

David Reich. *Who We Are and How We Got Here. Ancient DNA and the New Science of the Human Past* (Oxford: Oxford University Press, 2018, xxxi and 335pp., 28 illustr., pbk, ISBN 978-0-19-882126-7)

Archaeogenetics is the most revolutionary thing to have happened in archaeology in recent years, and David Reich is very much at the forefront of this development. If you have been following the news, you will know that he is involved in projects the world over. It will also not have escaped your notice that there has been some controversy. For instance, the news that 4500 years ago Spain saw an influx of violent hordes decimating every single native man and enjoying repeated access to local women (Ansedo, 2018) was met with outcry by the Spanish archaeological community (including some co-authors of the eventually published paper), who strongly criticised the inflammatory language used to present research to the public ahead of its scientific publication, but also pointed out that archaeological evidence contradicts such a scenario (Valera et al., 2018). The scholarly piece (Olalde et al., 2019) is much more neutral in tone, but it is hard to assess whether this is due to peer pressure, to the fact that 8000 years of history had to be squeezed into four pages, or whether Reich's original public statements had been deliberately overdrawn to generate interest. Similarly, scholars working in the Pacific region have stated that their research, which relies on carefully building ties with local communities, has been rendered more difficult by Reich-led studies, which generally display a greater concern for fast and high-impact publication (Lewis-Kraus, 2019, though note the reply by Reich, 2019).

So, when a scholar at the forefront of his field, and not shy of controversy, publishes a work aimed at a general audience, there is considerable interest from the

scholarly community too, especially since the book-length treatment promises some more detailed insight into how Reich himself sees the social processes involved. Indeed, this book has plenty to offer. The case-studies are extremely wide-ranging in space and time, from the peopling of the Pacific to the earliest Palaeolithic settlement of Europe, from the genetic impact of the caste system in India to the spread of Indo-European speakers, and taking in the Americas and East Asia on the way. Current gaps in knowledge, particularly the relative paucity of studies in Africa, are duly noted, but even so, this is an eloquent illustration of just how deeply and irreversibly aDNA has influenced all enquiry into the past. The potential of the method is beyond any doubt, and topics as diverse as migrations, marriage rules, and status-based reproductive patterns are all within the remit. The volume is written in a clear and accessible style, so if you need a brief introduction to how aDNA works at the molecular level (though see Horsburgh in *Current Anthropology* 2018 for a critical comment) and what actually happens behind the closed doors of the lab, or if you wish to catch up with the increasingly fast developments across several world regions, then you could do much worse than reach for this book.

However, it is also clear that this is very much an advertisement for Reich's research agenda, his conception of archaeogenetics and its role. As such, the volume is unashamedly partial. This is something archaeologists will particularly notice, as they are often cast in one of two narrative roles. Either they provide supporting evidence for a conclusion reached by genetics, or they are convenient sometimes slightly

bumbling background characters who, for unaccountable political or theoretical reasons, have quite misinterpreted the evidence at their disposal. Archaeogeneticists can then sweep onto the stage and suggest radical new ideas, for instance that the Bell Beaker spread could be connected to a new worldview (e.g. pp. 110–17). Who would have thought? (Strahm (2004), amongst many others, springs to mind). It is never questioned that molecular evidence trumps all other kinds, a stance also taken by the discipline's founder, Luca Cavalli-Sforza (e.g. Cavalli-Sforza & Cavalli-Sforza, 1996: 118), who is coincidentally compared to Moses leading his people to the promised land (xxi). It is all there for the taking, and indeed Reich likens archaeogeneticists to the Barbarians bearing down on Rome, wreaking havoc and turning received wisdom upside down (p. 128). This is exciting stuff, and there is a real sense of passion animating the writing in this volume.

