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Genomics en Route Ancestry, Heritage and the Politics of Identity across the Black Atlantic¹

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Introduction

The making of identities and the construction of belonging involve multiple interactions between the spheres of history, politics, culture, law and economics. Moreover, these processes are profoundly shaped by developments in science and technology and vice versa (Jasanoff 2004). This constellation becomes particularly clear in the field of genealogy, where biological and cultural categories intersect to form unique and by no means static constellations of kinship, descent and inheritance (cf. Carsten 2000, 2004; Edwards 2000; Franklin 2007; Franklin and McKinnon 2001; Strathern 2005). In recent years, genealogical research into family histories has gained enormous popularity, not least because of technological advances such as the internet, which has opened up new avenues of access and communication, be it via databases, chatrooms or online forums that provide the root-seekers with an unprecedented infrastructure to pursue their advance into the past (see Basu 2007; Nash 2008). Commercial genealogy companies have long recognized this trend and have begun to offer their services through the worldwide web. Increasingly, these services do involve genetic ancestry testing, which constitutes one of the avenues by which the science of the new genetics has entered the public realm.²

In these contexts, DNA and its scientific analysis have been regularly presented as a kind of truth machine that can reveal one's past and future, if only one is able to read the signs.³ Individual and collective histories, from ancient migrations to more recent genealogical traces, appear to be inscribed onto our bodies, encoded in certain DNA frequencies. In a similar manner, individual futures are seemingly made accessible, for example, through disease susceptibility tests. A lot has been said and written about the inadequacy of such analogies⁴ and emphasis has been laid upon the creative uses to which genetic information is actually being put by the people

affected by it (see Rabinow 1996; Wade 2007). Nevertheless, the image of DNA as a repository of truth is still particularly effective in the domain of genetic testing, and it is this image that makes genetic testing for ancestry such an attractive option for which people are willing to pay quite substantial amounts of money.

Currently, up to twenty companies offer ancestry testing via the internet (Bolnick et al. 2007)⁵ and the phenomenon is being widely discussed in the anglophone press as well as in academic literature, with a strong bias towards the U.S.A.⁶ Despite a shared interest in an embodied past among test-takers of all backgrounds, there are, of course, different views with regard to the impact the testing is assumed to make on one's life. Whereas some customers of recreational genomics⁷ may seek a genetic connection to famous historical figures such as Genghis Khan (available through Oxford Ancestors), thereby emphasizing the playful aspects of ancestry testing, the practice may take on a deeper personal meaning in diasporic contexts, where an emotionally-laden concept of an original homeland (i.e., 'roots') exists but knowledge about its concrete contours is limited. Especially for African Americans and other members of the black diaspora whose family histories are shaped and shattered by the violent disruptions of slavery and the slave trade, the new technology promises to reveal hitherto unavailable information and thereby indeed to operate as a kind of identity assurance on a molecular level.

Both the company advertisements and the mainstream media coverage put great emphasis on this revelatory component of the testing. In the following, I attempt to go beyond this initial rhetorical stance in order to discuss some of the processes through which meaning is created (and contested) in and through the practice of genetic ancestry testing. In other words, I will look at aspects of what Catherine Nash has termed the 'cultural work of making genetic meaning' (2004: 3). Drawing on my previous work on cultural politics and roots tourism, my ongoing research in Ghana as well as on interviews with service providers and customers of genetic ancestry testing, I will try to identify continuities and ruptures with other existing forms of Black identity production and the politics of memory and heritage. In order to achieve this, I will follow a relational approach that takes different and shifting positionalities into account, thereby highlighting the processuality of knowledge production and political practice.⁸

Through its combination of techniques of embodiment, purification, objectification and commodification, genetic ancestry testing constitutes a unique location where the changing dynamics of heritage formation in connection with individual and collective categorizations can be fruitfully explored. On the one hand, genetic ancestry testing is a highly personalized endeavour, placing an individual's body, represented by a drop of saliva, on the centre stage of the interpretation of genetic data. On the other hand, it is firmly linked to collective classifications: first, in terms of the taxonomies underlying the construction of the database and the design of 'populations'; and, secondly, in terms of the conclusions about a test person's biological and/or social belonging to one group or the other. The diasporic 'self-fashioning' (Nelson 2008a) that ancestry testing facilitates is thus deeply political in its foundations as well as its articulations.⁹

Given the great popularity of genetic ancestry testing among African Americans in the U.S., I refer mainly to the situation of this particular group and to perceptions of their needs.¹⁰ I consider the practice of genetic ancestry testing as part of a wider Black Atlantic network (Gilroy 1993), a diasporic relationship that is at once historical, imaginary, economic, political, legal, cultural and touristic, and that involves complex connections and disjunctions between the African homeland and diaspora. My analysis of genetic heritage/politics will consequently focus on three interrelated aspects. The first one concerns the specifics of the African diasporic situation and the impact of slavery on notions of identity. The second one relates to the specificity of United States multiculturalism and the ethnicization of belonging. The third one is connected to the situation of African states, which are at the receiving end of the genealogical quest yet have been strikingly under-represented in previous discussions.¹¹ Before I turn to those issues, I will describe how the tests work – both in terms of the underlying technology as well as their representation in public.

'One Simple Test Can Identify Your Family's Country of Origin':¹² Genetics, Genealogies, Populations

If the twentieth century has been the 'century of the gene' (Fox Keller 2000), which cumulated in the announcement of the 'decoding' of the human genome in the year 2000, the first decade of the twenty-first century has already been called the beginning age of 'postgenomics' (Abu El-Haj 2007). On the one hand, this refers to a shift away from gene determinism to the acknowledgement of systemic complexity, as evident in the research on gene-environment interaction in the fields of proteomics and epigenetics (Lock 2005; Zwart 2007). On the other hand, this term captures the growing emphasis on difference, as is evident in the Human Genome Diversity Project (see Reardon 2005) or the more recent HapMap Project (see Braun and Hammonds 2008), as well as the growing individualization of genomic information (Condit 1999, 2007).

Genetic ancestry testing is firmly placed in this discursive realm of inherited human variation (see Marks 2001). The scene for this enactment of diversity is the noncoding, non-recombinant parts of DNA on which statistically noticeable markers of genetic difference between groups of people, i.e., haplogroups, can be located. Those are mitochondrial DNA (mtDNA), which is exclusively inherited from mother to child, as well as Y-chromosomal DNA (NRY DNA), which is inherited from father to son only.¹³ Ancestry testing makes use of this genealogical order so as to trace maternal or paternal descent respectively.¹⁴ Individual markers are then run through a computer program which compares the sample to a database in which other DNA sequences are classified along the lines of known 'populations'. As a technology, ancestry testing at the same time relies on established categories of race and ethnicity while also undermining them – a dynamics that will be analysed further down.

