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The Roots of African Eve: Science Writing on Human Origins and Alex Haley's *Roots*

In January 1987, molecular biologists Rebecca Cann, Mark Stoneking and Allan Wilson sparked a major scientific controversy with the publication of an article entitled 'Mitochondrial DNA and human evolution' in the journal *Nature*. In the article they claimed that by analysing mitochondrial DNA derived from the placentas of 145 women representing five major geographic regions, they could infer that 'Africa is a likely source of the human mitochondrial gene pool',¹ and in addition, they offered a 'tentative time scale' which postulated that 'the common ancestor of all surviving mtDNA types existed 140,000–290,000 years ago'.² Mitochondrial Eve, or African Eve as she became more popularly known, was born. The controversy was immediate and intense. Palaeoanthropologists objected to what they saw as the complete dismissal of the fossil record by the Berkeley geneticists, whose study represented the first major attempt to apply the relatively new science of molecular biology to human origins, the study of which had previously been the province of palaeoanthropology. Palaeoanthropologists themselves had been split over what the fossil record revealed about the geographical origins of *Homo sapiens*: while multi-regionalists argued that modern humans had evolved from archaic homo populations in different geographical locations, others favoured an 'Out of Africa' model of the migration of modern humans from Africa to other parts of the world. However, whereas most traditional proponents of the Out of Africa model believed that once modern humans left Africa they interbred with premodern populations in other regions, the African Eve hypothesis stated that there had been no such interbreeding, that modern humans had simply replaced existing premodern populations.³ Some 'Out of Africa' proponents, most prominently Chris Stringer and Robin McKie, wholeheartedly embraced the biologists' findings, and by the 1980s other evidence from within palaeoanthropology was pointing to Africa as the birthplace of modern

humans.⁴ However the multi-regionalists only intensified their campaign. The leading multi-regionalist advocate Milford Wolpoff organized a symposium for anthropologists who opposed African Eve and described the hypothesis as consisting of the 'idea of killer Africans sweeping out across Europe and Asia, over-running everybody', genocidal terminology that had been carefully rehearsed and planned.⁵

Indeed, what was something of an academic battle over the question of human origins was also an ideologically and racially charged debate. Each side tried to accuse the other of being racist; the multi-regionalists were accused of exaggerating racial divisions while African Eve advocates were accused of implying a total and violent replacement of *Homo erectus* (or Neanderthals) by *Homo sapiens*.⁶ Much of what Venla Oikkonen has identified as the 'emotional tensions' in journal articles and scientific commentaries about African Eve in the 1980s and 1990s appears to be focused around the racial implications of the hypothesis.⁷ Proponents of the hypothesis were keen to seize the findings for anti-racist ends, to, in part, re-envision genetics as an anti-racist science which emphasized commonality and racial unity over difference, and their work was viewed favourably by black groups and commentators who seized upon the findings as positive evidence that 'all the world's people are Africans in disguise'.⁸ Yet others were uneasy about locating the source of all humanity in Africa, resulting in the 'hate mail, crank mail' and 'strange scrawling notes' that Rebecca Cann, lead author of the mitochondrial study, describes receiving after the publicization of her team's findings.⁹ Racist assumptions often surfaced in the discussions of those opposed to the hypothesis to the degree that, as Jason Antrosio argues, rather than celebrating Africa as the cradle of humanity, it is rather leaving Africa which came to be celebrated in certain academic and popular writing, a kind of celebratory attitude that the historian of science Robert Proctor has dubbed 'Out of Africa – thank God!'.¹⁰ The media response to the hypothesis similarly betrayed an unease about the racial implications of Eve: Newsweek's best-ever selling cover depicted an African Adam and Eve as mixed-race African Americans with chemically processed hair, an image which the illustrator claimed had originally been 'much more pure' but was changed at the request of the cover art director who wanted an illustration that would be 'more appealing to a wider variety of people'.¹¹

Yet despite threatening to unsettle racialized assumptions and hierarchies, the African Eve hypothesis became, by the 1990s, the academically accepted, dominant theory of human origins. Several scientists raised serious questions (that were not racially inflected) about the study at the time; some queried

the team's statistical analysis, while others objected to the way Cann and Wilson had interpreted the racial origins of the women whose DNA they had studied.¹² Nevertheless, the theory took hold and has, since its inception, been taught to anthropology and biological science students alike. A slew of popular science writing on human origins was published in the wake of the hypothesis including Michael H. Brown's *The Search for Eve* (1990); Brian M. Fagan's *The Journey from Eden: The Peopling of Our World* (1990); Roger Lewin's *The Origin of Modern Humans* (1993); Richard Dawkins's *River Out of Eden* (1994); Richard Leakey's *The Origin of Humankind* (1994); Chris Stringer and Robin McKie's *African Exodus: The Origins of Modern Humanity* (1996); Bryan Sykes's *The Seven Daughters of Eve* (2001); Spencer Wells's *The Journey of Man: A Genetic Odyssey* (2002); John H. Relethford's *Reflections of Our Past: How Human History Is Revealed in Our Genes* (2003); Stephen Oppenheimer's *Out of Eden* (2003) and Norman A. Johnson's *Darwinian Detectives: Revealing the Natural History of Genes and Genomes* (2007) to name only some. Television documentaries such as *Children of Eve* (1987), *The Real Eve* (2002) and *Journey of Man* (2003) also embedded the story of the Eve hypothesis in the popular imagination.

However recent developments have called into question the validity of the hypothesis in ways which suggest that African Eve may be losing favour in the second decade of the twenty-first century. In 2011 scientists studying the genome of a Neanderthal skeleton revealed that interbreeding did take place between archaic and modern humans, disproving the replacement theory at the heart of the Eve hypothesis.¹³ Human evolution is now thought to be more complex than previously thought; there is evidence that European and Asian populations contain some Neanderthal DNA, whereas African populations share nothing with Neanderthals, pointing to interbreeding either when humans emerged from Africa or at a later date. In 2010 scientists discovered a third hominin previously unknown to science – Denisovans – whose DNA matched neither humans nor Neanderthals, but traces of whose genomes were found in Australian aboriginal populations and in the Philippines.¹⁴ African Eve is not yet dead, as continued references to her and to related discoveries attest, however there is now enough doubt around the hypothesis for scientists and sociologists of science to revisit the circumstances and context in which the theory took hold.¹⁵

