Arts & Humanities

The Double-Edged Helix

To write about DNA ancestry testing, sociology professor Alondra Nelson immersed herself in the world of African-American genealogy. The story went deeper than she had imagined.

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As she stood on the stage of the Hyatt Regency ballroom in downtown Atlanta in front of three hundred people attending the 2010 Africa Policy Forum, Alondra Nelson had a meta moment. Here she was, a sociologist and ethnographer, taking part in the phenomenon she was studying. But this went beyond participant

observation — now *she* was the focal point, no longer the studier but the studied. Her DNA-test results were about to be divulged in a very public way.

The audience watched and waited. Though she and two other women were more or less the warm-up act for the sons of Marcus Garvey and Martin Luther King Jr. — which was surreal enough — Nelson knew what was expected of her. She had seen the reality shows. The audience needed a reaction. The reaction was part of the ritual. She became aware, as the seconds ticked down to the big reveal, of wanting to fulfill the expectations of the crowd.

In truth, taking the test — ordering the DNA kit, scraping the inside of her cheek with a swab, popping the swab in the mail, and, six weeks later, receiving a certificate proclaiming the region of Africa inhabited by her ancestors — had never been a priority for Nelson. She was more interested in learning why so many others were getting tested.

Who are you?

“I don’t know anything about myself. I want to find out who I am, where I come from.” — rap superstar Nas, on PBS’s *Finding Your Roots, with Henry Louis Gates Jr.*

“There’s a general human desire for a sense of identity,” says Alondra Nelson. “And then we have specific desires.”

Nelson is the dean of social science at Columbia, where she has taught since 2009. Her new book, *The Social Life of DNA: Race, Reparations, and Reconciliation after the Genome*, which examines the uses of genetic ancestry testing, comes at a time when evidentiary technology is shaking up racial politics: cell-phone footage of police violence that belies official accounts; big data sets showing the crushing toll of mass incarceration on black families; and personal DNA analysis, which — as Nelson shows — could be the most potent tool of all.

It starts with the longing for self-knowledge. In her book, Nelson looks at African Ancestry, Inc., a DNA-testing company cofounded in 2003 by Rick Kittles, a geneticist now at the University of Arizona College of Medicine. As a black scientist, Nelson says, Kittles provides a sense of comfort for customers who yearn for a pre-slavery ethnic connection but who may be wary of submitting their DNA to a lab,

given the horrific history of surgical and pharmaceutical experiments performed on African-Americans, as well as the pseudoscientific abuses of genetics — what Nelson calls “scientific racism.”

The test works like this: for a fee ($299 at African Ancestry), geneticists isolate your DNA and look for sets of genetic markers called haplotypes, which vary among populations. African Ancestry has a DNA database of hundreds of ethnic groups in Africa (among thousands), mainly from areas involved in the transatlantic slave trade. By comparing your matrilineal or patrilineal markers with those in the database, the company can make geographical and historical hypotheses about your African roots.

“They’re making lots of educated guesses,” Nelson says. “They’re guessing that the ethnic group in Africa whose DNA they’re testing today is the same group that was there hundreds or thousands of years ago. They’re making inferences about the genes *and* the history.”

Getting this information, Nelson says, lets African-Americans “make the move from race to ethnicity — from being African-American or black to being, say, Guinean-American. It’s complicated: ethnicity can be its own essentialist category” — “essentialism” is the idea that racial or ethnic groups possess timeless, inalterable qualities — “and I’m not saying that ethnicity is the Holy Grail. But it is certainly striking for groups that haven’t had that to get it.

“So much of our society is organized around ethnicity. Think of the St. Patrick’s Day Parade, or the Feast of San Gennaro. It’s not crazy for people to want to participate in society in that way.”

Nor is it surprising that people torn from their ancestral culture should feel, as one woman put it to Nelson, “this nagging need to *know*.” But what are the implications of personal genetic data for the community, for politics — for the very meaning of identity?

Origin Story: 1991

The backhoe’s blade lifted Manhattan’s earth, and the earth yielded its secrets.

Bones. Bones, in wooden boxes: bones connected to bones: *a human skeleton*, jaw stretched wide. Another skeleton, with coins over its eyes. A small skeleton: a child: too small for words. Another box, and another, twenty-four feet underground, while above, on the street, judges and cops and lawyers gabbed about Michael Jordan's second MVP title and *The Silence of the Lambs*.

