had previously identified a kind of genetic signature called the Cohen Modal Haplotype, which is present in only about three to five percent of ordinary Jews but in about half of the Cohanim. To the astonishment of virtually everyone except the Lemba, the Buba had the Cohen Modal Haplotype in frequencies as high as those of the Cohanim.

These studies raise an obvious and important question: Do the findings mean that the Lemba are "really" Jewish? Similar questions could be asked of the connection between genetics and many other kinds of ethnic, religious, national, and familial identities. Can individuals' genetic heritage make them any more German, Parsi, Cherokee—

or Jeffersonian? For many groups (though by no means all), the answer seems to be a qualified yes. Today your genetic heritage can help get you a passport to Israel or membership in the Daughters of the American Revolution, just as in the past it could have gotten you turned away from segregated schools and restaurants.

The racial stakes have been raised even higher by a new commercial testing service in Florida called DNAPrint Genomics, which claims to offer customers a detailed breakdown of their genetic origins to determine their eligibility for “race-based college admissions or government entitlements.” DNAPrint Genomics does not use Y chromosome or mitochondrial DNA tracing. Instead, its staff test for a number of autosomal genetic markers called SNPs (pronounced “snips”), which they claim are diagnostic of individuals’ geographic origins. Thus, customers receive a quasi-racial profile rather than the information about one ancestor among thousands that they would receive through Y chromosome or mitochondrial DNA testing. An individual might be told, for example, that he or she is 75 percent Indo-European, 15 percent African, and 10 percent Native American. Many geneticists are quick to dismiss these claims as commercial hype, arguing that the

“genetic admixture” studies might be useful for studying populations but that they don’t allow individuals to be given such precise genetic information with any degree of confidence. Other observers worry that admixture studies will give a scientific imprimatur to race-based discrimination.

And yet the most striking thing about commercial admixture studies may well be their failure to map precisely onto ordinary social conceptions of race. To take only one example: Brothers and sisters in the same family, with the same parents, might turn out to have very different genetic profiles simply because of the different genetic cards they’ve been randomly dealt. Would that make one brother black and another white? Or mean that one sister has enough Navajo “blood” to qualify for tribal membership, while her siblings do not?

DNAPrint Genomics claims to offer an exact quantification of an individual’s genetic origins. Ironically, it’s precisely because of this kind of obsession with racial quantification that many of the “little races” of the South survived for so long. In a society where people were strictly classified, socially and often legally, as either white or black, there was little conceptual space for people who did not quite count as either. When



The Lemba of northeast South Africa trace their origins to the Middle East and consider themselves Jews.

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legal segregation began to break down in the 1950s and 1960s, so did the strict outsider status of the “little races.” Today, labels such as Brass Ankle, Redbone, and Melungeon are almost quaint, and Southerners whose grandparents would have been ashamed of their heritage are now seeking ways to discover information about their ancestry that earlier generations did their best to conceal. Genetic testing seems to them a means of connecting with their vanished past, and perhaps even of validating those mysterious stories about their origins.



A number of years ago, when Wayne Winkler first began dating Andrea, the woman who would eventually become his wife, she asked him about his ethnic background. “Melungeon,” Winkler replied. Andrea thought Winkler was pulling her leg. She had grown up in Tennessee, the heart of Melungeon country, but she had never believed that Melungeons really existed. Winkler says, “It was as if I had replied ‘Leprechaun.’”

As the current president of the Melungeon Heritage Association and the author of a forthcoming book on the Melungeons, *Walking toward the Sunset*, Winkler understands their quasi-mythical status. Many Tennesseans grew up thinking that Melungeons were moonshiners and counterfeiterers, that they had six fingers on each hand, and that when they emerged from the hills and hollows, it was to capture misbehaving children, like the bogeyman. Because of their dark (or “olive”) skin, Melungeons were said to be the descendants of Portuguese sailors, runaway slaves, American Indians, a lost tribe of Israel, ancient Carthaginians, gypsies, or inhabitants of Sir Walter Raleigh’s Lost Colony on Roanoke Island, North Carolina (established in 1587, the colony disappeared sometime before 1591). One legend had it that they were the children of Satan and an American Indian wife he took when he was driven out of hell. The meaning of the name *Melungeon* is uncertain too. Some speculate that it is a corruption of the French *melange* (meaning mixture), a hybrid

African-Portuguese term *melungo* (meaning shipmate), the Greek *melas* (meaning dark), or simply the surname Mullins, a common one among Melungeon families. (One of the most famous Melungeons was Mahala “Big Haley” Mullins, a woman moonshiner reported to be so fat that when she died, she had to be buried in a custom-made coffin built around her bed.)

