

SHUTTING THE STABLE DOOR AFTER THE HORSE HAS BOLTED

Critical Thinking and the Third Science Revolution

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In this article, pursuing breadth rather than depth, Kristiansen does not set out to convince as much as to add to the last decade's cavalcade of diagnostic statements about the discipline (consistently put forward and curiously in line with the agendas of the well-established archaeologists offering them). As promised, we are presented with a rather optimistic scenario of the road ahead, leading into nothing less than revolutionary times. That is, if you are surfing the waves of the so-called "third science revolution" and not stuck in post-modernist discourse, in which case you are doomed to be left at the shoreline. In Kristiansen's scenario, fuelled by the sheer force of new types and levels of data input (e.g. DNA, isotope analysis) – mainly dealt with and stemming from large projects enabled by the EU – the wedding of micro and macro perspectives in archaeology is to finally take place. Potential spouses in this shift towards a "revised modernity" are evolutionary/world system approaches combined with micro materiality/agent-network approaches. Their offspring – destined to change the way we understand mobility, interaction and cultural/genetic transmission in prehistory – is made possible through the combination of increased levels and availability of scientific data, and a renewed focus on quantification and agent-based modelling methodologies. Through this recipe an entirely "new prehistory" is made possible, a prehistory anchored more heavily in absolute

data, minimizing our previous reliance on “qualified guessing”. Finally these changes, Kristiansen points out, also call for a critical commitment in research, and a new investment in public discourse.

Having somewhat crudely outlined my understanding of Kristiansen’s perspective, it may come as no surprise that it is a scenario which I – coming from a vibrant cross-humanist research environment – do not fully recognize, nor is it one I hope for. I will concentrate this comment on what I consider to be some of the most important points raised in this article and the aspects which I found wanting, relating especially to the state of ideological critique in archaeology and the ethics of scale involved in Big Data and EU-funded projects.

ADD CRITICS AND STIR

I was happy to realize that in this piece, the word “critical” was used a similar amount of times to that of other, more dramaturgical terms, such as “revolution” (24/24 times). Kristiansen points out the need for critical theorizing and critical discussion in relation to everything from data analysis, theory development and quality research programmes to ideological uses of the past. But this does not mean it takes centre stage. According to the order of events suggested, critical thinking and public engagement will have to stand back at first to let large scientific data sets, new methodologies and theoretical models of explanation emerge. Therefore, in most of these instances I am left wondering *what* it is, in Kristiansen’s view, to be critical, *when* we should be critical and *on whom* the bulk of the critical work, or the burden, should lie.

For it does seem to be a burden to Kristiansen, at least in parts. When it comes to “political issues about the use of the past” we are reassured that critical heritage studies will keep growing and thus “force” archaeology to confront such matters. In the same vein, the contributions of critical archaeologists investigating the concepts of ethnicity and culture will “inevitably” (whether we like it or not) lead to critical discussions on how (rather than *if*) ancient DNA can work as evidence in archaeological interpretations about cultural interaction and transmission. In other parts of the text, “critical thinking” and awareness of “critical theory” seems to be something almost taken for granted, or something that will come about by itself. Young researchers are trusted to be well versed in both “complex computer modelling” and “the latest critical theory”, thereby bridging the “opposition between science and humanities, theory and data”. And when it comes to the science revolution, Kristiansen insists that, since we are “past theoretical hegemonies

in the humanities”, the necessary critical discussion of “biology versus culture, genetic versus cultural evolution” will now emerge in the intersection between large data sets and methods of analysis and interpretation. This can be regarded as a turn towards a more positivistic approach Kristiansen states, “but it is one that is informed also by critical theory about the use of the past. It will therefore be more engaged in political and ethical issues.” Most of this engagement seems to refer to the increased contacts with the public, demanded of archaeologists in light of the attractiveness of DNA research in current society and the growing number of political movements looking to use such research for propaganda.

On the whole, these revolutionary changes enabled by science, in which data comes first, methods to deal with it later, and the development of theories to explain the results after that, already signals an understanding of theory (and of archaeology for that matter) as something that should emerge primarily from the researcher’s interaction with neutral data rather than her interaction with society. According to this logic it follows that critical evaluation and dealing with the public come later on, the main problem seemingly resting with society rather than with the researcher. Therefore, most of the direct critical incentive comes from devoted critical theorists or next-door neighbours rather than the archaeologists doing the complex modelling, although they and all the rest of us are so well read and informed today that we will somehow automatically engage in critical and ethical issues. To be fair, Kristiansen does point out the need for “maintaining high-quality, critical research programmes”, but in this instance too the corrupting influences we need to protect ourselves from come from the outside, from “ideological infiltration”. From such statements one might be led to assume that good critical research is normally ideology-free, that data is clean.