Down in the pit, workers, in the midst of an archaeological survey of the site of a proposed federal building on Duane Street, had dug up what most historians had assumed, in May 1991, to have been long obliterated by centuries of New York City development. Old maps showed that the land now designated for a thirty-four-story tower and adjacent pavilion was once the *Negros Buriel Ground*, which received the dead from the 1690s to 1794. The cemetery, located outside a segment of the city wall running from present-day Chambers Street at Broadway to Foley Square, covered almost seven acres. Now from the earth the buried past rushed up into the racial vortex of a divided city governed by its first black mayor, David Dinkins. Black demonstrators, angered by the despoiling of hallowed ground and by the continued exhumation of the remains by technicians whose concerns were neither spiritual nor cultural, held vigil at the site and prevailed upon elected officials to stop the dig.

"You had a rare combination of African-American leaders: a mayor [Dinkins, now a professor of public affairs at Columbia], a state senator [David Paterson '77CC], and a congressman [Gus Savage (D-IL)] who was chair of the House Subcommittee on Public Buildings and Grounds," says Nelson. "And this constituency saying, 'You've got to do something.'"

In July 1992, under political pressure, the General Services Administration, which controlled the site, halted excavation and handed over the forensic investigation of the largest slave cemetery ever discovered to a mostly black team of scientists from Howard University, led by anthropologist Michael Blakey.

"It was a perfect storm," Nelson says. "You also had a generation of black scientists, trained in the 1970s, who could say, 'We want to take over this project.' This research team was unusually interdisciplinary: archaeologists, historians, anthropologists — and then they add geneticists. It was radical in its composition."

Four hundred and nineteen skeletons were unearthed. The entire burial ground was thought to hold upward of twenty thousand people. Bone analysis showed wear and tear consistent with hard labor. Some graves contained objects — buttons, pipes,

cowrie shells — that, along with dental analysis and emergent DNA testing, pointed to direct links to Africa. One casket lid was decorated with iron tacks in a heart-like shape that some scholars construed as a *sankofa*, a symbol from the language of the Akan people of present-day Ghana.

In 1995, Rick Kittles, a PhD student from George Washington University, was brought on to the burial-ground project. As a biologist, Kittles had had experience using cutting-edge techniques to sequence DNA. It was at the burial site that Kittles refined the methods that would lead to his commercial venture, African Ancestry.

Under Blakey, the team recovered a past that helped change our understanding of New York's origins, of Northern slavery, and of the development of the country. In the seventeenth and eighteenth centuries, one out of five people in New York was a slave. The only Colonial American city with a higher proportion was Charleston, South Carolina.

"We don't want to overplay origin stories," says Nelson, "but it's very significant that the introduction of DNA analysis for probing history should happen at a site that's about slavery, race, and the founding of the nation. And it becomes a moment for us, both as a community in New York City and as a nation, to say: *this happened*."



Family tree: 1977

You knew something big was going on if the Nelson kids were up past nine on a school night. The routine was simple: go to school (in the Nelsons' case, Catholic school in San Diego), come home, do your homework, eat dinner, wash your dishes, go to bed. Dad was in the Navy, so bedtime was rarely negotiable.

But in the winter of 1977, for eight consecutive nights, the four Nelson kids stayed up with their parents till eleven. They weren't alone. Millions of Americans — record numbers, in fact — were also curled up on their sofas and chairs, eyes riveted to the screens of their Zeniths and Sylvanias. They were watching *Roots*.

Based on the book by Alex Haley, *Roots* traced the descendants of Kunta Kinte (played as a young man by nineteen-year-old LeVar Burton), who was captured in West Africa in the 1760s and shipped to America in chains. Here was an American tale that cut to the very chromosome of the body politic. Never had American society confronted the history of slavery in such a popular and synchronistic way. Black and white viewers alike encountered a reenactment of the wickedness and brutality of slavery with feelings of anger, horror, and heartbreak, and sweet satisfaction at scenes of defiance.

Roots also generated a mania for genealogy. Making a family tree became a widespread, imagination-quickening pursuit for hobbyists of all ages: interviewing relatives, visiting libraries, going through public records. Nowhere was this activity more prevalent — or more vexing — than among African-Americans, for whom even the most successful searches ultimately dissolved in the fog of slavery. Now, four decades and a few technological leaps later, DNA ancestry testing is a nearly three-billion-dollar industry, and TV shows like *Finding Your Roots* have brought nimble storytelling and celebrity intrigue to records-based genealogical inquiries, at whose limits DNA is climactically summoned to provide what the archives can't: specific African identity.