The question that is raised by recent challenges to the hypothesis is why, given its scientifically contested foundations, the African Eve hypothesis was able to gain such credibility that it became scientific orthodoxy. Why did the

reservations and questions raised about the study at the time it was published come to be dismissed and ignored in favour of a definitive narrative of an African Eve? Alexandra Hofmänner suggests that it was specifically the invocation of Africa, as an imaginative geography of otherness which has been projected onto the frontiers of science, which meant that an African Eve would always be more successful than a Russian, French or Korean Eve.¹⁶ Such geographies motivate 'the collection and transport of empirical artefacts, information and ideas from elsewhere to sites of analysis where they are measured, mapped, qualified and interpreted against a Western epistemological order and its standards, concepts and theories'.¹⁷ The hypothesis, in this sense, provides an example of the 'discursive conventions' operating within and privileged by anthropological science which 'determine which social categories will succeed in attaining significance in the constitution of the reward system of science'.¹⁸ Another theory is that it was the Eve nickname itself which was responsible for the significant attention which the findings received and their eventual acceptance by both scientists and the public. As Kathleen Fuller contends, if Eve 'had been named mtMable, the rush to embrace her probably would not have occurred'.¹⁹ The Eve sobriquet reportedly came from the paper's authors themselves, being 'casually bandied about the laboratory or raised at Wilson's weekly progress meetings', although both Cann and Wilson would later distance themselves from the name.²⁰ Fuller argues that 'the name "mtEve" fed into the creation stories many scientists were raised with; even if they no longer believed the stories, the concepts still manifested at an unconscious level'.²¹ While providing a familiar and comforting way of conceptualizing human origins, the Eve nickname led to confusion in both public understanding and scientific circles where, as Roger Lewin has shown, 'captivated by the powerful images of an African Eve, many people naturally assumed that the Berkeley researchers were talking about a literal Ur-mother – the first modern human, with her Adam', when in fact Eve was simply one of many individuals in a population from which modern humans evolved.²² For Lewin, Wilson's description of Eve as 'one lucky mother' muddled the debate, leading writers to describe her in ways that the evidence did not imply.²³ Nevertheless, Eve remained a popular point of reference for scientists writing about human origins. Richard Dawkins, as the title of his 1995 popular science book *River Out of Eden* suggests, embraced the biblical analogy wholeheartedly, although he was keen to point out that 'there is more poetry in Mitochondrial Eve than in her mythological namesake'.²⁴

Yet there was another familiar origin story upon which proponents of this new tale of human ancestry were able to draw; Alex Haley's novel *Roots*, which

had been published eleven years earlier in 1976 to immediate acclaim. Part autobiography, part fiction (Haley described it as 'faction'), *Roots* tells the story of Haley's African ancestor, Kunta Kinte, who lives a peaceful life in the Gambia, until he is captured by slave traders and taken to America on a slave ship. The narrative follows the lives of Kunta's descendants, enslaved people who keep the story of their African ancestor alive, until it eventually reaches Haley in the 1970s present. The book ends with Haley's account of how he came to write it and his trips to West Africa where he meets a griot (an oral historian) who verifies his tale. Haley's novel was extraordinarily popular, selling over 1.5 million copies within its first eighteen months and winning the National Book Award in 1976 and the Pulitzer Prize in 1977. *Roots* was made into a TV series which, when it aired in January 1977, made broadcasting history by becoming the most watched television programme ever in the United States, 130 million viewers (3 in 5 Americans) seeing all or part of the series, newspapers reporting the cancellation of night school courses, a huge drop in restaurant business and the emptying of bars on the night of the final episode.²⁵

This chapter explores how Haley's novel and the search for African ancestors that it inspired among black populations provided scientists and science popularizers with a pre-existing narrative of African origins upon which to draw in their own storytelling about the origins of humankind in Africa. Haley's 'black family bible'²⁶ helped scientists to tell the story of African Eve in a way which would be both comprehensible and appealing to the public, lending their account – and genetics more broadly – power and plausibility by reinforcing what Keith Wailoo calls 'already existing cultural and political forms of imagining self and the past'.²⁷ *Roots* offered a narrative model for thinking about the relationship between African ancestors and present-day humans, a model taken up by Eve's proponents who were concerned to emphasize the implications of the hypothesis for individual identities in the present. *Roots* was an appealing intertext because Haley's tale of the struggle and survival of African Americans, and the ancestry tracing that it inspired, helped lend credibility to African Eve as an anti-racist hypothesis, the promotion of which had been partly based on a desire to distance anthropology from the race theories which had historically arisen within the discipline.²⁸

Yet *Roots* ultimately appealed, I suggest, because it had itself been written somewhat anthropologically; Haley had been influenced by his reading of earlier African anthropologists, the influence of which partly accounts for the conservatism that many critics felt characterized Haley's portrayal of Africans and their American descendants. While the novel tells a story for all African

Americans prevented through the legacies of slavery from knowing their ancestries, it did so in a traditional form that was palatable to white readers and later audiences who watched the television show. Haley's traditional and to a degree non-threatening tale of African ancestry thus provided a relatively safe formal example for science writing on human origins in Africa. *Roots* was appealing because this science writing was itself implicitly concerned with promoting the idea that we are all from Africa to a white readership. The influence of *Roots* ironically racialized a theory which was intended to be anti-racist, and ultimately led to the emergence of the racially inflected conception of ancestry which predominates today: the idea that we can know who we are through selected ancestors and that we can know them through genetic science. This chapter offers an account of the narrative origins of this idea and of the significance of a literary text in the emergence of one of the most controversial theories of human origins of the twentieth century.

Finding *Roots* in genes

Roots is referenced directly in several popular science books about, or with sections concerning, human evolution and African origins that were published in the wake of the Eve hypothesis. Chris Stringer, a palaeoanthropologist who embraced the geneticists' findings, concludes his 1996 book *African Exodus: The Origins of Modern Humans* (co-authored with journalist Robin McKie) by quoting what they describe as the 'emotional climax' of Haley's novel, where Haley meets his lost ancestors in Africa in a ceremony which Stringer compares to humanity's relationship with its African kin.²⁹ The anthropological geneticist John Relethford opens the first chapter of his 2003 book *Reflections of Our Past: How Human History Is Revealed in Our Genes* by relating how as a graduate student he became captivated by *Roots*, both novel and TV series, which inspired his own interest in genealogy.³⁰ Geneticist Norman A. Johnson begins the section on mitochondrial DNA and African Eve in his book *Darwinian Detectives: Revealing the Natural History of Genes and Genomes* (2007) with a description of how 'Alex Haley traced back his ancestors to Africa'.³¹ Steve Jones, however, viewed *Roots* in less inspirational terms, writing in his 1993 book *The Language of the Genes* that 'Alex Haley, by comparing his genes with those from Africa, would have learned much more about his forefathers than he could hope to uncover from the records'.³² For Jones the 'ancestral voices' which 'are particularly fluent in telling the story of the past' are mitochondria,

which are 'an accurate record of history'.³³ Jones typifies the attitude that many science writers have taken towards the historical record when writing about genes and ancestry – that is, as Deborah Lynn Steinberg puts it, to read genes as documentary evidence in a way that 'narrates social history as (a functional effect of) evolutionary biology'.³⁴ Discussing Jones's reference to Haley's novel, Steinberg contends:

Jones's invocation of *Roots* as illustrative of the limits of social history and potentiality of genetics takes the textual metaphor to a number of disturbing conclusions. First is that genes enscribe a precise taxonomy of racial/ethnic origins... Second is the positivist notion that genetic profiling not only (accurately) traces racial, ethnic and national migrations but that these tracings are meaningful, indeed more meaningful, when they are stripped of political and economic context.³⁵

A similar dismissal of social and historical contexts is evident in Relethford's book in which (ironically, given that *Roots* provides him with a means to frame the opening questions of his book) he writes that 'our written and oral histories are incomplete and lack much time depth' and that genes are a much more authentic way of understanding the past.³⁶

While *Roots* may at first appear as simply a passing point of reference – whether emotionally embraced or dismissed – in such reflections on human origins, its influence goes deeper and can be discerned in the narrative organization and tone of this writing. This is perhaps most evident in the fusion of individual origins with wider human ancestries, and the narrative emphasis on the present as being the key to the past, which both *Roots* and science writing on human origins share. Haley's novel garnered such power and popularity, among African Americans and beyond, because he consciously conflated his own, individual search for ancestral roots with a wider tale of a collective ancestral past in Africa. The novel begins with an acknowledgements section in which Haley explains how the book arose from his 'intense wish to explore if my maternal family's treasured oral history might possibly be documented back into Africa where all black Americans began' before he goes on to write:

Finally, I acknowledge immense debt to the griots of Africa (griots are storytellers) – where today it is rightly said that when a griot dies, it is as if a library has burned to the ground. The griots symbolize how all human ancestry goes back to some place, and some time, where there was no writing. Then, the memories and the mouths of ancient elders was the only way that early histories of mankind got passed along... for all of us today to know who we are.³⁷

From the outset, Haley presents his semi-autobiographical work as at once personal family saga, black history and human history, producing a work in the tradition of Afro-American autobiography which could be read, as Helen Taylor argues, not 'as personal statement or exploration, but as communal expression of the collective experience and unconscious'.³⁸ Haley knowingly wrote, as he explains at the end of the novel, a 'symbolic saga of all African-descent people',³⁹ and in so doing tapped into a desire among African Americans to re-connect with Africa as a source of both ancestry and pride, a desire that had been growing since Malcolm X had articulated the need for a history of the African origins of slaves told by their ancestors in his *Autobiography*, which Haley had co-authored. What made the wider, collective identification with Haley's story so easily possible, however, was the temporal structuring of his narrative. Through including in his acknowledgements section a partial statement of intent (as quoted above), Haley places himself, and the 1970s present, as the starting point for a narrative which otherwise begins, a page later, in 1750. The effect of this is that it is Haley himself (and by extension 'all of us') who becomes the hero of his epic tale, as it is Haley who begins and ends an otherwise linear narrative of which Kunta Kinte is undoubtedly the star. As Jerome de Groot argues, by the end of the novel, 'the author/researcher is the purpose of the research and the novel, the focal point of everything that has gone before'.⁴⁰ Distinctions between past and present are blurred in this narrative frame, where Haley, 'forever latent in the lives of his ancestors, emerges as heir to this past, the ready recipient of an uninterrupted lineage of strength and resistance'.⁴¹ History functions as an extension of identity, a way of understanding both collectively and individually who we are in a present.

Relethford's reference to *Roots* at the beginning of *Reflections of Our Past* is immediately followed by an explicit link between his individual desire to know his family's ancestry and a much wider, scientific quest for knowledge of humanity's origins, the purpose of which is to draw the reader into his narrative as a potential protagonist of the epic tale he is about to narrate:

Occasionally, a show would be aired that drew my primary attention away from my work and to the tube... One show that particularly captured my interest and attention, to the detriment of my studies for a week, was the mini-series *Roots*... I was captivated by both the miniseries and the book. In addition to the sheer drama, I found something very appealing about the idea of finding one's 'roots' and extending family history into the past. A number of years later, I acted upon this interest and contacted relatives on both my mother's side and my father's side of the family... Many of you may have similar interests in family

genealogy. It is natural to be curious about where you come from ... My specific interest in family history grew into a broader interest in history and ancestry in general ... much of my eventual professional research would ultimately revolve around 'roots' and human history.⁴²

Relethford invites his readers to begin connecting the curiosity they might have about their own family history to the history of humankind, which become one and the same as he relates the focus of his book as being

on the evolutionary history of a population, or a group of populations ... the scope of this book ranges from events that happened millions of years ago to events that occurred within the past few centuries. In a broad sense, this book deals with questions common to all humans – who are we, and where do we come from? In other words, what are our 'roots'?⁴³

Relethford's direct, inclusive addresses to readers – 'we' and 'our' – signal his intention to tell a story which, much like Haley's, is in some sense a quest for self-knowledge, where 'we', 'our genes' can 'reconstruct the past' in a narrative which is otherwise structured 'in terms of a chronological journey'.⁴⁴ The effect, as Marianne Sommer identifies in her analysis of Relethford's book, is that 'the reader is led from thinking about his or her grandparents and great grandparents to the evolutionary history of populations, their migrations, and structural developments. The knowledge generated through population genetics is presented as a seamless extension of personal memories and family stories into humanity's deep past'.⁴⁵ Such a leap between past and present, family and humanity, is made possible because the genetic techniques which the team who 'discovered' African Eve introduced foregrounded the importance of individuals living in the present. Unlike traditional palaeoanthropological accounts of human evolution which relied on fossil evidence – human skeletons which are thousands of years old – to tell the story of human origins, the DNA analysis which led to the discovery of Eve involved deciphering the past from the present – from the placentas of living women.⁴⁶ These techniques stressed the primacy of present-day individuals in understanding human history in ways upon which science writers could draw in making the story of human origins in Africa relevant and exciting for contemporary readers; as Stephen Oppenheimer puts it in *Out of Eden*, 'we are participants in this genetic story, since 99 per cent of the work of reconstruction of our ancient gene trees was carried out using modern DNA given voluntarily by people living in different parts of the world today. This is a story of relevance to each and every one of us'.⁴⁷

Haley's novel provided a literary model for how Eve's tale could be expressed in narrative terms. Haley not only positioned author and reader as the starting point of an epic history, but his prioritization of a single line of descent has echoes in the shape and even methodology of the hypothesis itself. As Norman Johnson explains:

How did Wilson's group track back to the most recent common ancestor of our mitochondrial DNA, this Eve? They started with the idea that an Eve, a most recent common ancestor, existed, and then they worked backwards, both logically and chronologically. In this way, the method of Cann, Stoneking, and Wilson was not all that different from what traditional genealogical researchers do. Although the story of *Roots* was told chronologically from Africa circa 1767 to 1970s America, Haley's detective work was largely backwards. He started with the family he knew, and traced his way back generation by generation.⁴⁸

Haley's research into his family history had originally been much wider: he had travelled to Ireland in search of his white ancestors, an experience he wrote up, but as his biographer Robert Norrell asserts, 'Over time, as his story became an exclusively African and black narrative, he deleted the passage about Ireland'.⁴⁹ The story that emerged is one which instead tapped into the desire of African Americans to know their African ancestry specifically, Haley creating a tale where Kunta's 'manhood and his Africanness united the family even in his absence' creating a 'harmonious reunion between an African past and an American present',⁵⁰ an emphasis designed to create a singular line of 'pure' African descent of which he and all African Americans could be proud. Yet, if conducting a comprehensive genealogy, Haley might have explored his ancestry along all lines, including his white European forebears that the novel itself makes explicit are part of his family; Kunta's daughter Kizzy is raped by her enslaver and much of the narrative focuses on the outcome of that rape, her son Chicken George.⁵¹ This is an aspect of black American ancestry which Octavia Butler addresses in her 1979 novel *Kindred*, in which the novel's heroine travels back in time to save her white slave-owning ancestor and, by extension, herself. However, Haley's novel propounded a racialized politics of identity which consciously and symbolically prioritized a single (African) biological lineage as the root of identity and belonging, when any number of his ancestral lineages could have been explored with differing results.

The African Eve hypothesis similarly involved stressing the singularly African lineage of the African Americans from whom samples were taken,

despite a forthcoming study which suggested there was up to 39 percent 'white' input into the black American mitochondrial gene pool.⁵² Cann had used mitochondrial DNA mainly from African American women to stand for African populations (only two of the twenty 'African' samples were from women from Africa) which raised questions about how, given the history of slavery in the United States and mixing between black and white populations, these samples from African Americans could be considered indicative of a 'black' or African gene pool. Cann's defence was that sex had historically taken place between white men and black women, leaving the mitochondrial gene pool largely unaffected.⁵³ Yet Cann's controversial use of African American women's MtDNA to stand for African MtDNA did not lead to a discussion of the (genetic) legacies of American slavery (something that would later occur with the revelation, through Y chromosome analysis, that Thomas Jefferson had had children with his enslaved mistress Sally Hemings) or of the difficulties inherent in inferring racial or geographic origins from genes. Instead, the need to emphasize humanity's direct African lineage foreclosed this possibility, even though the Eve study relied on the contemporary prioritization of a singular characteristic (MtDNA) in order to construct a meaningful line of ancestry. As Daniel Dennett recognizes in his discussion of Mitochondrial Eve:

Speciation can now be seen to be a phenomenon in nature that has a curious property: you can't tell that it is occurring at the time it occurs! You can only tell much later that it has occurred, retrospectively crowning an event when you discover that its sequels have a certain property... Mitochondrial Eve can only be retrospectively crowned.⁵⁴

Such privileging of a singular ancestral line as representative of a definitive point of origin meant that advocates of Eve were able to emphasize the unity and similarity of human beings in the face of arguments from their multi-regionalist opponents. Indeed, what some scientists also appear to have borrowed from Haley was a way of narrating the story of human origins as a battle against all odds to tell that story in the face of adversity and racism. The triumph and achievement of the end of *Roots*, which is not only that Haley has been reunited with his Gambian kin but that he has been able to tell his story which 'can help to alleviate the legacies of the fact that preponderantly the histories have been written by the winners',⁵⁵ are replicated by Chris Stringer and Robin McKie when they quote Haley in the final paragraph of *African Exodus*. From the outset they frame their story as a fight to tell the truth of human origins in the face of 'a sustained programme of vilification by scientists who have spent their lives

committed to the opposing view'.⁵⁶ Their book ends on a similar note where in the penultimate paragraph they describe how

the scientific impact of the Out of Africa theory has already been enormous. Ten years ago, despite the best efforts of researchers like Chris Stringer, Gunter Brauer, and Desmond Clark, it would not have been possible to organise a scientific congress to discuss our recent African Exodus – there were too few supporters and too many influential opponents. But those days have gone. Its proponents now dominate the field... Our African Exodus, once a heresy, is today's orthodoxy... Two years after Chris last held the skull of that ancient forebear on the eve of its return to Ethiopia, Alex Haley – the black American author – told the story of the hunt for his own African 'Roots' (as his book was called). In his narrative's emotional climax, he tells how, reunited with his lost Gambian kin, the village women pass him their babies in an ancient 'laying on of hands' ceremony. Symbolically Haley was being told: 'Through this flesh, which is us, we are you and you are us.'⁵⁷

Positioning themselves as heroically re-writing the history of science in the face of opposition to the Eve hypothesis, Stringer and McKie's triumph mirrors that of humans' African ancestors themselves. The interactive website that accompanies Oppenheimer's *Out of Eden* takes a similar tone: 'We are the descendants of a few small groups of tropical Africans who united in the face of adversity, not only to the point of survival but to the development of a sophisticated social interaction and culture expressed through many forms.'⁵⁸ Just as Haley fights to tell his true family story and his ancestor Kunta Kinte survives the physical and mental torture of slavery in order for him to do so, so African Eve's brave survival becomes embodied in us, and as a story to be told by a group of courageous scientists in the present wanting to uncover the truth about our human origins in Africa.

Clearly not all of this science writing concerning Eve makes direct reference to *Roots*, but the situation of contemporary African Americans and Black Britons seeking to trace their ancestries back to Africa – a phenomenon that can be traced back to the popularity of *Roots*⁵⁹ – also appears repeatedly in this writing and functions, as more overt narrative echoes of *Roots* do, as a means of reiterating the anti-racist credentials of this new approach to African origins. Stringer and McKie were keenly aware of the racial implications of the hypothesis: 'Already the story of our African Exodus has entered the maelstrom of American racial issues'⁶⁰ they write, citing the theory as a defence against attempts to link race and intelligence such as the infamous Bell Curve study. They ask readers to 'just consider the political implications' and note that 'our theory has made a great