One of the most prominent proponents of the new gene/alogy among African Americans has been Henri Louis Gates, Jr., Harvard Professor of African American Studies and well-known public intellectual. He hosted the TV programme *African*

American Lives, where the family histories of celebrities like Whoopi Goldberg, Quincy Jones or Chris Tucker were tracked down by means of conventional genealogy as well as DNA testing.¹⁵ For this production, he relied heavily on the services of African Ancestry, which at that time was the only company that had specialized in African American consumers and to which I will turn below.¹⁶ Meanwhile, Gates has founded his own company African DNA, in collaboration with Family Tree DNA. On the homepage of this company, Gates' advocacy for ancestry testing reads as follows:

With cells collected from the insides of our mouths, geneticists can analyze small sections of our genetic material that form distinctive sequences known as 'haplotypes', which can then be compared to DNA samples taken from people on the African continent. The process is a bit like matching fingerprints on CSI. A match between our DNA and the DNA from a person from Africa means that we have possibly found someone with whom we share a common ancestor, someone from our same 'tribe' – be it Igbo or Yoruba, Fulani or Mende. Such a match can reveal an ethnic identity that has been lost for centuries, since the dreadful Middle Passage. I would urge anyone who is interested to try and trace their family back to Africa, through genealogical research and DNA testing. There are several tests available, and each is surprisingly inexpensive, often less than a pair of designer sneakers. (Henri Louis Gates, Jr. on AfricanDNA.com)

This explanation reveals a lot about the representational dynamics of ancestry testing in general and its unique combination of science, history and consumption. Gates' reference to the price of the tests (in the range between \$100 and \$350 per test) not only indicates the middle-class status of potential clients but also speaks to the desirability of ancestry testing as a 'must-have' consumer good, similar to a fashionable 'pair of designer sneakers'. In an analogous way, the allusion to *CSI*, a globally successful TV programme in which the lab and the forensics practised therein feature as the main site of criminal investigation and the establishment of truth, firmly places ancestry testing within the realm of popular culture and consumerism.¹⁷ Like many other genealogy websites, the complex processes by which the genetic data are codified, compared and eventually interpreted get blackboxed and obscured from the public representation of the procedure: the only things left to consider are the easy cheek swab and the eventual revelation of the results in a certificate of descent. The probabilistic nature of ancestry testing (both in terms of the DNA analysis itself and the comparison with an existing database) is likewise withheld. Instead, the impression of an exact match (comparable to the uniqueness of a fingerprint, genetic or otherwise) is being created, despite the fact that such a one-to-one match hardly exists, given the clinal nature of genetic variation and the wide distribution of haplotypes across population boundaries.

The ambiguity of ancestry testing can be stressed even further if one takes into account the fact that the testing focuses exclusively on one singular (paternal or

maternal) line of biological descent. The further back one moves in time, the more complex the situation becomes, as a person's direct ancestors multiply exponentially, yet the test would only refer to one of those.¹⁸ However, despite these severe limitations, the advertising for the tests evokes genetics as a proof not only of African origins but more specifically of ethnic belonging – 'our same tribe' – manifested in an individual's body and supposedly kept intact over long periods of time by means of biological inheritance. History and identity are thus located in the DNA, creating the impression that genetic science can give direct access to the past and thereby resolve what is presented as the diasporic identity crisis.

African DNA does admit that 'sometimes the tests yield multiple exact tribal matches'. Distancing itself from other companies, it offers an extra feature, namely cooperation with historians who help to interpret the results in order to arrive at the most plausible conclusion about the test-person's ancestral belonging. This strategy was already employed in *African American Lives*, where, for example, John Thornton, a well-known expert on the transatlantic slave trade, was brought in to align the genetic data with historical knowledge. This reference to yet another scholarly expertise further increases the impression of the scientific nature of ancestry testing, which, as I argue, rhetorically constructs its revelatory power. Yet, as Henry T. Greely insists, this image of science is misleading, because:

the real science of genetic genealogy is riddled with qualifications and limitations; it deals with varying degrees of probability and not with anything close to certainty. It looks at precise questions, precisely defined, like a direct paternal or maternal line. Genetic genealogy skips the caveats and in doing so promotes a false perception of science; it invokes science's power without accepting its limits. (2008: 231)

Moreover, the underlying mythologization of science goes along with a double reification of history – both in terms of the formation of diasporic identities as well as the idea of African ethnicity and the intrinsic connection between the two. Consequently, the reference to 'tribal' identity stands as the ultimate goal of ancestry testing. This idea of ethnic or 'tribal' descent plays on the convergence of cultural, territorial and biological boundaries in the definition of populations that is prevalent in many other heritage projects outside the sphere of recreational genomics. The company that has taken this 'tribal' identification furthest is probably the abovementioned company African Ancestry, to which I will now turn.

In the internet presence that African Ancestry displayed until a few years back, the parallel to commodified heritage presentations, as they dominate Afrocentric popular culture,¹⁹ was particularly evident. Pictures of African people in 'traditional' apparel, images of masks as well as straw-clad round huts were depicted next to the various product offers and explanatory texts. Any reference to contemporary Africa was carefully avoided, suggesting that the genetic test would open up a direct window to a past of ancient glory (not contemporary struggles). Here, genetic 'roots seeking' operates in the same discursive realm as conventional heritage tourism directed at a

diasporan audience, where references to an imaginary homeland are at the heart of the advertising brochures and travel itineraries. On African Ancestry's homepage, in addition to the images of masks and sculptures, the faces of an old man and an old woman were used to mark paternal and maternal descent respectively, suggesting cross-generational inheritance, ancient ancestral wisdom and access to a past associated with oral lore. However, it was never them whom one was supposed to ask in order to find out about one's origin,²⁰ but rather one's own body – a self-referential repository of genetic information that only needed to be tapped and interpreted by the knowledgeable scientist.

Today, these images have been exchanged for different kind of representation, focusing more on the interaction with potential customers. The website is now animated and entails a number of videoclips and infomercials. The photographs of African people have been replaced by pictures of African American families as well as much more abstract images, such as that of a classical pedigree illustrating maternal or paternal genealogical lines which are to be traced through the testing.²¹ This shift can be interpreted as a move towards a more 'objectified' outlook, using scientific imagery and contemporary African American faces in order to convey the company's message. Nevertheless, like the stated goals of African DNA, the claim to ethnic specificity (and thus to a particular heritage discourse) still holds true, as in the section on 'benefits', where the 'Certificates of Descent' from other companies that are not specialized in an African American clientele are compared to that offered by African Ancestry. In contrast to the other certificates on display, where the genetic information is given without an explicit reference to contemporary cultural affiliations, African Ancestry dismisses this 'generic haplogroup jargon' and emphasizes symbolic peoplehood instead – a very important feature in the heritage discourse of African Americans. In the end, the results may read as follows: 'African Ancestry hereby certifies that [so and so] shares Maternal Genetic Ancestry with the Fulani people in Guinea-Bissau and the Mende people in Sierra Leone' (retrieved 3 March 2011 from <http://www.africanancestry.com/benefits.html>). On the 'testimonies' page, one gets an impression of how this particular information is interpreted by African Ancestry's customers – who are often shown in tears or displaying similar emotionally-laden gestures. Sometimes, the announcement of genetic ancestry is framed in public conventions, which stress the ritual and revelatory component of the ancestry testing even further.²² On such occasions, representatives of African nations or 'tribes' may be present to symbolically embrace their newly identified 'genetic relatives'²³ – thereby creating a strong and emotional moment of effervescence that could not have been generated by the test results alone. However, the effect of such ceremonial affiliation is often limited to the instant of the performance itself: similar moments are created in homecoming rituals, such as naming ceremonies, which are staged as part of the travel itineraries of diasporan heritage tourists on the African continent (see Schramm 2010). The BBC documentary *Motherland: A Genetic Journey* also facilitated such encounters for its protagonists, which at first enhanced the intensity of the felt connection. In later interviews the test-persons expressed their estrangement from the African communities they were said to be related to and emphasized their

