

# Commentary. Archaeology, Archaeogenetics and Theory

## Challenges and Convergences

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This set of thought-provoking papers is the result of a 2018 workshop on the impact of the ‘genetic revolution’ on archaeological theory building, one of a series of publications, meetings and conference sessions aimed at fostering interdisciplinary dialogue, and dealing with the almost impossibly large influx of data from archaeogenetic research and the issues it raises (see, amongst others, Scharl & Gehlen ed. 2017; Manolakakis et al. eds 2017; Meller et al. eds 2017; Samida & Feuchter 2016). We are only now beginning to get a handle on what the results imply for our views of past societies and ways of life (for the Neolithic, see e.g. Vander Linden 2016; Furholt 2019; Hofmann 2015, 2016). But while they have caused considerable uproar, it is fair to say that archaeogenetic data have not created new problems, but rather brought into sharper focus fault lines which have existed in our discipline for a long time, albeit in varying intensities in different countries. As outlined in the papers collected here, these fault lines concern the sorts of pasts we think are important to write about, the nature of interdisciplinarity and what this means for the craft of doing archaeology, and our relationship to a wider public and the implications of the images of humanity we create. All these issues are as yet unresolved.

Beginning with the pasts we write about, many authors have highlighted that archaeogenetics tend to reproduce tropes that are dangerously close to

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gender-biased and racist views (e.g. Nash 2004; Hakenbeck 2019; Frieman & Hofmann 2019; for similar issues in genetics more widely see Lipphardt 2017; Pálsson 2007:176–202; Jobling et al. 2016; Kowal & Llamas 2019), generally quite in contrast to what the geneticists themselves want to convey. This effect arises from the chosen foci of research and the way these are reviewed and amplified in the media. The violent ‘steppe people’ with their warrior ethic are a prominent example (see most luridly Barras 2019). As a result, a positive feedback loop is instigated (see Lipphardt & Niewöhner 2007:56–60) by which it is more likely that evidence of further violence will be particularly noted, investigated, prominently published and widely received. For instance, in their recent report on the mass grave of Koszyce, Schroeder et al. (2019:1, 6) go from the statement that people associated with Corded Ware ‘possibly’ perpetrated the atrocity to the statement that this was ‘probable’, when of course there is no clear indication of who the culprits were. We are left with a narrative that is not simply about violence in the past, but about violence conceived as an ethnic conflict, whereby ethnicity is narrowly defined as a genetic attribute.

Yet this is hardly a comprehensive picture. To begin with, there is some diversity in the contribution of ‘steppe ancestry’ in different populations, and this ‘steppe’ component also decreases slightly over time (e.g. Malmström et al. 2019). This suggests a complex picture of non-homogenous migration events, divergent routes and impacts, and even backflow. Indeed, the overall genetic picture of male-biased, substantial migration could be the aggregate of longer processes with multiple ups and downs in relative population contributions (Goldberg et al. 2017). In addition, there is the archaeological evidence for substantial continuities in cultural traditions, for instance in parts of Denmark (e.g. Iversen 2013), the Netherlands (Beckerman 2015:246–248) and Switzerland (Ebersbach et al. 2017), which suggest a much more even contribution of existing and immigrant populations to Final Neolithic social formations. As Furholt points out in his contribution here, it is burial ritual which changes most dramatically, not all aspects of society, and while there was differential access to these new practices, this was nowhere the whole story, representative of all of the population. By focusing on just one storyline, we are selling our data short.

In criticising these readings, I do not want to claim there was no violence, but to question the prominence such narratives receive over others as convenient attention-grabbers, with little thought as to whose positions are bolstered by such narrowly ‘impact-focused’ outputs. What we are seeing here is a wider shift of the Overton Window, of what is considered permissible to say about the past and which sorts of explanations are considered ‘strong’ – namely those based on quantifiable factors, such as genetic difference. As Ribeiro and Barrett point out in this issue, what falls by the

wayside is the qualitative character of human action as purposeful under certain circumstances, including power relations and ideological factors. These aspects cannot be addressed by genetic data alone.