There is no denying that things will never be the same again. In many instances archaeogenetic evidence has revealed flaws and inconsistencies in archaeological reasoning and has forced a fundamental re-think. Yet why should this be a one-way process? The contribution a deeper appreciation of archaeological models could make to archaeogenetics is never addressed, nor does the reader get a sense of how diverse opinions within the field really are. Granted, this is not the main focus of the book, but in many cases a more thorough reading of the archaeological literature could have provided a wider range of models, beyond the 'mass migration or no migration at all' scenario, that Reich could already have referred to when designing his studies and interpreting the results of his statistical calculations. It is but a small consolation that archaeology is not the only discipline thus treated—the results of linguistics, or even

of mitochondrial aDNA studies, are similarly under-referenced (as pointed out by Bandelt in *Current Anthropology* 2018), leading time and again to the claim that a stunning, undreamt-of and game-changing result was first and uniquely obtained by Reich and his team.

This lack of understanding of the contribution other disciplines could make is particularly noticeable when Reich feels compelled to comment on the ethical implications of his research, not just regarding sample selection and consent (e.g. pp. 162–71; see Horsburgh in *Current Anthropology* 2018 for further comment), but also in terms of how this may feed into contemporary debates. These are among the weakest sections of the book. Those following Twitter feeds and press releases will already have noted that Reich advocates finding a new way to talk about biological differences between human groups in terms of physical capabilities, susceptibility to disease, and educational achievement, amongst other traits. This was openly criticised by a collective of scholars who drew attention to the difficulties with definitions of 'race', which are not biologically, but socially and politically, grounded (Kahn et al., 2018; see also Long & Kittles, 2003).

In the present volume (pp. 247–65), this topic is fraught with ambiguity. On the one hand, we are told, denying biological difference between populations may be well-meaning but is misleading, leaving scientists open to attack from the very same right-wing bloggers they are hoping to undermine (pp. 254f.). On the other hand, the existence of biological differences between groups 'should not affect the way we conduct ourselves [... We] should commit to according everyone equal rights despite the differences that exist', because for a given individual, hard work and context can lead to a divergence between actual performance and

gene-based predictions (pp. 265f.). The latter viewpoint, however, is presented as a personal opinion, partly based on Reich's own experiences as a member of a particular religious and ethnic group. It is laudable, but not backed up by the 'scientific facts' he is willing to present in favour of the existence of race as a meaningful biological category. It is instructive to note in this context how difficult it apparently is to find proponents of the (archaeo) genetic community willing to participate in a workshop that would provide non-specialist guidance about how one should understand the role of 'race' and how extremist propaganda on this score could effectively be countered with genetic arguments. Reich himself also declined (Harmon, 2018).

The same apparent contradiction applies to Reich's discussion of the role of women in prehistory, which is seen as reduced compared to men: 'measured by the contribution to the next generation, powerful men have the potential to have a far greater impact than powerful women, and we can see this in genetic data' (p. 235); males quite simply can have more children over a lifetime. This is often reinforced by social norms further limiting female agency. However, nowadays one should support equality between the sexes, as 'one of the ennobling behaviours of which we humans as a species are capable' is to struggle 'against the social and behavioural habits that are built into our biology' (p. 246), such as creating inequalities between the sexes. Reich here seems torn between what he would like to recommend as a person who wants to live in a peaceful, equal-opportunities society, and what his data appear to be telling him. It is here that involving the social sciences, including archaeology, could have helped. It might have shown that someone's 'impact' in prehistory could include ways other than genetic signature,

that these ways still have a direct influence on the physical and social environments in which, for example, children are raised (which, after all, can affect their genetically predicted performance in various areas, see above) and therefore have a lasting influence on society. Yet the idea that women would have been crucial to individual and group survival, or could have contributed to society beyond lending their wombs, is not entertained.

Overall, because other disciplines are repeatedly downplayed, opposed or ignored, Reich's own moral recommendations appear poorly grafted onto the more data-based sections of the text and thus seem easily attackable by those with a political motivation to do so. That we simply should 'behave a little better in our own time' (p. 246) seems a hollow claim to set against allegedly biologically inbuilt propensities. The book is rife with such contradictions (one need only look at the *Current Anthropology* 2018 reviews section on Reich's volume to find plenty more examples, e.g. Vander Linden's contribution), but these do not lead Reich to question the assumptions that went into the generation and subsequent interpretation of his own data. Where could alternative viewpoints make a difference? How are populations actually defined and is this definition appropriate? Although this is a volume that aims to reach a wide audience and impress on them the potential of an increasingly important field, one could still have expected a more balanced approach here.