diasporic identity instead. Again, this reaction is comparable to nongenetic-based homecoming experiences. Despite these limitations, the attractiveness of the tests is persistent.

African Ancestry claims to be able to announce genetic ancestry with such a degree of precision that a person's ethnicity can be determined, because of its 'largest African database'. Information on the specific setup of this database varies in the different reports that are available. Glaser (2003) speaks of a sample of 9,000 Africans from 82 ethnic groups; a *TIME Magazine* article (Hamilton 2005) gives the number of 20,000 DNA samples from 400 indigenous African groups, whereas Rees (2005) talks of 10,386 paternal and 11,170 maternal lineages from over 135 indigenous African populations. In 2005, Rick Kittles, scientific director and co-owner of African Ancestry, stated that the database they use consisted 'of over 11,170 mtDNA haplotypes and 10,386 Y chromosome haplotypes from over 120 indigenous African populations' (Winston and Kittles 2005: 214). Three years later, when the current homepage was launched, it was indicated that the database 'includes lineages from 30 countries and over 200 ethnic groups. Paternal lineages: 11,747 samples. Maternal lineages: 13,690 samples' (retrieved 3 March 2011 from www.africanancestry.com/database.html).²⁴

Despite the fact that the database is constantly expanded, these differing (and at times contradictory) numbers, especially when concerning the category of 'population', indicate the controversial issue of boundary determination on the part of the providers of genetic ancestry services. For example, in the case of Ghana, among the ethnicities that are listed are 'Fante, Ashanti, Akan', yet both Fante and Asante are subgroups of the Akan language family and thus the three terms are not on the same classificatory level. Moreover, this classification does not say much about the political constitutions which make ethnicity a meaningful category of belonging. Population geneticists, on whose findings the various databases of ancestry companies are drawn, often work with the presupposition 'that ethnicity, language, and genetic inheritance are today shared characteristics of well-demarcated, easily defined human populations and that these characteristics generally covaried in the past as they are held to covary in the present' (MacEachern 2000: 362). However, this conceptual unit that is here framed as 'ethnic group' or 'tribe' has a specific history in colonial administration and anthropology (see Braun and Hammonds 2008). It does not match the dynamism of human migrations, self-identifications and political affiliations, and has consequently been abandoned in (social) anthropological literature. Inasmuch as the notion of an unspoiled African cultural authenticity that has remained intact since the first Africans were taken away as slaves is ahistorical, the suggestion that all members of an ethnic group share a biological essence ignores the longstanding historical relationships, transformations, continuous movements and violent disruptions that have shaped African societies, just like any others.

In the genetic analysis, molecular time, which is already a controversial measure in itself (Sommer 2008), is collapsed with historical time, despite the fact that those categories operate on quite different levels (see MacEachern 2000). Ethnic differences are first taken for granted and only then are genetic maps produced

accordingly (see Marks 2001) – a highly problematic methodological issue. Even while ethnicity and biology may statistically correlate²⁵ (as do other sets of criteria by which any groups can be distinguished from one another), this connection does not give a hint at cultural (or political) belonging. In order to arrive at conclusions about such an affiliation – in the sense of a personal identity as the revelation procedure suggests – interpretation has to come in. To facilitate this meaning-making, African Ancestry offers its customers guidance in the form of ‘Show Your Roots Items’ (such as T-shirts and caps displaying various ‘countries of origin’) as well as a ‘Historical reference guide for 21 West and Central African countries’. The latter presentation bears a resemblance to the glossy brochures of the heritage industry, which forms such an important conceptual framework for ancestry testing.

However, just as a root-seeker’s homecoming experience is not reducible to standardized tourist representations and reified heritage products, neither is a person’s response to the genetic information one-dimensional or necessarily deterministic.²⁶ On the contrary, as Alondra Nelson (2008a, 2008b) has demonstrated, people’s interpretations of the test results show a high degree of creativity and flexibility (even though it often rests on the illusion of clear biological distinctions between groups). Customers of genetic ancestry testing engage in processes of cultural authentication that are simultaneously influenced by aesthetic representations and sensual experience but that also draw significantly on historically shaped and socially performed (as well as continuously transformed) political subjectivities. In the following text, I am going to further investigate these interpretative frameworks, i.e., the conceptualization of diasporic identities, the specificity of U.S. multiculturalism and finally the response by receiving African states, as exemplified through the case of Ghana.

Rupture and Reconnection: Diaspora

Ever since the time of slavery, the rhetoric of African kinship and racial solidarity played an important role in African diaspora identity politics and its manifestations in the various homecoming movements to the African continent: from the foundation of the Liberian colony in the nineteenth century via Marcus Garvey’s rallying cry ‘Back to Africa’ and the pan-African solidarity wave of the 1950s and 1960s to the more recent homecoming drive which is mainly articulated as heritage tourism but also, to a lesser yet by no means insignificant extent, as repatriation (see Schramm 2010). Especially since Alex Haley’s world-famous novel *Roots* (1976) and the accompanying TV series, genealogical research has become widely popularized among African Americans. Haley’s semifictitious discovery of his ancestor Kunta Kinte and Juffure as his ‘ancestral village’ (no matter how fabricated or factual it may have been) promised an opportunity to reach beyond the gap of the Middle Passage and to link up with an integral African past that had been denied through slavery. To some extent, this development went along with a culturalist turn in Black politics, where the idea of political solidarity that had dominated the Pan-Africanist and Black Power movements of the 1960s gave way to (or at least was complemented by) more personalized identity claims that were connected to the appropriation of

African 'traditional culture' in a commercialized heritage framework (cf. Diawara 1992; Hernandez-Reguant 1999; Ross 1998).