impact in black communities, particularly in the US. Pressure from organisations such as the Tu-Wa-Moja African study group recently led the Natural History Museum in Washington to close parts of its exhibition on human evolution because it did not reflect Out of Africa thinking.⁶¹ Such statements position genetic and anthropological science as righting the wrongs of the past, as helping in the fight against racism, much as Haley sought to do with *Roots*. Yet more than this, genetics is positioned as having a central role in enabling black people to tell stories of the kind that Haley set out. Bryan Sykes ends *The Seven Daughters of Eve*, a book about 'how the history of our species, *Homo sapiens*, is recorded in the genes that trace our ancestry back into the deep past',⁶² with an account of working with a woman from Bristol with Jamaican parents who wanted to know more about her ancestry. His description of her reaction to his findings is one in which science enables the revelation of a history previously ignored, as the woman is transported through the generations back to Africa; 'the effect on her was overwhelming. She was literally lost for words... It was as if the DNA was itself a written document from her ancestors, which in a sense it was; a document that had been handed down, one generation at a time, from the woman who had endured and survived that terrible voyage from Africa.'⁶³ Mitochondrial Eve once again collides with the example of an enslaved African ancestor who in turn connects to individuals in the present, in a moment in which the science of human origins liberates black people. However while the anti-racist sentiment behind connecting humanity's origins in Africa with the struggles of the living descendants of slaves is clear, this entanglement ultimately proves highly problematic for thinking about Eve. For rather than prompting a discussion about the legacies of slavery and racism, and their relationship to genetic science (a discussion which could have begun, for example, with the contested 'African' MtDNA samples), what African ancestry tracing and its precursor *Roots* helped to support in scientific narratives on human origins is a largely conservative mode of conceiving of race, kinship, ancestry and 'Africanness' which was familiar and acceptable to a white readership who needed to accept Eve as their ancestor and the methodology of genetics more broadly.

Anthropological Roots

Above all, *Roots* served as such a useful intertext in narratives on human origins in Africa because Haley represented race and ancestry in a traditional manner, drawing heavily upon anthropological and historical sources to produce a

narrative which was itself, to a degree, anthropological in style and tone. According to Norrell, as part of Haley's research for *Roots*, he and his researcher George Sims studied anthropological works on West Africa to the degree that 'the first draft was a compendium of anthropological information on African life'.⁶⁴ Following the publication of an article entitled 'The African' in the *New York Times Magazine* in 1972, Haley received a letter from retired anthropologist Ina Corrine Brown praising his work and suggesting sources at which he might look.⁶⁵ Haley's novel became a 'patchwork' of 'pieces of anthropological scholarship incorporated whole, potted textbook histories, appropriated pieces of other writers' novels, folk memory, research, errors and epiphanies',⁶⁶ a patchwork that would eventually lead to two plagiarism lawsuits, the second of which Haley settled out of court with the anthropologist and novelist Harold Courlander. Haley conceded that several elements of Courlander's earlier novel *The African*, published in 1967, had made it into *Roots*, although Norrell has shown that the settlement was not intended by Haley to be an admission of guilt and that the judge in the case held racist views and doubted whether a black man like Haley could have written *Roots*, making a successful defence unlikely.⁶⁷

Whether or not *Roots* did plagiarize *The African*, its indebtedness to anthropological writing was highlighted in a critical article written by Courlander, in which he argues that, setting aside the plagiarism issues, Haley 'derogated the ideal he sought to celebrate' in his characterization of Kunta Kinte and Africans in simplistic and, it is implied, potentially racist terms.⁶⁸ Courlander writes that 'the Mandinka, like the Bamana, Soninke and other peoples of the region, were far more sophisticated about Europeans and products of Europe than Haley suggests'⁶⁹ so that, for example, Kunta's inability to recognize horses in America doesn't ring true when 'horses had been a part of the scene in Sudanic Africa for centuries'.⁷⁰ Yet simultaneously, Courlander contends, Kunta takes on the ethnological perspective that is implied by such characterization: Haley has 'placed in Kunta's mind the observations and knowledge of generations of scholars' as Kunta observes in detail 'what Bell, the cook in the Big House, like an academic Africanist calls "Africanisms"' ⁷¹ of the American-born enslaved people he lives alongside. Courlander provides the following example from the novel as evidence:

These heathen blacks wouldn't understand drumtalk any better than the toubob. Kunta was forced to concede, though – if only with great reluctance – that these pagan blacks might not be totally irredeemable. Ignorant as they were, some of the things they did were purely African, and he could tell that they were totally unaware of it themselves. For one thing, he had heard all his life the

very same sounds of exclamation, accompanied by the very same hand gestures and facial expressions. And the way these blacks moved their bodies was also identical. No less so was the way these blacks laughed when they were among themselves – with their whole bodies, just like the people of Juffure.⁷²

For Courlander, Kunta's ethnologically detached, snobby, attitude towards his fellow slaves discredits the novel in literary terms, but we might also view Kunta's almost scientific gaze not as the result of extensive borrowing from anthropological sources, but as part of a strategy (if crude and limited in its success) on Haley's part to write a hero who is the intellectual equal of the whites who enslave him. Kunta's observations of white people in particular seem to deliberately reverse colonial anthropological discourses on Africans as Haley turns the language of the (racist) white observer onto the whites themselves. For Kunta, the white slave raiders 'had a peculiar stink', the white deck hands on ship had 'faces pitted with the holes of disease, their peculiar long hair in colours of yellow or black or red, some of them even with hair around their mouths and under their chins' and 'a kind of paleness without features that he knew would never leave his mind'.⁷³ The first white woman he sees in America astounds him because 'after seeing the hungry way the toubob on the great canoe had lusted after black women, he was amazed to see the toubob had women of their own; but looking at this specimen, he could understand why they preferred Africans'.⁷⁴ When he later encounters more poor white indentured labourers, Kunta is astounded because 'even the wild animals of his homeland, it seemed to Kunta, had more dignity than these creatures'.⁷⁵ Kunta's dehumanizing observations of the white people he encounters are at one level a response to the inhuman ways in which they are behaving; but his observations are also an attempt to reverse the pseudoscientific, anthropological narratives through which Africans had so frequently been viewed. By making the whites the 'specimens' to be viewed in this way, Haley goes some way to undermining the dominance and truth status of these discourses.