Nelson, before taking her own DNA test, had always known a *little* about her ancestry. She was born in Bethesda, Maryland, in 1968. Her father, who was stationed in Vietnam at the time of her birth, grew up in New Orleans and was part

of a westward postwar wave of the Great Migration in which thousands of black Southerners moved to California. Her mother was from Washington, DC, the daughter of a Jamaican immigrant father and a Philadelphia-born mother.

Nelson couldn’t go back much further than that.

Who were they?

Burial 284 — Man between twenty-one and twenty-eight years. Burial 205 — Woman between eighteen and twenty years. Burial 99 — Child between six and ten years.

Nelson sits on a granite bench on Duane Street, two blocks north of City Hall. Here, on a one-third-acre parcel of land, surrounded by federal office towers, lies the African Burial Ground National Monument.

Grass. Trees. Burbling water. A twenty-four-foot-high edifice of black granite called the Ancestral Chamber, whose tapered interior symbolizes the stifling, disease-plagued transatlantic crossing — the Middle Passage — that killed some two million people. Enter the chamber and look up. The narrow triangular opening in the roof affords a precious sliver of sky.

Exit the chamber and step down onto a round patio of coffin-shaped tiles arranged in concentric circles, each engraved with brief descriptions of the persons whose bones were uprooted in the 1990s. *Burial 128 — Infant under three months. Burial 332 — Man between forty-five and fifty-five years*.

Who were they?

Leslie M. Harris ’88CC, a professor of history at Emory University and the author of *In the Shadow of Slavery: African Americans in New York City, 1626–1863*, says they were mothers and fathers, sons and daughters, friends and neighbors. After 1626, when the Dutch West India Company shipped the first eleven bondsmen to New Amsterdam, slavery became a prominent feature of the settlement. Women worked as domestics, doing heavy household labor. Men worked on farms or at the docks, loading and unloading cargo. Skilled slaves assisted shoemakers and carpenters. Others laid cobblestone streets and built the city wall (at what is now Wall Street). Some of the remains uncovered in Lower Manhattan belonged to people who were

literally worked to death; more than half belonged to children.

“As soon as children were able to carry something, they were put to work,” Harris says. “Though child labor was prevalent generally, slave children were subject to longer hours, more work, and had no chance to become independent laborers.”

When the British ousted the Dutch in 1664, they brought with them a harsher brand of slavery. Individuals, not just companies, began buying slaves, says Harris. Slaveholders lived in constant fear of rebellion — arson was a mortal threat in the wood-beamed city — and signs of mutiny were met with public executions and family-rending relocations. Laws limited the number of black people who could gather in one place, including at funerals, like the ones held at the burial ground.

New York abolished slavery in 1827, long after the cemetery closed. On the western side of the African Burial Ground National Monument, a few feet from Nelson’s bench, seven burial mounds rise from the grass. This is where the remains of the excavated bodies were reinterred during a ceremony in 2003.

“You hear people say, ‘Slavery was generations ago, my family didn’t own slaves, I have nothing to do with it, it’s over, get over it,’” Nelson says. “So to have a monument like this, with coffin mounds and trees, really reminds us that it lives with us, and that there are people now who are the immediate descendants of a pernicious caste system in American society, the aftereffects of which we’re still dealing with every day.”



Burial mounds at the monument

The R-word

In 2002, while Nelson was finishing up her PhD at New York University and about to start a professorship at Yale, a young lawyer named Deadria Farmer-Paellmann walked into Brooklyn federal court with an audacious plan: she would seek financial damages for slavery by filing a class-action suit against three corporations, including the insurer Aetna, that had profited from the slave trade (records showed that Aetna had sold insurance to slave owners who wanted to indemnify their human property). Nelson chronicles the case in her book, placing it in the context of reparations efforts that date to the Civil War, when General William T. Sherman ordered the settlement of forty thousand newly freed African-Americans to a four-hundred-thousand-acre strip of Southern coastal land (the basis of “forty acres and a mule”) that had belonged to Confederate landowners — an order that, after Lincoln’s assassination, was revoked by President Andrew Johnson, resulting in forced evictions.