At the same time, *Roots* (like many genealogical projects) already anticipated the biological reasoning that is at the core of genetic ancestry testing by relying on a concept of natural kinship while giving priority to a singular source. As David Chioni Moore puts it, 'the [very] force of these root images derives in large part from their biological or genetic claims about present identity' (1994: 14). These claims are not self-evident; after all, Kunta Kinte (apart from his semifictitious character) is but one of many possible ancestors of Alex Haley, and Haley himself shares this particular ancestor with numerous contemporaries. The linear connection that is constructed between the two individuals derives its power and meaning not from biology alone but rather from a unique historical and political constellation, beginning from the particularities of the slave trade and stretching out to current racial politics in the diaspora (and the U.S.A. in particular), even if, as Moore speculates:

[a]s a matter of pure theory or strict bloodline genealogy, Alex Haley could have identified any of [his] non-African ancestors as his 'root', but as a matter of practice and American social mandate, that is hard to imagine ... As a matter of day-to-day reality in the United States, the general dynamic of ethnic choice is divided very strictly by color. Though many 'mixed' whites ... can choose to identify either as ... Belgian or Italian ... for the most part the so-called 'one-drop' rule identifies all Americans of any visible Africanness as Black ... (1994: 15)²⁷

However, such directed genealogy (in search of one's Black forebears) also served (and continues to serve) as a means of empowerment for a generation of new middle-class African Americans who have experienced the Civil Rights Movement, have partly benefited from it and yet are notwithstanding (or perhaps even more so) aware of ongoing racism and discrimination, as they are still prevalent in the U.S.A.²⁸ This generation is also the group that can afford to travel to Africa or to take the genetic testing, and indeed, as Gina Paige, the business executive of the company African Ancestry, told me, the average age of their customers is fifty-four and most of them come from urban centres, such as Washington DC, Chicago, Atlanta or Los Angeles (personal communication, Washington DC, 18 March 2007).

To research into one's family history indicates a way to document one's own uplift and also provides a means of honouring the struggle of one's forebears, often on behalf of African Americans in general. It gives a voice to those whose agency had been suppressed during slavery. Reconnecting with one's African past and emphasizing an African identity through consumption, genealogy or travel also springs from a desire to counteract the stigma of slavery as 'social death' (Patterson 1982). The promise of genetic ancestry testing to concretize this African connection down to the level of community (as the idea of 'tribe' or 'ethnicity' suggests) therefore bears a strong social component, if only in a different sense from ethnicity as a political organizational form.

According to Gina Paige, clients' concrete motivations for taking the test vary, yet all are connected to the expectation of gaining a sense of certainty about oneself. She divided customers into four main groups: first, people wanting to confirm and replenish their conventional genealogical research; secondly, people wanting to adopt a child from Africa and aiming to make sure that they and their child would share the 'same culture'; thirdly, people wanting to travel to Africa who want to make sure to get as close as possible to their ancestors' possible point of departure; and, fourthly, people wanting to invest in Africa who intended to base their choice on a meaningful family connection. Whereas the first group thus views genetic testing as but one rather small component in a larger historical/memorial project, the other three motives seem much more loaded, as they take the genetic connection as the starting point to impact on one's life decisions.

Of course, this interpretation is clearly articulated from the company's point of view, whose advertising strategy plays exactly on this identity-formative potential of genetic testing. Given the intrinsic ambiguity of the results, people's reactions may likewise be characterized by ambivalence. While all may share a moment of emotional excitement at the moment when the results are revealed,²⁹ some may just forget about it, whereas it may indeed have profound consequences for others – and perhaps not in the way that is expected. Bolnick et al. (2007) have warned of the possibility of a negative psychological backlash if the test results do not correspond to people's self-ascription. However, the power of 'narrative identity' (Baylis 2003; cf. TallBear 2003) that is shaped by lived experience does not automatically get lost in genetic testing for ancestry, as the example of Suleika³⁰ shows.

Suleika was a young African American woman who worked as a biologist at the University of Chicago, in the genetic research lab of Rick Kittles, the cofounder of African Ancestry. I met her several times early in 2007 and we had long discussions on the African American experience, on academia and representation as well as on the epistemological differences and similarities between natural and social science approaches to their respective subjects of enquiry. She had not yet taken the test, but was looking forward to do so and finding out about her African origins, because she wanted to incorporate 'something from that culture' into her wedding ceremony. To her, the verification of a specific African ethnicity would enhance the symbolic power of the union with her husband-to-be; it would affirm their belonging together. The sociality that she sought in ancestry testing was limited to the intimacy of her private life. At the same time, her desire for such heritage-affirmation was firmly based in her notion of a diasporic identity. She prioritized Africanness, yet she also accounted for the ruptures and mixtures that are characteristic of diaspora. This awareness went hand in hand with an uneasiness that also extended to the possible impact of the genetic ancestry test on her sense of self. Suleika was wary that the results might confirm to her that she was only partially African: 'I was in my African dance class the other day, and I couldn't do the steps, so I was wondering – hm, perhaps this is my European genetic heritage that makes me less able to do these dance steps?' (personal communication, Chicago, 4 April 2007). That self-ironic juxtaposition

mirrors her desire for cultural purity and reconnection, a desire that is nevertheless already saturated with the knowledge that such purity remains an illusion.

In accordance to her Afrocentric worldview, she expressed an idealized idea of African cultural stability, manifested in clearly bounded and thus genetically identifiable ethnic groups with distinct traditions. In his seminal study on the Black Atlantic, Paul Gilroy (1993) has criticized such an essentialist notion of the African diaspora as Americocentrism – derived from the racial dynamics in the U.S.A. and grounded in its consumer culture and political conservatism. However, Suleika's understanding of race and American identity as well as her own self-positioning in that discursive field was far more complex than that. Despite her rhetorical embracing of a genealogical (or roots-based) model of identity, she acknowledged the historical situatedness of present subject positions as well as the transformative role of politics. As Peter Wade has argued, 'kinship, genealogy and related constructs of biology do not stand in a relation of opposition to rhizomic hybridity – as necessarily conservative, essentialist and linked to primordial identities, roots and belonging – but rather are structured by the same tension between being and becoming' (2005: 607). Suleika's awareness of that tension was also evident in her research on specific health problems of African Americans, where she considered genetics (that is, her field of specialization) alongside social and environmental factors, thus taking the complexities of racial formation into account.³¹ The fact that Suleika attributed positive connotations to her African heritage while associating European ancestry mainly with embarrassment needs to be put in relation to the history of slavery and race in the U.S.A. where the one-drop rule created strict classificatory categories of Blackness and Whiteness which were framed in the dominant ideology of White supremacy. This is also reflected in the representation of the differences between Y-chromosomal and mtDNA analyses as they are put forth in the public representations of the tests: while mtDNA samples show many more matches in Africa, the Y-chromosomal DNA often hints at European descent.³² This is interpreted as evidence of the long history of sexual exploitation of female slaves by their European owners, a history that runs through many Black and White families (see Ball 1998). What is not addressed here is the problematic factor of probability and chance: only a tiny fraction of one's ancestors shares one's mtDNA or Y-chromosomal DNA. Moreover, 'misperceptions about the relationship between biology and race, and group genetics in general, can make the interpretation of genetic data difficult', as Sloan R. Williams has warned in his analysis of the debate about whether or not Thomas Jefferson fathered the children of his female slave Sally Hemmings (Williams 2005).