This shift of the Overton Window has begun to impact interdisciplinary communication more generally, where it has become acceptable to claim that science is difficult to do, but objective, while humanities research is easy and based ‘merely’ on interpretation (critiqued e.g. in Sørensen 2017:105; Pollard & Bray 2007:255). This imbalance extends to the sciences controlling most of the funding, and therefore setting the questions and driving the agenda, as several contributors to this issue point out. It is hard under such circumstances to reach mutual respect for the contribution of different fields. Perhaps this is best exemplified by the way non-genetic information is systematically side-lined in archaeogenetic narratives (see also Terrell 2019). As just one example, Booth (2019:5) claims that material culture is ‘a poor, or at least unreliable gauge of demographic change’ and can therefore, in a blanket fashion, be excluded from any argument regarding population continuity. This is a stark simplification of a long-standing archaeological debate which critiqued the practice of seeing single kinds of artefacts (such as pottery or brooches) as indicative of population change, rather than performed ethnicity (e.g. Burmeister 2000). Yet these archaeological contributions for example also stressed the role of private versus public displays of identity, and the persistence of whole networks of transmission and contexts of action as precisely indicating population continuity in times of change (e.g. Burmeister 2000:542). As long known in archaeology (e.g. Collet 1987), the context of a practice or piece of material culture is key for interpretation. This idea has evidently not made it into the archaeogenetic mainstream.

It is little wonder, then, that archaeological data are rarely appreciated in their full complexity and are almost unconsciously relegated to second best. For instance, Pickrell and Reich (2014:385) paint a bright future in which archaeologists can buy an aDNA test commercially, but warns that they will need help in interpreting the results, because those are complicated – as if the reverse was not also true and geneticists could simply acquire ‘easy’ archaeological data without needing deeper understanding. Instead, the way forward for collaborative research is to design it together from the start. Indeed, there are encouraging signs of rapprochement between geneticists and archaeologists. Thus, Veeramah (2018) argues that the field should move away from grand narratives and ask ‘bottom-up’ questions of greater relevance for specific sites or regions, while Goldberg et al. (2019) and Tassi et al. (2017) have begun to model populations historically and to see contact between populations (as opposed to simple tree-like splits) as a constant – scenarios which seem more likely on archaeological grounds.

Once it is realised that ‘populations are pragmatically constituted in line with the interests of the researchers’ (Pálsson 2007:206), and that sampling strategy and statistical tools to an extent predetermine outcomes (as Serre & Pääbo 2004 have shown with regards to race), we can explore whether, in an archaeological setting, different approaches would lead to different results regarding the convergence of genetic lineages and cultures.

Yet the issue is not just about kinds of questions, it is also about kinds of answers and kinds of knowing, as several articles in this volume make clear. There is a strong tendency in scientific research to frame questions in a dualistic mode, as hypotheses which must be proven true or false. As Hingley and colleagues (2018) point out, dualities cause problems, because no matter how well-intentioned the resulting narrative – in their example concerning the interaction of ‘indigenous’ Iron Age and ‘mobile urban’ Roman groups – any duality can be spun unhelpfully in politically charged public discussions. What we need, therefore, are not clear-cut and simple scenarios, but messy and tangled ones, in full appreciation of the fact that some phenomena in the past – just like in the present – are ambiguous, uncertain or vague, and that representing them as such is not only warranted, but necessary (e.g. Gero 2007; Sørensen 2016; Lipphardt 2017:129; Nilsson Stutz 2018; Bösl & Feuchter 2019:255). This is especially pertinent for complex issues like ‘identity’, which need more than one kind of data and analytical scale to tackle (Ion 2017:189). In contrast, some practitioners would rather ‘bypass fundamental ambiguities’ in their study of ‘archaeologically important cultures’ (Pickrell & Reich 2014:378) or indeed believe it is time to ‘lift the interpretative burden from archaeology’ (Kristiansen et al. 2017:335).