Melungeon legends make it hard to separate fiction from fact. But the Tennessee census records and other historical documents are clear evidence that Melungeons (or others once officially classified as “free people of color”) have been living in the east Tennessee mountains for at least 200 years. It’s generally thought that many Melungeons moved to east Tennessee to escape the persecution and ill will of their neighbors in Virginia and North Carolina, and then moved even farther up into the mountains when Scots-Irish settlers began entering Tennessee. As a strategy to avoid bigotry and discrimination, the moves were not entirely successful. In 1834, Tennessee stripped Melungeons of the right to vote. In 1887, they were officially classified as “Croatan Indians,” the theory apparently being that they were descended from the survivors of Raleigh’s Lost Colony, who are thought to have intermarried with a tribe of Croatan Indians. The term *Croatan*, like *Melungeon*, came to be regarded as insulting, by the Melungeons and by everyone else too, and as early as the mid-19th century many Melungeons insisted that their ancestry was actually Portuguese (often pronounced “Portyghee”). By the 1960s, the Melungeons had all but disappeared. As legal segregation began to fade, along with social restrictions on marriage and courtship, they were assimilated into ordinary white society. The very word *Melungeon* began to seem a relic of the past.

In 1969, the town of Sneedville, Tennessee, began staging a play about the Melungeons, *Walk toward the Sunset*, by Kermit Hunter (the title inspired Wayne Winkler’s book). Although it was developed largely as a tourist attraction and was put on for only six years, the play marked the beginning of a transformation in Melungeon identity. For the first time, a few Melun-

geons began to take pride in their history, and some even began to identify themselves openly as Melungeons. Yet it was not until 1994, when Brent Kennedy, a vice chancellor of development at Clinch Valley College (now the University of Virginia's College at Wise), published his book *The Melungeons: The Resurrection of a Proud People*, that the revival of Melungeon identity really took off. Today thousands of people, most of whom did not grow up thinking of themselves as Melungeons, are reclaiming their Melungeon roots and tracing their genealogies and family histories. There are Melungeon gatherings, Melungeon research groups, Melungeon internet listservs, a Melungeon Health Network, even a Melungeon book series with Mercer University Press. The Melungeon Heritage Association, founded by Kennedy, is the hub around which all this activity revolves.

But where did the Melungeons come from? That's the great unsolved mystery that has dogged them for generations. In 1998 Kennedy recruited Kevin Jones, a geneticist at the University of Virginia's College at Wise, to help him with a genetic study of the Melungeons. Over the next several years, Kennedy collected DNA from a number of families he believed to have confirmed Melungeon ancestry. Jones analyzed some 120 samples of mitochondrial DNA and, with Mark Thomas of University College London, 30 Y chromosome samples. The data have not been published, but in June 2002 Jones announced his much-anticipated results at the Fourth Melungeon Union in Kingsport, Tennessee. About five percent of the mitochondrial DNA tracked to Native American sources, about five percent to African sources, and about 90 percent to a broad category called Eurasian, which includes Europe, the Middle East, and India.

These results are notable mainly for what they fail to reveal. With no comparison group, it's impossible to know whether the findings say anything special about Melungeons. It might be that any random group of people tested from that part of east Tennessee and Virginia would yield a similar result. And yet, even with a comparison group, genetic testing of this kind will usually

give results that are vague enough to be consistent with any number of different stories of a group's origins. For example, the category "Eurasian" is broad enough to be consistent with old stories of Portuguese and Turkish origins for Melungeons, as well as with the Irish and Scottish roots of most people in that part of the South. The markers tracing to Africa are consistent with stories of slave ancestry. Jones also found a handful of very unusual markers—four sequences, for instance, that matched with the Siddi, a north Indian people of East African descent. What does it mean that, out of the hundreds of thousands of lines of descent leading to the Melungeon families in the study, four had these unusual genetic markers? Very little, actually. But those markers are almost certain to produce even more far-fetched speculation about Melungeon origins.