The individualized sense of self which is emphasized through genetic ancestry testing – or, to use a different term, personal genomic histories (PGH) – is always embedded in historically and politically determined collective ascriptions and identifications. Besides the historical period of the slave trade and slavery, what needs to be considered here are the contemporary situation in the U.S.A. and the multiple meanings of diaspora that act as a driving force behind genetic ancestry testing.

Imagining Ethnicity, Creating Belonging: The U.S.A.

As we have seen, the ethnic specification of a test-taker's descent is perhaps the most attractive feature of genetic ancestry testing for African Americans. Apart from the problematic construction of ethnicity as a bounded entity with clear biological demarcations, the specific relationship between the African American customer and a particular ethnic group remains a controversial issue. The suggestion that the one biologically traceable line that is singled out in ancestry testing (through either mitochondrial DNA or non-recombinant Y-chromosomal DNA) would be more meaningful than all the other possible genealogical connections needs to be scrutinized in order to understand the process of genetic meaning-making. Moreover, it needs to be taken into account that it is the maternal line that is privileged in African Ancestry testing, since it is believed to reveal the desired results (i.e., African origins) more reliably than its paternal counterpart.

When I asked Gina Paige about the problem that the test declared descent on the basis of only a tiny fraction of a person's multitude of forebears, she gave the following answer:

Yes, but it is an important lineage – your maternal lineage – from your mother to hers to hers etc. ... If you were adopted –wouldn't you want to know who your mother is? And isn't it more satisfying to at least know one lineage, instead of none? You are German, your parents were German – so for you it is easy. Even if you do not do it, you could do it. In general, the criticism comes from those people who do not share the experience of that huge gap caused by the slave trade. But it is important to know that you did not just step off the boat, but that you are from somewhere, that you have a base.

Other geneticists who are involved in ancestry testing, such as Fatimah Jackson, who featured as an expert in both the BBC *Motherland* production and the PBS series *African American Lives*, have warned against too strong a reliance on genetics and the emphasis on a single line of ancestry in forging one's personal identity:

If you give up your identity to the geneticist ... who is going to take a piece of you, stick it in the machine and from that deduce where one ... or two of your ancestors, out of the millions of ancestors that are yours, that you can claim ... [came from] and you are gonna settle for that as your ancestry ... you've given up! Self-definition is the root of self-empowerment.

Despite this caution, she also drew attention to the specific sense of disconnection, dislocation and abandonment that finds its expression in the spiritual 'Sometimes I Feel Like a Motherless Child' and is shared by many African Americans. To her, the new genetic technology has a potential to address some of that sense of separation and establish a linkage with one's (African) origins.

In my conversation with Gina Paige, which was very much in line with the company's official doctrine and public appearance, she distinguished the situation of African Americans from that of other groups, whose systems of kinship were not violently disrupted by slavery. In her argumentation, she chose to employ a rhetorical strategy that made use of the symbolic power of a straight line of ancestry and of motherhood in particular. This rhetorical stance is not unique when it comes to the interpretation of genetic ancestry testing on the part of its proponents. For example, geneticist Bryan Sykes has also ascribed superior meaning to the mitochondrial connection between an individual and his or her particular 'ancestral mother' in his thesis about 'The Seven Daughters of Eve' (2001) to which all present-day Europeans could trace their roots. His racialized definition of Europeaness is one critical issue; his claim for a strong intrinsic connection and emotional closeness among the members of each genetic 'line' is another. In Sykes's description, it is the male geneticist who literally pulls the ropes and makes the hitherto passive female ancestors come to life. Catherine Nash (2004) has carefully criticized this representational strategy and demonstrated how it fits into dominant ideologies of kinship and male domination. Yet in the context of African American identity politics, the image of the mother takes on a special significance (quite different from the one attributed by Sykes). As the lines of the spiritual suggest and as Saidiya Hartman (2007) has recently emphasized, 'to lose your mother' is a central metaphor for the tearing apart of social ties during the era of slavery and the transatlantic slave trade. In the autobiographical account of her journey to Ghana of the same title, Hartman reflects on the desire to return and the ultimate impossibility of reconnection. She quotes a person who had done the DNA testing and on viewing the results remarked that 'he felt more lost than before. Now he was estranged from an ancestral tribe as well as the country of his birth' (2007: 90).

In spite of the fact that 'homecoming' in the sense of a family reunion may turn out to be an illusion (I will deal with this issue further below), the attractiveness of ethnicized belonging persists and therefore needs to be critically examined. While sticking to the discursive framework of diasporic identity claims, PGH are in many ways a move away from pan-Africanist projects of political solidarity and resistance, since they focus much more on the individual and his or her cultural affiliation.

Gina Paige herself gave a clue as to how the urge to know one's individual roots was shaped in the U.S. context when she spoke about the disadvantage of African American children whenever their schools held events such as 'International Day' or 'Cultural Week', during which students are asked to present their family's cultural heritage. Whereas Italian-American, Polish-American or Irish-American children had access to such cultural resources, African Americans could not say where they were from. Africa was too broad a category and too differentiated in order to function as a linkage to an 'Old World' heritage.³³

This dilemma has wider implications in terms of political subjectivity. In contrast to other minorities who came as immigrants to the U.S.A., the lack of ethnic affiliation (intrinsically linked to their slave status) contributed to the perception of African Americans in strictly 'racial' terms, 'regarded for centuries as

inherently unassimilable ... [and kept] from taking a full part in American society' (Frederickson, quoted in Shain 1999: 84). This perception began to change with the Civil Rights Movement and the growing participation of African Americans in the U.S. public sphere and political establishment (i.e., through the Black Congressional Caucus).³⁴ Genetic ancestry testing refers back to the prioritization of ethnicity in the U.S. multiculturalist setup. Some of the clients who were interviewed for promotional purposes by the company African Ancestry affirm this sentiment: 'I never knew what to answer, when people asked me where I am from. But now I can say: Sierra Leone!' (retrieved 3 March 2011 from <http://www.africanancestry.com/testimonials/index.html>). Paradoxically, by emphasizing their origin elsewhere, customers ultimately affirm their belonging to U.S. civil society. In times of political and economic neoliberalism, where the individual is central, ethnicized gene/alogy apparently allows African Americans to stake their claim on what Henry Louis Gates, Jr. calls 'the American tradition' (2007: 164) of multiculturalism and the capitalist spirit of self-realization with greater vigour. In order to work in that manner, this middle-class identity needs to be framed in terms of a specific contribution to the American 'success story' of limitless opportunity.³⁵

However, the effects of genetic ancestry testing are not limited to the U.S. sociopolitical setup. Because it represents ethnic and national units in Africa as the cornerstones of the conceptualization of genetic kinship, the reverberations of the practice across the Atlantic need to be analysed. A starting point for such an analysis is the debate over diasporic 'homecoming' that is currently advanced in some African settings.

