Esclavages & Post-esclavages

Slaveries & Post-Slaveries

3 | 2020

Inscrire l'esclavage dans les humanités numériques

Reading DNA ancestry portraits against the grain

Sarah Abel

Electronic version

URL: <http://journals.openedition.org/slaveries/2343>

DOI: 10.4000/slaveries.2343

ISSN: 2540-6647

Publisher

CIRESC

Electronic reference

Sarah Abel, « Reading DNA ancestry portraits against the grain », *Esclavages & Post-esclavages* [Online], 3 | 2020, Online since 27 November 2020, connection on 29 November 2020. URL : <http://journals.openedition.org/slaveries/2343> ; DOI : <https://doi.org/10.4000/slaveries.2343>

This text was automatically generated on 29 November 2020.

Les contenus de la revue *Esclavages & Post-esclavages* / *Slaveries & Post-Slaveries* sont mis à disposition selon les termes de la licence Creative Commons Attribution - Pas d'Utilisation Commerciale - Pas de Modification 4.0 International.

Reading DNA ancestry portraits against the grain

Sarah Abel

- 1 In recent decades, developments in the field of molecular anthropology have led scientists to regard the genome as a kind of biological archive, which can give access to aspects of human histories that are not retained in collective memory or written records. It has been proposed, for instance, that genetic studies may contribute to shedding light on the regional and ethnic origins of Africans displaced by the transatlantic slave trade, helping to restore ancestral links that were forcibly erased by the dehumanizing process of enslavement and the imposition of racial categories (Blakey 1998; Jackson & Borgelin 2010). A corollary of these scientific developments has been the emergence of a direct-to-consumer DNA ancestry-testing industry, which invites members of the public to learn about their 'ethnic' composition and family history through the lens of their genome (Nash 2004; Abu El-Haj 2012; Bonniol & Darlu 2014; Nelson 2016). The tests function by comparing segments of customers' genomes to DNA samples taken from human populations around the world, producing a set of reports that are delivered to customers through interactive online portals. To date, more than 30 million testing kits have been processed globally (Farr 2019), many of them by large North American companies like AncestryDNA and 23andMe.¹
- 2 My doctoral research (Abel 2016b) addressed how personal DNA tests are being used by members of the public to shed light on aspects of the histories and legacies of transatlantic slavery. As part of my fieldwork, I aimed to conduct interviews with people who had taken a DNA ancestry test, to find out how they interpreted their data in relation to understandings of their family history and their personal sense of ethnic or racial identity. A tech-savvy colleague suggested that I look at Instagram, a social media platform that centres on photo sharing.² By searching for hashtags (#) bearing the names of DNA ancestry testing companies, I came across a rich visual archive composed of digital 'snapshots' that people had made of their DNA ancestry reports, often accompanied by written reflexions which they shared publicly on the platform.

- 3 The image I am looking at is a typical example of these ‘genomic portraits’.³ It features a world map, with regions highlighted in bright colours to show the location of the various populations to which the test-taker has been genetically ‘matched’. A colour-coded pie chart in the top left corner indicates the proportion of the test-taker’s genome that is calculated to have been inherited from these different populations. Finally, a precise account of the individual’s genetic ‘ancestry composition’ (dating from roughly the last 500-1,000 years) is provided in the form of a list of percentages. The person who posted these results, for instance, was attributed 78.3% ‘Sub-Saharan African’ ancestry, mostly linked to West African populations in Nigeria, Ghana, Liberia, Sierra Leone, Senegal, the Gambia, and Guinea Bissau; 19.7% ‘European’ ancestry, mostly from places like Britain, Ireland, France and Germany; and 1.2% ‘East Asian & Native American’ ancestry. The reports usually bear the test-taker’s name, and sometimes their photograph, as if to underline the deeply personal and unique nature of the data.
- 4 It should be understood, however, that the DNA ancestry report itself is not an objective account of a person’s genomic inheritance; it is a partial representation constructed by scientists and marketing personnel, who exercise their own ‘creative’ choices, for instance by deciding which reference populations to include, how to label and depict the ‘ancestral’ groups, how to categorise them, and so on. Since each DNA testing business uses its own proprietary databases and methods, a person may receive varying accounts of their ancestry from different providers. The portraits, moreover, are not truly tailored to each customer’s family history, but based on statistical estimates: they tell us about whom we resemble genetically, according to the specific parameters set by the company (Abel 2016a).
- 5 Some companies refer to these portraits as ‘DNA stories’. Yet the stories they claim to reveal are ambiguous and potentially multiple: they can be read in different ways, and on various levels, depending on the contextual knowledge and intentionality of the reader. On one level, for instance, the DNA ancestry chart may be interpreted as saying something about the *biological* nature of ‘racial’ difference. Figure 1 shows a sample DNA ancestry report, taken from the website of the Californian biotech company 23andMe. In it, the DNA company’s classification and colour-coding of reference populations into roughly continental groups (whose geographies echo, for instance, the ‘divisions of mankind’ proposed by 18th and 19th century natural historians like Johann Friedrich Blumenbach and Carl Linnaeus), serve to naturalise these categorizations, reinforcing racialized notions about which human groups are more closely related to one another. On the contrary, studies have shown that present-day African populations hold a disproportionate share of the world’s human genetic diversity, due to the antiquity of our species’ origins in the region (Campbell & Tishkoff 2008), a fact that is rarely made evident from these genomic portraits. Although by no means endorsed by DNA ancestry testing companies, explicitly racist readings of genomic portraits have flourished among White nationalist communities, whose members have used these technologies to offer evidence of their claims of racial ‘purity’ (Panofsky & Donovan 2019).⁴

Fig. 1. Excerpt from sample DNA ancestry report on 23andMe website.