Indeed, Haley's exposure to scientific, and pseudoscientific, ideas about Africa extended beyond anthropological scholarship. Haley had begun work on what was to become *Roots* at the same time as he was writing the *Autobiography of Malcolm X* – an account of Malcolm X's life and political beliefs published in 1964 which was Haley's first real commercial and critical success.⁷⁶ Whilst Haley is often portrayed as having been keen to distance himself from what were considered to be Malcolm X's radical and controversial views, it seems clear that much of what Malcolm X articulated about African Americans' ignorance of

their history and ancestry inspired Haley to uncover this history in *Roots*. In one episode Malcolm X describes his conversion to the Nation of Islam while in prison, which was prompted by his brother Reginald, who tells him 'you don't even know who you are ... You don't even know, the white devil has hidden it from you, that you are a race of people of ancient civilisations, and riches in gold and kings. You don't even know your true family name,'⁷⁷ a sentiment echoed in Kunta's observation of his fellow American-born slaves in *Roots*; 'how ignorant of themselves they were; they know nothing of their ancestors, as he had been taught from boyhood.'⁷⁸ For Malcolm X, the solution lay in the core teachings of Elijah Muhammad, founder of the Nation of Islam, which he describes thus:

'The true knowledge,' reconstructed much more briefly that I received it, was that history had been 'whitened' in the white man's history books, and that the black man had been 'brainwashed for hundreds of years.' Original Man was black, in the continent called Africa where the human race had emerged on the planet Earth ... The devil white man cut these black people off from all knowledge of their own kind.'⁷⁹

Muhammad preached that blacks were the first race on earth and that the white race was genetically engineered by a disaffected black scientist called Yacub, who, having been exiled, 'decided, as revenge, to create upon the earth a devil race – a bleached-out, white race of people.'⁸⁰ This origin story led Malcolm X to read *Findings in Genetics* by Gregor Mendel, from which he concluded that 'the white gene is recessive', and to develop an interest in the work of archaeologists and anthropologists in Africa: he cites British anthropologist Louis Leakey's fossil and bone findings as triumphant proof of humanity's origins in Africa, likely one of the 'white men's books' he was forced to use in educating his fellow inmates about the African origins of slaves, who 'wouldn't believe it unless they could see that a white man had said it.'⁸¹

The tension Malcolm X felt in employing the findings and writing of white scientists to locate human roots in Africa is also felt by Haley, who not only aimed to provide black Americans with knowledge of their African origins (and was clearly influenced by X in this regard⁸²) but saw his writing process as a counterpoint to white writing. Explaining how he came to write *Roots*, Haley stated:

Most of what I'd read so far had been written by outsiders, predominantly white missionaries and anthropologists, and even among the most knowledgeable and well intentioned of them, the tone was somewhat paternal and condescending. Their insights and observations were inevitably limited by the cultural chasm separating them from their subjects.⁸³

Haley didn't subscribe to the idea that white people had been created by a scientist called Yacub, but he clearly wrote with the knowledge that humanity originated in Africa. While he had reservations about 'white missionaries and anthropologists,' in writing *Roots* Haley describes how he 'began to devour books about Africa, especially about the slave trade,'⁸⁴ many of which were undoubtedly written by them.

The result is that the while Haley attempted to undermine the (pseudo) scientific anthropological and historical discourses that he recognized as problematic in their representation of Africa and Africans, this was embedded, in *Roots*, within a narrative which reproduced, without irony, the traditional modes of narration to be found in those texts. As Philip Curtin has shown, historians of Africa in the mid-twentieth century who were concerned to overturn the racist idea that 'Africa had no history' initially approached this task by taking 'the argument on the opponent's "terms"', that is, by reproducing an elitist style of history which drew on the same roots as Eurocentric history.⁸⁵ Selecting some segments of African history and ignoring others, such historiography produced, Arnold Temu and Bonaventure Surai contend, a teleological, glorified account of the African past.⁸⁶ This approach is evident in *Roots*, where there is a tension between Haley's desire to redress the absence of black history, to counter the fact that 'histories have been written by the winners' and his own approach to (re) writing that history. Narrative time moves linearly from Kunta's birth through to Haley's triumph, portraying all the while the greatness and exceptionality of the Kinte clan. That theirs is a history worth telling because the family command a high level of respect in Juffure and beyond is an unsettling reproduction of the kind of history that Haley, at the end of the novel, claims to be writing to overcome. Yet Haley's treatment of gender and class reveals his own narratorial alignment with these winning histories. Haley consciously highlights Kunta's sexism and the patriarchal values of Juffure throughout the novel: Kunta 'intended to put Binta in her place as a woman' and 'he would deal firmly with her if she ever made it necessary. After all, she was a woman'. The women are painfully stereotyped as coming to village meetings only 'if a case held the promise of some juicy gossip'. Later when married to Bell, Kunta would 'listen with one ear while he thought about something else'.⁸⁷ While a charitable reading might situate these moments as part of Haley's characterization of Kunta, this patriarchal dominance is reinforced by the narrative itself which is focalized almost exclusively through Haley's male ancestors. Approximately half the book is given to Kunta's life and Haley uses free indirect narration to ensure that other points of view are rarely experienced. When Kunta's daughter Kizzy is sold away

and the story moves with her, there are only a couple of chapters dedicated to her experience before the narrative moves on to the perspective of her son, Chicken George, for the greater part of the second half of the book. Ironically, given that it is Haley's grandmother and great aunt through whom he hears about his ancestral history, women are problematically side-lined in Haley's tale in a way that undermines the mission of his book.

Something similar can be said for Haley's treatment of class. Class stereotypes abound: where Kunta's first enslaver is a rich doctor who treats the people he has enslaved comparatively well, Kizzy's master is poor and (concomitantly) rapes her and treats his slaves badly. On seeing some white indentured labourers, 'it was easy for Kunta to understand why plantation-owning massas and even their slaves scorned and sneered at them as "lazy, shiftless, no-count white trash" ... in fact, as far as he was concerned, that was a charitable description.'⁸⁸ Kunta's view is in direct alignment with the plantation owner, a kind of elite conservatism that is carried over in his attitude towards rebellion and organized resistance,

as much as he hated slavery, it seemed to Kunta that no good could come of the white folks giving guns to blacks. First of all, the whites would always have more guns than the blacks. And he thought about how in his own homeland, guns and bullets had been given by the toubob to evil chiefs and kings, until blacks were fighting blacks.⁸⁹

Despite all his suffering and bravery, Kunta's political stance is unthreatening and pragmatic; he 'didn't believe that a rebellion could ever succeed' yet criticizes his fellow slaves, 'their own worst enemy was themselves ... never did more than a handful so much as protest, let alone resist.'⁹⁰ The kind of resistance that Kunta (and by extension Haley) advocates is cultural: it is the maintenance of Africanness, of African culture, language and identity, which is upheld as more powerful and effective than militant resistance or organized group action – the kind of action being taken by the Black Panthers when Haley was writing the novel in the late 1960s and early 1970s.⁹¹