The Game of Difference and Belonging in African States: The Case of Ghana

One of the prominent African Americans who featured in the aforementioned PBS series *African American Lives* was Oprah Winfrey, who had previously declared her strong affiliation with 'the Zulu people' in South Africa: 'When I'm in Africa, I always feel that I look Zulu. I feel connected to the Zulu tribe' (quoted in Gates 2007: 151). The popular image of the Zulu is that of a nation of warriors who, under the leadership of the legendary figure of Shaka, built one of the strongest African military states in the nineteenth century and also resisted European colonialism. This focus provides a counter-image to the racist ideology of African primitivism and barbarity that for a long time has also affected African Americans. In Afrocentric heritage conceptions, the wealth and power of African empires (another prominent example would be the West African Asante) features prominently. Moreover, African Americans have vigorously fought the apartheid system and expressed their political solidarity with the black majority in South Africa. Oprah Winfrey's fascination with the Zulu tradition is part of that diasporic (identity) politics. Her symbolic identification works independently of personal genealogy and it does not really matter whether or not any 'Zulu' could have been transported to the Americas during the transatlantic slave trade.

When she received the results of the genetic ancestry testing in *African American Lives*, she was declared ‘Kpelle’, a group in present-day Liberia she did not know much about before. Nevertheless, she exclaimed: ‘That’s me ... I’m Kpelle. I feel empowered by this.’³⁶ Henry Louis Gates, Jr. concludes: ‘And no doubt the Kpelle will welcome Oprah as a long-lost sister, just as warmly as the Zulu have done’ (2007: 164). This prognosis is probably right, given Oprah Winfrey’s generous financial commitment to various projects in South Africa. Winfrey’s reported reaction accentuates the identity-formative potential of the revelatory moment of genetic ancestry testing. However, the question remains over whether a test result that defines a person’s maternal line as ‘Akan’, ‘Yoruba’ or ‘Kpelle’ makes any difference in terms of how African Americans are perceived and treated when they come to Africa as travellers, pilgrims or repatriates. Gates’ comment indicates that this is not necessarily the case; rather, the test results are fitted into previously existing networks of relations and adjusted to mutual horizons of expectation.

In order to illustrate these dynamics, I will turn to the situation in Ghana, where genetic ancestry testing has been taken up as the latest feature in the public discourse on the ‘homecoming’ of the diaspora. For the past twenty years, the Ghanaian state has been very active in reaching out to African Americans, who are addressed in a language of kinship as long-lost brothers and sisters. On the one hand, this attention is expressed in heritage tourism that focuses on the commemoration of the slave trade. Here, the ‘return’ of the diaspora is celebrated in general terms in the form of specially designed festivals and pilgrimage tours along the slave route. On the other hand, African Americans are called upon to ‘come home and invest’ – and thereby to make a concrete commitment to Ghana. The recent ‘Joseph Project’, initiated by Jake Obetsebi-Lampety, who was between 2005 and 2007 Minister for Tourism and Diasporan Relations in the cabinet of President John Kufuor, included plans for the establishment of a so-called ‘gene map’.³⁷ In the official statement that accompanied the launch of the Joseph Project, the necessity of such a genetic database was explained as follows:

To irrevocably establish the genetic link between our returnees/pilgrims and the homeland, we intend in the medium to long term to collect DNA samples from across the length and breadth of West and Central Africa. With this genetic database map we would hope to be able to establish for every returnee/pilgrim interested, a personal report on his/her antecedents: to be able to organise visits to the villages of the ancestors. (Jake Obetsebi-Lampety, Ghanaian Minister of Tourism and Diasporan Affairs. Retrieved 3 March 2011 from <http://www.ghanatourism.gov.gh>)

Undoubtedly, this statement is framed within the logic of genetic identification that I have outlined above. It asserts (rather erroneously) that there is even a possibility to determine even the village from which one’s ancestors came. Similarly clear are the limits that are put on this connection: quite in accordance with the idea of recreational genomics, the reference to kinship remains firmly anchored within the

framework of tourism and investment that has dominated the discourse on African American homecoming even before the genetic ancestry testing became popularized. From the perspective of the Ghanaian tourism industry, genetic ancestry opens up yet another attractive business opportunity. Some private tour operators already cooperate with companies in the U.S.A. in order to facilitate ‘genetic journeys’. That means that, even if a database of its own, as envisioned in the Joseph Project, may not materialize due to financial and other constraints, the announcement speaks of African actors’ awareness of the needs of Diasporans and also of the latest trends in the homecoming business. By promoting gene mapping and genetic ancestry tracing, the Ghanaian state aims to maintain its leading position in the competition over the tourism and investment potential of African Americans.

If the newly created genetic identities were as powerful as the company advertisements claim, the test results, next to affirming the symbolic attachment expressed in homecoming, might also challenge Ghana’s status as a prominent destination in quite unforeseeable ways. In the statistics of African Ancestry, Ghana features only as a minor player, with apparently less than ten per cent of clients showing a corresponding match – so the promotion of genetic ancestry testing could eventually lead to unintended consequences, as African Americans could begin to prefer other destinations due to their test results.³⁸ So far, this does not seem to be the case, as genetic ancestry is not the only factor that determines notions of belonging and modes of self-definition. Other aspects include practicability or previously established relations (Oprah Winfrey has not simply abandoned her South African projects after receiving her latest test results).

For example, Gina Paige told me of one of her company’s customers who was very emotional about the testing and its significance for his sense of self. His results apparently pointed towards Nigeria. However, because Nigeria does not have the reputation of a recommended tourist destination, he decided to join a tour to Ghana that has been organized by a woman whose results pointed in that direction. Similarly, one of my African American interlocutors in Ghana was quite enthusiastic about the availability of the new technology. She and her son had done the testing with different companies – her own was with the Genographic Project (<https://genographic.nationalgeographic.com/genographic/journey.html>), while her son did his with African Ancestry. On the impact of the results, she said:

it was interesting to see that we shared the same markers. But mine was less precise than his – mine just said West African while his said Sierra Leone. So we might not have any roots in Ghana here. But when I got my results, I was a bit disappointed, because it did not tell me anything new ... Well, mine was also much cheaper, I paid only \$100 while he paid close to \$300. So I guess that they have a better database and you also pay for that. But Sierra Leone, this is more precise; it gives you at least an idea. For me as an African American woman, this is an important starting point. (Personal conversation, Elmina, 1 August 2007)

The fact that these tests did not indicate any gene/alological linkage with Ghana did not hinder her from continuing to travel there. After all, Ghana was the first African country she had visited and it had made a strong and lasting impression on her. The symbolic significance of genetic ancestry did not erase the importance of other emblematic points of connection, be it the tangible evidence of the slave trade in form of Elmina Castle and Dungeons or the concrete personal experiences that made her want to come back to Ghana after her initial trip. Thus, different users of the testing service are highly flexible in terms of what they make of their results. They could either fit it into already-existing imaginations of belonging or come up with new constructions of their senses of self.