- 6 On another level, however, the origins and proportions of DNA shown in these portraits can be read as clues about demographic and social histories. The particular mixture of continental ancestries shown in the Instagram post I am describing (a majority of Sub-Saharan African ancestry, with a smaller proportion of European ancestry and a ‘trace’ level of Native American ancestry) is a common result for African Americans in the US (Bryc et al. 2015). These patterns of mixture bear the traces of the sexual regime of the plantation, in which *de jure* racial segregation was coupled with systemic and usually coerced sexual reproduction between White slaveholding men and enslaved Black women. Read in this way, histories of colonialism and racialisation – processes that often operated through the ‘social management of heredity’ (Bonniol 2006: 6) – can be made legible among DNA ancestry data.
- 7 Nonetheless, these are unlikely to be the stories that most African-American DNA test-takers are seeking. Since the early 2000s, DNA ancestry testing has been proposed as a way for descendants of the enslaved to recover clues of their ancestors’ geographic and ethnic origins in Africa – knowledge that was largely effaced by slavery (Nelson 2016). Many African-American test-takers therefore use DNA tests as a way to connect with ‘genetic kin’ in Africa; others are trying to uncover family histories rooted in slavery within the United States. Meanwhile, the meanings drawn from DNA ancestry tests are likely to vary among post-slavery societies, depending on their particular histories of racialisation and contemporary racial politics. For instance, in Latin American and Caribbean societies in which histories of widespread ‘racial’ mixture (*mestizaje/mestiçagem/métissage*) paired with eugenic Whitening ideologies have made the demarcation of racial categories more fluid, DNA tests have often been used to talk about how ‘White’ or ‘Black’ an individual or population is, rather than about their ‘ethnic’ origins outside the Americas. These debates have become particularly virulent

in the context, for instance, of the introduction of 'race'-based affirmative action policies in Brazil (Kent & Wade 2015; Abel 2018).

- 8 Test-takers also add their own narratives, based on what they know about their personal family histories, and which lacunae they are trying to fill. On Instagram, these stories often appear in the form of written commentaries that accompany the genomic portraits. In the case I am describing, the test-taker positions her DNA report within the context of an identity quest that reaches back to her childhood. She writes about how, while growing up, she was perpetually asked what she was 'mixed with'; how her body was scrutinised by others for signs of different ancestries, her cheekbones said to be inherited of 'this race' and her eyes of another. The test-taker has tagged her post '#blackhistorymonth', suggesting that she recognizes her experience is not an isolated one: it is a Black story – part of a broader Black history. She describes learning from her mother that embracing Blackness can mean disregarding her other-than-African ancestries ('what I'm mixed with') – a declaration that leaves unspoken the long histories of anti-Black racism, as well as colourism within African-American communities. Yet, the DNA test – which she says was gifted to her by another matriarch, her grandmother – offers new possibilities to read her body against the grain of race, reclaiming parts of the mixture within her Blackness.
- 9 At the end of her commentary, the test-taker invites in further layers of narrative, asking viewers of her genomic portrait: 'what are you shocked at that I'm mixed with?!' The question seems to be directed at immediate acquaintances, but it is also open to strangers. Based on the qualitative interviews I conducted with DNA test-takers in the US and Brazil as part of my PhD research, I found that this was a common strategy used by test-takers, a way of 'trying on' the ancestries listed in the DNA report by discussing the results with friends, relatives, and others who might be able to answer questions like: do I seem Nigerian? Can you see traces of Scandinavian in me? Do you trust the results? Should I?
- 10 As a researcher, I add my own layers of narrative to these genomic portraits, analysing them and their accompanying discussions through the lens of national histories of slavery and colonialism, and in the light of different strains of racist and anti-racist thought. I am interested in how DNA ancestry technologies are mobilised to reconstruct family histories and reconnect with long-lost kin; how they are influencing public conceptions of race, and to what extent can they help members of the public come to terms with the histories and legacies of slavery.
- 11 As an archive of social processes and interactions, though, these genomic portraits remain incomplete. They represent a snapshot within a longer quest for identity, not its endpoint. While the categories they offer seem to break through the fiction of race, they too require interpretation, contextualisation. The evidence they present may contradict long-cherished family histories, posing dilemmas about which version of the truth to believe, or whether both can be true in different ways. Or the results may change as the test's methodology and reference populations are updated, serving as a reminder that DNA does not retain hard-and-fast answers, only traces and clues to be incorporated into our ever-developing narratives about the past.