Haley's relentless focus on the life of one heroic and exceptional individual and the life of his descendants certainly fulfils the role of the griot as Kunta understands it – to tell of 'great deeds of the ancient kings, holy men, hunters and warriors who came hundreds of rains before us.'⁹² Yet it is a telling of history in which many remain losers despite its being told from the perspective of an enslaved person, a history which depicts African Americans through the frame of a family saga which led critics to dub the novel a black *Gone With the Wind*.⁹³ Indeed the novel faced criticism, according to Helen Taylor, from black critics

who located it within the tradition of plantation novels from *Uncle Tom's Cabin* onwards, texts known for their 'patronising, racist or exploitative presentation of black history and experience'.⁹⁴ Haley's apparent blindness to how his blending of historical fact and fiction might in fact challenge traditional forms of historical narrative also resulted in criticism of the novel both for its lack of historical accuracy and for its unacknowledged borrowing from other sources.⁹⁵ Several contemporaneous responses sought to challenge the historical accuracy of the narrative Haley set out, yet rather than argue that 'he was part of an intertextually rich black tradition'; Haley was, according to Taylor, 'reluctant to see himself as part of a black continuum'.⁹⁶ The result is that Haley has largely remained, since *Roots*, an understudied if not ignored author in literary terms. While the novel was an undoubted commercial success, its credibility was undermined to the degree that it is often absent in contemporary studies and anthologies of African American slave narratives.⁹⁷

Yet it was the conservatism with which Haley approached slavery and the African roots of African Americans which undoubtedly accounted for the novel's popularity among white readers, including, ultimately, the science writers who refer to it in their accounts of humanity's origins in Africa. Haley's tale of suffering and triumph stressed the plight of Kunta and his family, but did so in a non-threatening way, through a form with which white readers were familiar. This familiarity was amplified when it came to the television adaptation of *Roots*. White critics praised the novel not only because it was being read by whites but also 90 per cent of the audience for the television miniseries was white.⁹⁸ The relative appeal to America's white population was something that was taken into account during the production of the miniseries. Norrell has shown that 'the producer's first concern in casting *Roots* for television was how whites would receive the show. Wolper said he was "trying to appeal to whites"'.⁹⁹ This was achieved as 'The ABC executive Brandon Stoddard said the network used actors whom white viewers had seen a hundred times before, "so they would feel comfortable"'.¹⁰⁰ The television script went further than the book by introducing more white characters and making 'some white characters "good", whereas in the book there are almost no admirable white figures'.¹⁰¹ The anti-racist message of the novel, designed to foreground the history of African Americans which had hitherto been largely ignored, was thus, when adapted for television, overtaken by the need to make palatable the role that white people had had in the slave trade, for the benefit of the contemporary white American population who might, it is assumed, feel uncomfortable in beginning to make their own connections as to whom their ancestors might have been.

Thus, despite the progressive and anti-racist intentions of the authors of popular science writing on human origins in Africa, their direct and indirect invocations of *Roots* served to reinforce the often traditional and conservative ways in which they represented Africa and Africans. To take one example: just as Kunta Kinte and the village of Juffure are represented by Haley as more 'primitive' than they would have been at that time, so narrative and visual representations of the Eve hypothesis often rely on stereotypical portraits of contemporary Africans in 'primitive' terms, as a way of evoking Africans living in the era of Eve. The covers of both editions of Stephen Oppenheimer's *Out of Eden* (or as it is titled in the United States, *The Real Eve*) typify this conflation. Each portrays the head of a young black woman next to a group of Africans in traditional dress, walking across a barren-looking landscape. Similar images crop up in the television documentary *The Real Eve* (based on Oppenheimer's book) where images of Africans hunting with spears are interlaid with multiple close-up shots of silent African faces that create an anthropological, Western gaze.¹⁰² While it might be argued that these images are designed to be evocative of an ancient time, rather than indicative of contemporary African lives, a consistent emphasis on imagining contemporary Africans as rural, simple and almost timeless (and thus living much like Mitochondrial Eve would have done) is also scattered casually throughout this writing. Spencer Wells, in *The Journey of Man: A Genetic Odyssey*, explains in his endorsement of Eve that 'you are more likely to sample extremely divergent genetic lineages within a single African village than you are in the whole rest of the world', before going on to explain why the racist notion that Africans are less evolved than other populations is wrong:

One of the interesting corollaries of inferring a single common ancestor is that each descendant lineage continues to change at the same rate, and therefore all of the lineages are the same age. The time that has elapsed between my mitochondrial DNA type and Eve's is exactly the same as that of an African cattle herder.¹⁰³

While declaiming the racial theories of earlier anthropologists such as Carleton Coon, Wells's contemporary Africans do not live in cities and are not modern, but herd cattle, as Mitochondrial Eve might have done 200,000 years ago. As Priscilla Wald has shown in her analysis of Wells's film which accompanied the book, 'a familiar developmental hierarchy pervades the language and images', where the San Bushmen are constructed as 'relics from whom the rest of humanity has evolved' and are frozen 'in genomic time'.¹⁰⁴

Figure 1 Front cover of *Out of Eden: The Peopling of the World* by Stephen Oppenheimer. London: Constable and Robinson, 2003. Reproduced with the permission of Little, Brown Book Group.

A similar image of timeless Africans emerges in Michael Brown's comprehensive account of the development of the African Eve hypothesis, *The Search for Eve*. Brown discusses at length the implications for race that surrounded the hypothesis and the problems which the metaphors used to promote it caused, yet he ends his book with a description of a trip to Africa in which modern-day Africans are represented as one and the same as their ancient ancestors:

There were groups of twenty or so natives in the tiny settlements, just like in olden times, and warriors in red capes approached with spears trying to sell us ostrich eggs.

I thought: Eve must have used ostrich eggs for something.

And the Masai women, in sackcloth and doing a lot of heavy lifting, carrying huge loads of firewood at the same time they tended straggling offspring: how tired Eve must have been, how absolutely pooped, that star-laden night so long ago!¹⁰⁵

While Brown's book received terrible reviews for its 'clumsy phrases',¹⁰⁶ for being 'relentlessly tabloid in its language'¹⁰⁷ and for its 'many clichés and unappetizing images',¹⁰⁸ here, he does what nearly all the writers discussed so far do; directly compares Mitochondrial Eve to Africans and/or African Americans living in the past couple of hundred years. In fact, this is what is implicit in references to *Roots* in this science writing. Not only does Haley's representation of Africans somehow legitimize simplistic representations of Africans in these narratives, but the very comparison made between Haley's novel and the search for humanity's roots in Africa encourages the collapsing of distinctions between Africans of 200,000 years ago, a couple of hundred years ago and the present.