The contributors to this section make a very forceful case that interpretation, while a responsibility, is far from a burden that can or should be avoided. The archaeological way of knowing the world is important and worthwhile. Both Ribeiro and Marila argue convincingly for the crucial place of methodological pluralism, of diverse perspectives on what constitutes worthwhile questions and pertinent data (or indeed archaeologically important cultures) and of in-depth reflections about the social and moral value of our investigations. As Ion states, this means that neither partner in the interdisciplinary endeavour should be afraid to modify their stance in response to criticism. So, if we have not provided easy, bite-size theories and models of migration for eager scientists to consume, this is not just an oversight. While there is of course room for operationalised simulations (Vander Linden 2019), they will always be partial and need to be flanked by models stressing the indeterminacy of past situations. Thinking again about migrations as phenomena is a revitalising opportunity, both for theory and for applied case studies. But we should not be expecting unambiguous and clear-cut answers.

This is because ‘messy’ aspects of past life, such as society, history and worldviews, are not just troublesome side issues, they are what makes the fascination and relevance of archaeology, and they inevitably inform present-day identity discourse. As Ion puts it, science is increasingly standing in for myths, religion and other traditional ways of knowing when it comes to questions of identity and origin. While recent, question-led archaeogenetic research no longer provides the caricatured ‘answer looking for a question’ (Jones 2019:17), or ‘data in want of a narrative’ (Ion 2017:186), it still often reproduces stereotypical interpretations which are not politically neutral. In a celebrity- and media-driven field like genetic research (for an analysis, see Jones 2019; Bösl & Feuchter 2019:239) all participants must become more aware of how best to frame their results and of likely public reactions. In this issue, Källén and colleagues tackle this aspect when they contrast the media trajectory of reports on a Viking female ‘warrior’ and on a ‘cosmopolitan’ Viking community. While the imagery of an empowered female clearly struck a chord, the multi-origin inhabitants of Sigtuna were quickly dismissed – but I would argue that this is not just because of the local Swedish focus of the story, but also because migranhood as an identity has fewer champions than gender equality. Migrants are just not cool in mainstream discourse – which is probably also why the ‘warrior’s’ non-local origins never were part of the media attention.

Although media engagement is exhausting and support for the scientists involved needs to be strengthened, as Källén et al. stress, this will increasingly form a part of our job description, and we will need many more studies along the lines of those produced in the light of Brexit (e.g. Brophy 2018; Bonacchi et al. 2018) to understand how it works. But we also need better messages. As Stojanowski (2019:192) points out, speaking (for example) about percentages of ancestry, or foregrounding skin and hair colour information without further context or explanation is courting the right fringe. It may not be seen as a conscious ideological choice to push simple narratives in high-impact outlets (Booth 2019:9). But it is time everyone involved became conscious that this is, in fact, a choice – and that it has consequences. Even by the narrow conventions of science, a simple narrative is only good if includes as much of the data as possible (including non-molecular sources of evidence), and one could argue that it is only an honest narrative if the gaps and ambiguities are explicitly pointed out (see also Nilsson Stutz 2018).

In sum, this thematic section clearly spells out the issues that still trouble archaeologists when it comes to engaging with Big Data, in particular aDNA. It also goes some way in pointing to possible solutions. The strongest message to emerge from the papers gathered here is that this is not just about unlearning and relearning quite a few things we thought we knew about

the past. It is also a matter of defending different kinds of questions and approaches, different ways of knowing, and different uses that knowledge can be put to. These debates are also raging in social anthropology (e.g. Pálsson 2007), geography (e.g. Nash 2004), or classics (e.g. Wiedemann 2017), to name but a few – wherever practitioners are interested in how ‘other lives were lived’ (Barrett, this volume) in all their complexity. It is now for our colleagues in the sciences to engage with these concerns.

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