Nelson follows subsequent appeals for reparations through the decades and into the genetic age: Farmer-Paellmann, in her claim, presented DNA evidence linking the

plaintiffs' ancestry to slave-trading regions in Africa — a tactic that failed to persuade federal judge Charles Norgle, who dismissed the case on the grounds that the genetic tests did not sufficiently establish a direct bloodline between the slaves and the plaintiffs. Nelson juxtaposes this decision with the plight of HR 40, a congressional bill introduced by John Conyers (D-MI) in 1989, calling for the creation of a commission to study the impact of slavery and its legacy on African-Americans, and to make recommendations for redress. Conyers has reintroduced HR 40 in every Congress since, but the bill has never made it to the floor.

"The past is never past until you talk about it," Nelson says. "If we keep repressing it, it comes out in social movements in the street, like in Ferguson, or in legal action. But there's this ongoing effort by people to try to force a conversation about this history."

Nelson doesn't think conversations are a cure-all, but she does call them "a necessary first step." So why can't we seem to take even a first step?

"Some of it might be due to the American mythology of 'the melting pot,'" says Samuel K. Roberts, an associate professor of history and sociomedical sciences at Columbia and the director of Columbia's Institute for Research in African-American Studies. The expression comes from the 1908 play *The Melting Pot*, in which British author Israel Zangwill refers to America as a crucible in which "the races of Europe are melting and reforming." This trope, with its emphasis on the sacrificing immigrant, became, Roberts notes, "a way, during the Cold War, of saying, 'We're all Americans; let's leave that other baggage behind.' It says everyone came from somewhere else and worked hard, allowing the next generation to do better and become more American.

"That is not a narrative in which African-Americans can participate. First, they weren't voluntary immigrants, and second, post-slavery history was so thoroughly oppressive, exclusionary, and bloody that it doesn't fit with the general narrative.

"Of course, European immigrant history was often bloody as well. There were violent repressions of labor unions and strikes. We don't remember that, either: the narrative is, 'You worked hard, and you made it out.' So two histories are being forgotten. For the one, we've all heard the alternative: the immigrant as rugged individual. But for African-Americans, I'm not sure there is an alternative. The closest we have is this idea of a post-racial, colorblind society — not the color of your skin,

but the content of your character. Which basically erases not just slavery but also the civil-rights movement: it takes that one phrase of Martin Luther King Jr. and twists it to say, ‘Race doesn’t matter, everyone’s got a fair shake, so stop complaining.’”

“It’s true that a lot has changed for minority communities,” Nelson says. “We’ve done a lot to make equality the law of the land. Yet this leads some of us to think that the problems are solved and there’s nothing more to be done. It’s interesting that genetic ancestry then enters this social climate that says, ‘Get over it.’ I think the persistence of the incantation *this happened* that genetic ancestry brings is really giving the lie to, and is talking back to, this discourse in American political life.”

A reckoning

For Roberts, the DNA work done at the African Burial Ground was interesting, because “it was political; it was about group identity. This was not individuals necessarily purchasing a claim to an identity; this is an identity that we have carried all along, and which has not always been recognized.” But the consumer tests raise political and even metaphysical questions.

“An interesting question has been, what part of our identity are we purchasing?” Roberts says. “What does this mean on a political level? For it’s such an individual thing. I’m not sure what it does for group identification, but there may be potential for interesting developments beyond just being able to say, ‘My people were Asante,’ or ‘My people were Ibo.’ In many ways, black Caribbean is an ethnicity or collection of linguistic-national ethnicities. Something similar might be said of many contemporary African ethnicities. And black African is an ethnicity. So what does this [genetic] purchase mean for contemporary ethnic, cultural, and political configurations?”

Nelson shared these concerns, and her inquiries led to some unexpected findings. Among them was that the financial transaction itself has meaning.

“With a consumer test, you are actually paying money to get your identity,” Nelson says, contrasting this with medical or legal situations where your DNA — your physical blueprint — is in others’ control. “People feel they have volition: *I bought*

this. It should make sense for me. I should have a role in saying what it means.” Nelson found, too, that customers have no illusions about the test’s definitiveness. “People I talked to are very keen about the technical limitations, keen that the results are based on inferences,” she says. “But given that the alternative is to know nothing at all, it becomes meaningful to know even a little.”

And how do people feel when that certificate comes in the mail?

“They’re relieved that they’re finally getting an answer. Often they’re elated. Almost always they’re gratified. Sometimes they’re surprised. And then coincidence comes into play: people will say, ‘This result makes sense because it’s an African community of great cooks, and in my family line there are lots of great chefs.’ Or, ‘This makes sense because this community has lots of women potters, and in my family in Virginia women have been working with pottery for generations.’ So we have this effort to find the thing that works, the alignment that makes it all fit together. Even when the information is inconsistent, there is still an attempt to tell a story about it.