BIBLIOGRAPHY

- ABEL, Sarah, 2016a. "À la recherche des identités transatlantiques. Des boucles conceptuelles au croisement de la société, l'histoire et la génétique," *Nuevo Mundo Mundos Nuevos*, Colloques, October. Available online: <http://nuevomundo.revues.org/69589> [last accessed, July 2020].
- ABEL, Sarah, 2016b. "The Power of Knowing: On the Scientific Construction and Social Uses of DNA Ancestry Tests in Two Post-Slavery Societies: Brazil and the USA," Doctoral Thesis, Paris, École des hautes études en sciences sociales.
- ABEL, Sarah, 2018. "Of African Descent? Blackness and the Concept of Origins in Cultural Perspective," *Genealogy*, No. 2/1. Available online: <https://doi.org/10.3390/genealogy2010011> [last accessed, July 2020].
- ABU EL-HAJ, Nadia, 2012. *The Genealogical Science: The Search for Jewish Origins and the Politics of Epistemology*, Chicago / London, University of Chicago Press.
- BLAKEY, Michael L., 1998. "The New York African Burial Ground Project: An Examination of Enslaved Lives, A Construction of Ancestral Ties," *Transforming Anthropology*, No. 7/1, pp. 53–8.
- BONNIOL, Jean-Luc, 2006. "Penser et gérer l'héritage des caractères discriminants dans les sociétés esclavagistes et post-esclavagistes," *Rives nord-méditerranéennes*, No. 24, pp. 23–34. Available online: <https://doi.org/10.4000/rives.552> [last accessed, July 2020].
- BONNIOL, Jean-Luc, & Pierre DARLU, 2014. "L'ADN au service d'une nouvelle quête des ancêtres ?," *Civilisations*, No. 63, pp. 201–19. Available online: <https://doi.org/10.4000/civilisations.3747> [last accessed, July 2020].
- BRYC, Katarzyna, Eric Y. DURAND, J. Michael MACPHERSON, David REICH, & Joanna L. MOUNTAIN, 2015. "The Genetic Ancestry of African Americans, Latinos, and European Americans across the United States," *The American Journal of Human Genetics*, No. 96, pp. 37–53. Available online: <https://doi.org/10.1016/j.ajhg.2014.11.010> [last accessed, July 2020].
- CAMPBELL, Michael C., & Sarah A. TISHKOFF, 2008. "African Genetic Diversity: Implications for Human Demographic History, Modern Human Origins, and Complex Disease Mapping," *Annual Review of Genomics and Human Genetics*, No. 9, pp. 403–33. Available online: <https://doi.org/10.1146/annurev.genom.9.081307.164258>.
- FARR, Christina, 2019. "Consumer DNA Testing Has Hit a Lull — Here's How It Could Capture the next Wave of Users," *CNBC*, August 25. Available online: <https://www.cnbc.com/2019/08/25/dna-tests-from-companies-like-23andme-ancestry-see-sales-slowdown.html> [last accessed, July 2020].
- JACKSON, Fatimah L. C., & Latifa F. J. BORGELIN, 2010. "How Genetics Can Provide Detail to the Transatlantic African Diaspora," in Tejumola Olaniyan & James H Sweet (ed.), *The African Diaspora and the Disciplines*, Bloomington, IN, Indiana University Press, pp. 75–100.
- KENT, Michael, & Peter WADE, 2015. "Genetics against Race: Science, Politics and Affirmative Action in Brazil," *Social Studies of Science*, No. 45/6, pp. 816–38. Available online: <https://doi.org/10.1177/0306312715610217> [last accessed, July 2020].
- NASH, Catherine, 2004. "Genetic Kinship," *Cultural Studies*, No. 18/ 1, pp. 1–33. Available online: <https://doi.org/10.1080/0950238042000181593>.

NELSON, Alondra, 2016. *The Social Life of DNA: Race, Reparations, and Reconciliation after the Genome*, Boston, MA, Beacon Press.

PANOFSKY, Aaron, & Joan DONOVAN, 2019. "Genetic Ancestry Testing among White Nationalists: From Identity Repair to Citizen Science," *Social Studies of Science*, No. 49/5, pp. 653–81. Available online: <https://doi.org/10.1177/0306312719861434> [last accessed, July 2020].

NOTES

1. See for example: www.ancestry.com/dna/, <https://www.23andme.com/>. A comprehensive list of current and defunct DNA ancestry testing companies around the world can be found on the website of the International Society of Genetic Genealogy (ISOGG): https://isogg.org/wiki/List_of_DNA_testing_companies (all weblinks are available in July 2020).
 2. I am grateful to Colleen Morgan for this suggestion.
 3. To protect the anonymity of the individual who posted the DNA report, I have chosen not to reproduce the original Instagram post here.
 4. Companies like AncestryDNA have recently stopped arranging their DNA results by continental grouping, seemingly to avoid the racializing effect described above.
-

AUTHOR

SARAH ABEL

British Academy Postdoctoral Fellow

Centre of Latin American Studies, University of Cambridge, United Kingdom