In sum, you are going to have to read this book, eventually. There is no getting around the fact that the archaeogenetics debate has given our field massively more media attention than we are used to, and that not all of it is of the kind we like. It is therefore imperative that we find out what the arguments are and where we can fruitfully work with the new data, and the

colleagues from this still quite new discipline, to propose a range of alternative models. We must also clearly state how we see the role of the past in political debates of the present. So, whether you want to catch up on all the genetics publications you have missed, run an ethics class and are in need of controversial material to discuss with your students, or quite simply need your blood pressure raising, have a go at the book!

### REFERENCES

- Ansele, M. 2018. The Invasion that Wiped Out Every Man from Spain 4500 Years Ago. New Research Indicates All Local Males on the Iberian Peninsula Were Killed by Hostile Invaders with Superior Technology. *El Pais*, 4 October 2018 [accessed 8 March 2019]. Available at: <[https://elpais.com/elpais/2018/10/03/inenglish/1538568010\\_930565.html](https://elpais.com/elpais/2018/10/03/inenglish/1538568010_930565.html)>
- Cavalli-Sforza, L. & Cavalli-Sforza, F. 1996. *The Great Human Diasporas: The History of Diversity and Evolution*. Reading (MA): Addison-Wesley.
- Current Anthropology. 2018. Book Review Forum: Who We Are and How We Got Here: Ancient DNA and the New Science of the Human Past. By David Reich. New York: Pantheon, 2018. *Current Anthropology*, 59: 655–62.
- Harmon, A. 2018. Why White Supremacists Are Chugging Milk (And Why Geneticists Are Alarmed). *New York Times online*, 17 October 2018 [accessed 8 March 2019]. Available at: <<https://www.nytimes.com/2018/10/17/us/white-supremacists-science-dna.html#click=https://t.co/oyfudVYwbM>>
- Kahn, J. and 66 others. 2018. How Not to Talk About Race and Genetics [accessed 8 March 2019]. Available at: <<https://www.buzzfeednews.com/article/bfopinion/race-genetics-david-reich>>
- Lewis-Kraus, G. 2019. Is Ancient DNA Research Revealing New Truths — Or Falling into Old Traps? *New York Times online*, 17 January 2019 [accessed 8 March 2019]. Available at: <<https://www.nytimes.com/2019/01/17/magazine/ancient-dna-paleogenomics.html>>
- Long, J.C. & Kittles, R.A. 2003. Human Genetic Diversity and the Nonexistence of Biological Races. *Human Biology*, 75: 449–71.
- Olalde, I., Mallick, S., Patterson, N., Rohland, N., Villalba-Mouco, V., Silva, M. et al. 2019. The Genomic History of the Iberian Peninsula over the past 8000 Years. *Science* 363, 1230–34.
- Reich, D. 2019. Letter in Response to Jan. 17 Article in the New York Times [accessed 8 March 2019]. Available at: <<https://reich.hms.harvard.edu/letter-response-jan-17-article-new-york-times>>
- Strahm, C. 2004. Das Glockenbecher-Phänomen aus der Sicht der Komplementär-Keramik. In: J. Czebreszuk, ed., *Similar but Different: Bell Beakers in Europe*. Poznan: Adam Mickiewicz University, pp. 101–26.
- Valera, A. C. and 90 others. 2018. Genética de una ‘fake news’: respuesta a las noticias sobre ‘invasiones’ y ‘exterminios’ en el III milenio Antes de Nuestra Era en la Península Ibérica [accessed 8 March 2019]. Available at: <<https://lasgafasdechilde.es/genetica-de-una-fake-news-respuesta-a-las-noticias-sobre-invasiones-y-exterminios-en-el-iii-milenio-antes-de-nuestra-era-en-la-peninsula-iberica/>>

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