Consequently, the impact of the tests on those communities 'defined as ancestors' (Rotimi 2003: 158) also varies. In the BBC *Motherland* programme, the British-Caribbean protagonists were taken to African villages whose inhabitants embraced them enthusiastically. Yet this welcoming gesture went along with clear expectations of support that emphasized the status of the 'genetic cousins' as Westerners. This is similar to previous homecoming moves in Ghana, where African Americans have been granted land and symbolic titles by local authorities who expect a significant effect on community development in exchange. Once the affirmation of African ancestry leaves the realm of symbolic kinship and enters the sphere of political affiliation, the situation gets even more complicated. A case in point are the demands for dual citizenship, as they have been expressed for quite some time now by a growing faction of Diasporan homecomers in Ghana (and elsewhere). During the festivities of the Joseph Project, Ghanaian politicians were once again confronted with such demands, when Diasporans repeatedly called for the restoration of their 'African citizenship' (Imakhüs Nzinga Okofo during the Reverential Night in Cape Coast Castle, 31 July 2007).

Jake Obetsebi-Lamprey, who initiated the Joseph Project and the gene map, clearly distanced himself from the possibility that any claim of political belonging could be deduced from the genetic testing:

The state does not come in at all; it is an individual project of finding one's roots. There is no such thing as automatic citizenship. Perhaps there will be ethnic citizenship, since it is on the level of ethnicity, it has nothing to do with the state – it cannot be a government thing, because it predates the government of Ghana. (Interview, 6 August 2007)

However, even if in the case of Ghana nobody has based a claim for national citizenship on his or her test results, political implications are beginning to emerge – a case in point is the proliferation of a recent chieftaincy dispute through the impact of a group of African Americans who sided with one fraction of the dispute on the basis of their genetic linkage (Delpino forthcoming). And Israel has also been confronted with demands for citizenship on the part of some South African Lemba, who base their identity claim as one of the lost tribes on genetic testing (cf. Azoulay 2003).

Obetsebi-Lamprey's statement therefore indicates some of the challenges of genetic identity politics at the interface between individual identification and

collective categorizations: ‘natural belonging’ is at once evoked and called into question; and the seeming stability of communal boundaries gets dismantled.

Genetic ancestry testing can thus be said to add a new dimension to the notion of biological citizenship, as it has been advanced by Nicolas Rose and Carlos Novas (2005). To these authors, biological citizenship denotes all those ‘citizenship projects that have linked their conceptions of citizens to beliefs about the biological existence of human beings, as individuals, as families and lineages, as communities, as populations and races, and as a species’ (2005: 440). Given its reliance on the linkage between DNA, history and identity, facilitated through the science of genetics, genetic ancestry testing can be regarded as one such project, which indeed represents a reterritorialization of biological citizenship, occurring ‘along national, local, and transnational dimensions’ (ibid.). While the rhetoric is heavily saturated with references to roots, land and territory, suggesting the boundedness of identity, the practice of genetic ancestry testing entails many dimensions that defy any such confinement but rather speak to the flexibility of identity arrangements in the new constellation.

Conclusion

This chapter has addressed the interface between notions of symbolic and biological kinship in the highly charged field of African /American identity politics. Genetic ancestry testing can be considered a continuation of older identity projects with other means, as it relies on mystified notions of origin, ancestry and belonging that have shaped popular Afrocentrism in the diaspora as well as the discourse of cultural nationalism in postcolonial states such as Ghana. Moreover, it does not always supersede previous identifications, but rather follows certain genealogical lines while leaving others aside.

At the same time, genetic ancestry testing forms part of a new biosociality (Rabinow 1996), where individuals establish novel social arrangements on the grounds of various biological constitutions – in the case of ancestry testing, these are the haplogroups that are aligned to certain ethnicities.

In order to grasp this latter aspect, Bob Simpson (2000) has come up with the suggestive term of ‘imagined genetic communities’, hereby playing on Benedict Anderson’s (1983) influential ‘reflections on the origin and spread of the nation-state’. Simpson is interested in the transformation of existing categories such as race or ethnicity on the grounds of genetic knowledge. He makes the point that ‘the raw data of human sameness and difference (what might be called the fatality of human genetic diversity) ... begin to inform the notion of ethnicity or what it is to be “just like us”’ (2000: 3). Yet the dynamics of genetic ancestry testing involves more than that, as it plays on the multiple cords of sameness and difference. On the one hand, it is about being ‘just like them’, i.e., identifying with an imaginary African authenticity presented as ‘ancient tradition’. On the other hand, genetic ancestry testing is clearly about the affirmation of a diasporic African American self.

Genetic ancestry testing (as a technology and an embodied political practice as well as a consumer product) criss-crosses the Atlantic in many ways: from the historical diaspora-constellation to the collection of genetic data; from the specific context of U.S. multiculturalism and its insistence on ethnic belonging up to the charged encounter between a test-person and the representatives of a genetically defined culture of origin. The very interplay between cultural heritage projects and biologically framed lines of inheritance that becomes evident here is a powerful indicator of the close entanglement between history, science, culture and politics in the 'new age' of genetics.

Notes

1. Acknowledgements: fieldwork for this chapter was sponsored by the Graduate School Cultures and Societies in Motion at the Martin-Luther-University Halle-Wittenberg. The School also made possible a research stay at the Department of Anthropology at the University of Chicago. Thanks to Stephan Palmié for hosting me there. I would like to thank Patsy Fletcher for her great hospitality in Washington DC. She also facilitated a meeting with Gina Paige, to whom I am grateful for sharing her thoughts. Moreover, I would like to thank Rick Kittles and Peter Forster as well as my various interlocutors in Ghana and the U.S.A. for their willingness to talk to me. David Skinner and Richard Rottenburg have offered very helpful and constructive criticisms.
2. On the emerging conversation between anthropology and the new genetics, see Pálsson (2007). Other important areas where the new genetics are discussed in public are health, including reproductive medicine and forensics (cf. Rabinow 1999; Rapp 2000; Lazar 2004).
3. See Michael Lynch et al. (2008), who use the notion of 'truth machine' to discuss the production of forensic evidence through DNA fingerprinting. My own understanding here is broader, referring to an idea of objectivity and definitude in representations of the new genetics.
4. For critical analyses of such representations, see Almond and Parker (2003); Goodman, Heath and Lindee (2003); Hubbard and Wald (1993); McKinnon (2005); van Dijk (1998).
5. For a comparison of company profiles, see 'Ethnic Origins DNA Testing Company Comparison', <http://www.isogg.org/eochar.htm> (retrieved 3 March 2011). For a critical discussion of several homepages of companies offering genetic ancestry services, see Greeley (2008).
6. For the latter, see, among others, Bolnick et al. (2007); Brodwin (2002); Brown (2002); Faubion and Hamilton (2007); Palmié (2007); Nelson (2008a, 2008b); TallBear (2008).
7. This term has been widely used with regard to commercial genetic testing services, be it for ancestry or medical diagnostics, as envisioned by companies such as 23andMe. For a critical approach towards the latter, see Hunter, Khoury and Drazer (2008); van Ommen and Cornell (2008).
8. Other authors have emphasised the inextricable connectedness of social and scientific worlds as a form of coproduction (cf. Fleck 1935; Knorr-Cetina 1981; Collins and Pinch 1993; Lösche 2001; Jasanoff 2004; Reardon 2005). In other contexts, such as Brazil, genetic ancestry testing is very much part of the rewriting or confirmation of bigger stories about collective histories and identities, impacting more directly on the imagination of