For Melungeons, genetic ancestry tracing is interesting mainly because of what it contributes to the solution of a genealogical puzzle. For other groups of mixed or uncertain origins, the process could have far higher stakes. A number of mixed-ancestry groups have organized themselves into formal associations and are petitioning the BIA for federal recognition as American Indian tribes, often claiming descent from tribes that vanished as a result of government policy in past centuries. Federal recognition as an American Indian tribe gives a group specific social benefits, such as educational and medical services and exemption from some state taxes. It also gives individual members of the group access to federal programs for legally recognized American Indians.

Genetics and genealogy play a crucial, and often controversial, role in decisions about American Indian identity. For example, many BIA policies require that individuals demonstrate one-half or one-quarter blood quantum to qualify for benefits. The notion of blood quantum is written into the Indian Reorganization Act of 1934, and the BIA even issues a kind of genetic identity card called the CDIB (Certificate of Degree of Indian Blood),

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which states an individual's blood quantum and serves as a passport to BIA services. Many individual tribes have their own blood quantum requirements for membership, ranging from one-half to one-thirty-second. Genealogy also figures in BIA decisions about federal recognition; to qualify, a petitioning group must demonstrate, among other things, that it's descended from a historical tribe or from amalgamated tribes.

Few tribes have been as frustrated as the Lumbee of North Carolina in their efforts to obtain full federal recognition. Numbering more than 50,000, the Lumbee are the largest American Indian tribe east of the Mississippi River. Like the Melungeons, the Lumbee have contested origins, have been tracked for centuries by accusations of mixed ancestry, and were at one point designated by the state as "free people of color" and subsequently as "Croatan Indians." Yet unlike the Melungeons, the Lumbee have always had a strong sense of themselves as a distinct, cohesive group. And unlike many other mixed-ancestry groups, whose members have only recently discovered their lost American Indian heritage, the Lumbee have considered themselves American Indians for centuries. They've been petitioning the federal government for full recognition as a tribe since the 1880s. Yet those efforts have never fully succeeded. Some recognized tribes have opposed the Lumbee petitions (though others have supported them), and the only concession the federal government has made to the Lumbee was a limited type of recognition in 1956 that specifically disallows their receipt of benefits from the BIA. In 1985, the BIA determined that the Lumbee failed to satisfy the criteria for full recognition, citing, among other factors, the group's "mixed and uncertain ancestry."

Given this long history of legal frustration, it would not be surprising if the Lumbee, like the Melungeons, were to look to genetic ancestry tracing as a way to support their ancestry claims. Such a move would not be unprecedented: Members of the Western Mohegan Tribe of the Upper Hudson have

undergone genetic ancestry tracing to advance their claim to legitimacy as an American Indian tribe. Genetic testing might help the Lumbee cause by establishing links between individual Lumbee and members of other federally recognized tribes, or links to descendants of American Indians who were listed on tribal rolls or living on reservations in 1934, the year of the Indian Reorganization Act. If a large number of Lumbee families were to have their Y chromosomes and mitochondrial DNA tested and compared with the DNA of other families in their part of North Carolina, it's also possible that a significant number of markers on their DNA might trace back to Native American sources. Given the participation of a large enough number of people, genetic tests might also settle the question of whether the Lumbee are descended from historical or amalgamated tribes.