“At the heart of what I’m trying to say is that DNA testing is all about telling stories, and having something to tell a story around.”

But the biggest surprise for Nelson was how people assimilated their newly acquired heritage. She had assumed that they would run with the information and redefine themselves on a genetic basis. What happened was that people absorbed the scientific data into an already complex calculus of identity that included the usual markers: foodways, religion, education, geography, occupation, affiliations, and domestic roles. DNA ancestry did not supplant, Nelson found; it enhanced.

“We put so much stock in science, so you’d think science trumps all,” Nelson says. “But identity is also an ongoing cultural process. It’s not just genetic.”

Nor is it just personal. Nelson reports that the search for one’s ethnic roots has a crucial collateral effect: people are reckoning with history itself.

“DNA ancestry is not just Grandma taking a test,” Nelson says. “These tests have social power. You get to say for yourself: *this happened*. And in a national community that doesn’t want to say *this happened*, that’s incredibly powerful.”

The circle and the heart

In September 2015, Nelson attended the centennial conference of the Association for the Study of African American Life and History, founded by historian Carter G. Woodson. The event was held at the Sheraton hotel in downtown Atlanta.

Naturally, there were echoes of her trip to Atlanta five years earlier, when she'd stood in the Hyatt Regency ballroom and watched the crowd's joyful outburst at the ancestry revelations of the two women who'd preceded her. That reaction only amplified her fear that her private skepticism about commercial genetic genealogy — "its technical limits and its symbolic excess," and the chance it might "contribute to a world in which claims of citizenship are tied to practices of consumption" — would be visible to the spectators and "ruin the experience of genetic revelation and African redemption that they had come to enjoy."

The man holding the microphone that day in 2010 was Rick Kittles, with whom Nelson, in the course of her research, had become professionally acquainted.

Kittles cut to the chase, announcing to the nervous but outwardly composed sociologist, and to the entire room, that she, Nelson, was related to the Bamileke people of Cameroon. Nelson, having a vaguely out-of-body sensation, smiled widely and said "Thank you," and, slightly bewildered, looked out at the crowd, which, to her relief, broke into delighted applause. Nelson walked off the stage and into a sea of hugs and congratulations — an experience that she calls "very powerful, very emotional."

Now, in 2015, five years after learning her likely ethnic roots (she doesn't feel much different, though now the word "Cameroon" jumps out at her in the newspaper), Nelson was back in Atlanta for the history conference. As she was rushing through the lobby of the downtown Sheraton on her way to a panel, she saw a familiar-looking man.

He was standing there alone at the front of the lobby, and looked an awful lot like LeVar Burton. *Was* it LeVar Burton? Of all people? But what was he doing here?

Nelson went up to him. "Sorry to bother you," she said. "My name's Alondra Nelson. I just finished writing a book, and you appear in it, because it's a lot about *Roots*." She explained that *The Social Life of DNA* would be out in January 2016, in time for the fortieth anniversary of Alex Haley's book.

“Oh,” Burton said, “we’re doing a TV remake of *Roots*, and I’m here to spread the word.”

Burton asked Nelson what she thought of the idea. Nelson told him that one reason she writes about the *Roots* phenomenon is that when she talks to younger people, they don’t understand the dimensions of that event — what it was like when there were pretty much three TV channels, and everyone you knew was watching the same thing for eight nights straight.

Burton nodded. He said that *Roots* needed to be made for a new generation. They chatted for another minute, and then Nelson, to affirm the reality, took out her phone and snapped a selfie of the two of them. Later she would say, “It’s what Oprah would call a ‘full-circle moment.’”

But there is another shape that comes to mind, one that Nelson writes about: the heart-like figure on the coffin lid at the African Burial Ground, thought to represent the Akan word *sankofa*. The shape is what you might get if the double helix of DNA was decoupled and the strands faced each other and curled their heads under and touched — a shape that is imprinted on the black granite slab of the Ancestral Chamber and adopted as the site’s official emblem.

A translation of *sankofa* appears in the visitors’ center of the African Burial Ground National Monument. The sign reads: LOOK TO THE PAST TO UNDERSTAND THE PRESENT. It’s an apt epitaph for the burial ground, and for the social life of DNA.

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