- the nation rather than the individual self (see Santos and Maio 2004). The complex relationship between individual and collective identities in the new genetics also becomes evident in the case of biobanks, e.g., the well-known example of deCode Genetics and the Icelandic database (Pálsson 2007; Fortun 2008).
9. Of course, there are also other contexts in which genetic ancestry testing plays a vital role, for example, in the Irish diaspora (Nash 2008) or among British Caribbeans (Skinner 2006), as well as in countries like Lithuania (Dauksas 2007).
 10. For an exception, see Rotimi (2003).
 11. Advertising slogan of African Ancestry (retrieved 3 March 2011 from www.africanancestry.com).
 12. On the multiple constructions of the Anderson sequence, the reference genome on which all mtDNA-based comparisons are founded, cf. M'Charek (2005). On the gendered ideology underlying the determination of descent through mtDNA or Y-chromosomes, cf. Nash (2004).
 13. Another form of testing is the so-called admixture test, which claims to determine percentages of a test-person's European, African, Asian or Native American ancestry through an analysis of so-called ancestry informative markers (AIMs) in nuclear DNA.
 14. The U.K. equivalent to the PBS series has been *Motherland: A Genetic Journey*, which drew considerable public attention towards genetic ancestry testing. Here, the focus was instead on 'ordinary' black British citizens. The entanglement of notions of citizenship, belonging and heritage underlying this particular programme deserves critical attention of its own: see Campbell (2007).
 15. The other company that was involved in the testing was Roots for Real in the U.K. In contrast to African Ancestry, their customer base is much wider. Their homepage features three faces that correspond to the common-sense racial classifications 'African', 'Asian' and 'European', and they proudly announce to use 'what is considered to be the largest available global geographic database of human mtDNA'. They also put an emphasis on ancient migration history, 'thousands of years into the distant past, when Europe and other continents were settled by prehistoric tribes and peoples' (retrieved 3 March 2011 from www.rootsforreal.com).
 16. For an analysis of the representational strategies of *CSI* with regard to the production of truth claims, cf. Cole and Dioso-Villa (2007); Lynch et al. (2008: ix–xiii).
 17. A person could have a maximum of 16,384 direct ancestors only 14 generations or 350 years back (Shriver and Kittles 2004: 615).
 18. My use of terminology is not strictly centred on the academic programme of Afrocentricity as it is advanced by Molefi Kete Asante and others (cf. Asante 1987); rather, I refer to a broader heritage framework which is shared by many African Americans who claim a connection to African culture.
 19. This is in contrast to African DNA's explicit reference to conventional genealogy, where the interviewing of one's (elder) relatives always plays an important role.
 20. The only place where the old imagery is still prevalent is the section of the website containing details on the company (see <http://www.africanancestry.com/about-aa.html>, date accessed 3 March 2011).
 21. See Palmié (2007 and Chapter 8, this volume), who elaborates on the divinatory dimension of genetic ancestry testing.
 22. See 'Susan Kidd African Ancestry Reveal' on YouTube (www.youtube.com/watch?v=Bb_NkNZYw-Y&feature=related, date accessed 3 March 2011).

23. Another epistemological (as well as ethical) difficulty in the construction of the comparative databases of African Ancestry and other companies such as Roots for Real arises from the fact that to a large extent these databases were initially produced for medical purposes (i.e., cancer research) and only later commercially exploited for the ends to which they are now put. Thus, while customers are assured that none of their genetic material will be stored or passed on to third parties, the same standard does not hold true for the samples that constitute the database.
24. Cf. Bolnick (2008) on the use of the 'Structure' computer program in the analysis of DNA material and the imprecise conclusions about genetic differences along the lines of 'race' that are often drawn from the statistical exercise. For a detailed discussion on the meaning of statistics in conceptualizing 'race', see Hacking (2005).
25. See the outcome of the EU-funded PUG (Public Understanding of Genetics) project, which looked at the impact of the new genetics on the formation and articulation of social identities; cf. Wade (2007).
26. On the dynamics of racial classification in the U.S.A., see Fields (1990); on the power of classification in general, see Bowker and Star (2000); Skinner (Chapter 2, this volume).
27. See the heated debates over racial discrimination after the devastating destructions of Hurricane Katrina (Hartman and Squires 2006).
28. See the interviews with African Ancestry customers conducted by Geertje Couwenbergh (2006).
29. The names of non-public figures have been anonymized.
30. Fatimah Jackson (2001) also argues for the specific needs of African American patients. On the ongoing explanatory power and relevance of racial classifications in medical research and practice, see Hacking (2005). For a critical view on the new trend of racialized medicine, see Duster (2006); Fullwiley (2007); Wald (2006).
31. Note that in its initial online presentation, African Ancestry visually brushed over this (otherwise acknowledged) reality by displaying the features of very dark and thereby stereotypically marked 'African' man.
32. On the powerful adoption of such heritage discourse among Scottish-Americans, see Basu (2007); among the Irish, see Nash (2008).
33. On the alternative notion of a black public sphere, see Baker (1994); Squires (2002).
34. Another important case in point is the debate over 'Native American DNA' and the racialization of ethnicity connected to it (see TallBear 2008). This has also affected African Americans who can claim historical linkages with Native American groups, but have recently been excluded from tribal membership and benefits (cf. Johnston 2003; TallBear 2003).
35. Apparently, her Zulu identification was also backed up by a genetic test – which shows that the conclusions from the genetic data are arbitrary at best. Tests taken with different companies may lead to different results, depending on the composition of their databases as much as on the interpretation of the results.
36. On the broader dimensions of the Joseph Project, see Schramm (2008).
37. According to Gina Paige, most of the clients' DNA samples point to Nigeria, followed by Cameroon and Sierra Leone. The high percentage of 'Nigerian matches' could also be due to the fact that Rick Kittles spend a long period of research for his cancer project in Nigeria, where he collected lots of DNA samples.

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