Yet the use of genetic testing to document "authentic" American Indian identity for the Lumbee would also ratify the genetic standards that have often been used against them in the past. Many Lumbee don't match up with the popular archetype of an American Indian. Some look like African Americans; others have blond hair and blue eyes. The Lumbee don't live on a reservation or speak an American Indian language, and they've never had a treaty with the federal government. The earliest documented history of the Lumbee comes from Scottish settlers in the early 18th century, who reported an American Indian tribe living along the Lumber River whose members spoke an obsolete English dialect and lived like Europeans. In 1936, the BIA sent Carl Selzer, a Harvard University anthropologist, to Robeson County, North Carolina, to determine whether the Lumbee really were American Indians. Selzer's methods would be laughable if his conclusions had not been so consequential. He examined 209 Lumbee, measuring their features and putting a pencil in their hair to determine whether it was "Indian" or "Negroid." If the pencil slipped, it was Indian hair; if it stuck, it was Negroid. Selzer decided that only 22 of the 209 Lumbee he examined were "authentic" Indians.

But the Lumbee know very well who they are. They have their own origin stories, often connected to Raleigh's Lost Colony. They have particular ways of living, behaving, and speaking. They have heroes, most notably Henry Berry Lowry, the Lumbee Crazy Horse, a Civil War and Reconstruction-era marauder who defended the Lumbee against hostile whites. The state of North Carolina has given the Lumbee official tribal recognition. During the long history of southern racial segregation, the Lumbee had their own schools and their own university, now called the University of North Carolina at Pembroke. In 1958, a group of Lumbee gained national attention (including photographs in *Life* magazine) when they attacked a Ku Klux Klan rally and ran the Klan out of Robeson County. When the University of Oklahoma basketball team went to the Final Four in March 2002, their coach, Kelvin Sampson, was widely reported to be the first American Indian to coach a Final Four team. Sampson is a Lumbee.

As cohesive and resilient as the Lumbee have proven themselves over the years, their identity as a group has never depended on the genetic standards that are written into American law, and membership has never been determined by measuring blood quantum. In fact, one of the most striking things about the Lumbee has been their ability to maintain such a strong sense of group identity over time while accepting outsiders into the group. Their openness looks progressive today, even as it explains why so many of the Lumbee failed the BIA's absurd racial purity tests in 1936.

For all the potential appeal of genetic ancestry tracing for individuals, it's difficult not to feel ambivalent about its wider implications. Given the long and damaging history of eugenicist thinking and race-based discrimination, a technology that seems to ratify the old racial categories resists wholehearted embrace. In a way, genetic ancestry tracing looks suspiciously like what Carl Selzer was doing with his pencil in Lumbee people's hair back in 1936. We'd like to believe that we've moved beyond that kind of thinking.

We'd like to believe that identity should be rooted in something other than genetics or race—in a history, a way of thinking, a language, a religion. Some people, especially Americans, would like to believe that you can be whoever you choose to be, regardless of your genetic inheritance. Yet it's impossible to get away from genetics entirely, if only because of the inescapable fact of biological families. So many structures of identity are rooted in kinship. Being African American or Jewish or Ojibwe—or even, for that matter, American—depends on who your parents happen to be. As undemocratic and illiberal as the thought may sound to modern ears, some aspects of identity are not a matter of individual choice. And it's this balance between chance and choice, between what's given and what's made, that creates the moral tension surrounding genetics and identity. We want to be part of a family, but we also want to be able to escape it. We want to know where our ancestors came from, but we don't want our ancestry held against us. Genealogy by genetics may look like a hobby now, but if genetic testing as a determinant of identity were to find its way into our social and legal institutions, it could take on a meaning and significance we never intended. How much should genetic ancestry matter to our identities? We've only begun to struggle with that question.



When my sister-in-law Lisa got her results back from Family Tree DNA, they showed a set of markers known as Haplogroup W. The bad news for my nephew Walker is that Haplogroup W is not a Native American haplogroup. The good news is that Haplogroup W, while quite uncommon, is found in low frequencies all over Europe and Asia, including, among other locales, the British Isles, Spain, Sicily, Switzerland, Sweden, Ukraine, Georgia, Russia, Turkey, Lebanon, Saudi Arabia, Syria, Kuwait, Iran, and India. The highest frequencies occur in Finland.

Walker has not given up his ribbon shirts yet, but he's developing an interest in Finnish fashion. □