The problematic effect of this convergence is that it ironically recalls the idea which typified earlier anthropological and scientific writing about Africa: that Africans are not as 'evolved' as Europeans or whites, because they are in fact a different species. Polygenism – a precursor to the multi-regional hypothesis – was propounded by American anthropologist Josiah Clark Nott in his 1855 publication *Types of Mankind*, in which he describes Africans of the Cape Colony as 'the lowest and most beastly specimens of mankind... but little removed, both in moral and physical characters, from the orang-utan'.¹⁰⁹ Ranking some African groups above others, Nott proclaimed them all to be 'without a history' and stated that 'Negroes in Africa must remain substantially in the same benighted state wherein Nature has placed them, and in which they have stood, according to Egyptian monuments, for at least 5000 years'.¹¹⁰ Africans' supposed

primitiveness was evidence of their failure to evolve forward in time and while Nott's views were controversial in the mid-nineteenth century, representations of Africans as primitive and timeless have continued. That science writers on human origins in Africa find it almost impossible not to compare recent black history with the evolutionary history of humans thus undermines the more overt anti-racist intentions of their writing. Their anti-racist intentions are sincere, as Wald notes, but racism is 'intricately interwoven in the language, images and stories – the representational conventions – that have developed with centuries of oppression ... the narratives that inform the science and its applications can perpetuate the very inequities they seek to address'.¹¹¹

The griot called MtDNA

The African Eve hypothesis represented one of the first instances when new genetic techniques of analysis were used to make a definitive pronouncement on race. The idea that all humans are descended from Africa refuted older bioscientific emphases on racial types and biological racial difference in favour of an explicitly anti-racist stance designed to foreground human similarity and relatedness. Although the hypothesis called into question the foundations upon which much scientific racial thinking had been based, it still asserted genetic science to be a practice which could make such declarations on race; put differently by Wald, 'implicit in the very conviction that genetics can refute the logic of racism is an assumption about the authority of genetics ... to establish definitive terms of relatedness'.¹¹² African Eve re-established genetic science as an authority on race which, whether it was argued to be biologically real or not, was a concept whose meaning and parameters could be ultimately determined by science.

Yet African Eve was a scientific fact which, as this chapter has argued, was shaped by fiction in such a way that the popularization of what was supposed to be an anti-racist hypothesis became racialized. The hypothesis was of significance for all humanity, regardless of race, because as Stringer and McKie put it, 'our variable forms mask an essential truth – that under our skins, we are all Africans',¹¹³ a sentiment reiterated by Rebecca Cann, who, interviewed in 2012, claimed that 'I tell my students they should all celebrate black history month, since they are all Africans genetically'.¹¹⁴ However references to *Roots*, and to the experiences of black people attempting to trace their ancestries back to Africa more broadly, meant that the implications of the hypothesis were

invariably seen to have most significance for black people. The conflation of Eve's tale with the search for African ancestors by the descendants of enslaved people racialized the findings so that the white population could view African ancestors from a distance through the familiar narrative frames of Haley's tale (and thus through older anthropological conventions), while the emotional import of the findings was reserved for black populations still grappling with the recent history of transatlantic enslavement.

What *Roots* helped to establish in those black populations and in genetic science is a way of thinking about relatedness, race and identity as a question of biology, genealogical thinking which created a 'stable epistemology for rootedness' based on blood ties, reproducing and embedding a heteronormative understanding of identity and kinship.¹¹⁵ This way of thinking had not always been the norm: for example, in *Dusk of Dawn: An Essay toward an Autobiography of a Race Concept* (1940), W.E.B. Du Bois contemplated what might constitute a tie to Africa and, while acknowledging it as the place where a large portion of his ancestors lived, wrote:

The physical bond is least and the badge of color relatively unimportant save as a badge; the real essence of this kinship is its social heritage of slavery; the discrimination and insult; and this heritage binds together not simply the children of Africa, but extends through yellow Asia and into the South Seas. It is this unity that draws me to Africa.¹¹⁶

This is a political and social sense of belonging and cross-racial kinship which is absent from *Roots*, where instead Haley reinforced the 'rules that govern relatedness'¹¹⁷ in his singular vision of familial relationships and a racially black line of descent recognized at the time by one reviewer as 'playing its part in the reaffirmation of ethnicity'.¹¹⁸ For, as Louis Kushnuck contends, 'if the present is unsatisfactory and, indeed, dangerous to the political/economic ruling class because of the possibility of growing class consciousness, a renewed and largely artificial ethnic identity is just what the capitalist ordered'.¹¹⁹ The impact of the political conservatism of *Roots*, published at a time of black radicalism and anti-racist activism, was that knowing 'who you are' became individualized, something to be discovered through ancestry and biology rather than collective affiliations in the present. This idea was by no means widespread in biological science of the time either: writing about Haley's *Roots* in an exchange of letters in the journal *Bioscience* in 1978, biologist Gairdner Moment countered that 'whether you are black, white, or any other color, you do not need to know anything whatsoever about your biological ancestors to "know who you are"'.¹²⁰

Yet this is the very idea which would become central to the technology which the application of genetic techniques to human evolutionary history made possible – genetic ancestry tracing.

The following chapter explores the development of genetic ancestry testing in the 1990s, the appeal of which, as Alondra Nelson contends, cannot be understood without considering the social transformation in the public's interpretation of the past occasioned by *Roots*.¹²¹ Marketed primarily at African American populations, genetic ancestry tracing has gained enormous support from those who, like Haley, wish to recover family histories erased and disrupted by the Atlantic slave trade. Literary scholar Henry Louis Gates has made several TV series including *African American Lives* (2006–2008), *Faces of America* (2010) and *Finding Your Roots* (2012), which employ genetic technologies to trace the ancestries of (black) American celebrities, and he offers genetic ancestry testing through his own company AfricanDNA. This contested technology has not only reinforced the importance of knowing biological ancestors to individual identity, but made more explicit what was latent in science writing on Eve; the idea that the body is a more significant source of historical information than material evidence or writing. Writing on human origins, geneticist Bryan Sykes contends that 'within the DNA is written not only our histories as individuals but the whole history of the human race' and that 'our DNA does not fade like an ancient parchment; it does not rust in the ground like a sword of a warrior long dead'.¹²² Writing is used as a metaphor but dismissed as a medium, to be replaced by the genes which go 'way beyond the reach of written records or stone inscriptions'.¹²³ As Richard Dawkins puts it, 'We can use DNA archives to reconstruct history',¹²⁴ through what Spencer Wells terms the 'historical language of the genes'.¹²⁵ It is an idea not out of step with Haley's stress on oral storytelling and embodied knowledge over the written word: recounting his visit to Gambia at the end of *Roots*, Haley meets griots who criticize the Western 'crutch of print' as he is reminded that 'every living person ancestrally goes back to some time and some place where no writing existed; and then human memories and mouths and ears were the only ways those human beings could store and relay information'.¹²⁶ Haley's novel and science writing on human origins together present a vision of the body as supreme in creating and storing a knowledge which is the foundation of identity, a vision which would have a great influence on the racial developments in genetics to come. But it was a vision which would be challenged – not least in the realm of fiction where, as I will argue in Chapter 2, the significance of writing itself is tested against the idea that the search for biological origins, for 'who we are' and where we come from, is something of great importance for individuals, racialized communities and humanity more broadly.