To my mind, critical thinking involves examining the premises and frames of our undertakings and should come before data collection and explanation, not after. A critical perspective involves critique of ideology, of hegemonic ideas engraved into society, upheld by people within and outside institutional contexts. Meaning that when archaeologists start incorporating, for example, genetic data into a “new prehistory”, not only do we need to critically discuss potential links between biology/culture (among ourselves and with the public), but we must also ask why such research is so popular right now and why there is so much funding directed that way. Genetic research “raises fundamental questions about what it means to be human” Kristiansen states, and this is true, but more explicitly, it raises questions about difference and sameness, evident from its uses elsewhere in society, such as in ancestry testing

and criminal profiling (Duster 2014). When combined with questions of *origin* it therefore – rather than raising new ones – taps directly into the same old questions asked within the framework of modernity for centuries, questions of belonging that archaeology as a discipline (as one out of many conditions) have made possible. I am not saying archaeology is by default ultranationalist or anything of the kind, but we know very well by now that there are deep-seated causes why archaeological interpretation “lends itself” well to political needs, and that using, for example, DNA as a source of knowledge in archaeology is not the same as using it in medicine. In times of globalization and unrest, it is not a secluded movement within academia or archaeology that has brought big questions of migration and grand narratives back to the table. It is a part of, and a response to, the same societal motion that gives rise to ultranationalism on the other side of the spectrum. This is why we must remember the level of critique dealing with ideology as a part of the archaeological venture, not merely as an “infiltrator”.

If we talk about being critical without including this level, I believe the renewed vows between archaeology and natural science – just as with the “add women and stir” critique directed towards researchers taking feminist directions to be about writing women into prehistory – will perpetuate a kind of “add critics and stir” approach.

BETWEEN WHAT WE KNOW AND WHAT WE DO

This “add critics and stir” tactic struck a chord with me because it echoes the kind of reasoning I often face in my own research efforts. As an archaeologist studying the uses of the past by archaeologists and EU officials in relation to the key link between them – that of funding – I often hear that, “Yes, of course archaeology and politics go hand in hand, we all know that by now” or “Are we not past that discussion at this point?” But there is still a huge difference, I argue, between what we say and what we write in archaeology, or perhaps more accurately, a *gap between what we know and what we do*.

To me, archaeology has never been about *matters of fact* as much as it has been about *matters of concern* (see Latour 2004). And a key place where the concerns of archaeologists and political spheres meet is in the policies guiding the distribution of funds for research, as well as archaeological responses to the same. Kristiansen talks affectionately about the power and accessibility of large and “wide” data sets (Big Data), especially as utilized within current European-scale projects funded by the European Research Council (linked to the EU Horizon 2020 frame-

work). The funding source “has already had a rather large impact on the formulation and financing of projects on a European scale”, Kristiansen states, adding that the “long-term effect of the ERC funding will be profound”, allowing us to cope with the “data revolution”.

Actually, I could not agree more. I too believe this will have a profound effect, and I have already noticed some of that impact in my own undertakings. I agree that the potential involved in this kind of funding is huge and beneficial to archaeologists everywhere, but it is certainly not free of ideology. Going through research reports and narratives produced by large-scale archaeological EU projects, I have often found that the level of critique outlined above, the one concerned with ideological critique, is missing when it comes to the frame of *EUrope*. For most such projects, dealing with the bureaucracy and infrastructure of making the multinational effort itself operational, not to mention the hard work of mining Big Data for clusters that can actually say something about a research problem, seems to obscure questions of research context.

Just as projects financed on a regional or national basis, EU funding comes with certain frames. Aside from the basic matters of concern directing them – such as direct “impact” (reports, policy briefings with quantified results), the development of “excellence” in EU research for a world market (research as merchandise), or the generation of “European added value” (relating to goals on EU integration and a type of “tax return”) – there is also an important question of scale involved. The choice of scale is both an empirical and a political one as it coincides with political matters of concern. Working on a European level becomes an ethical issue. Kristiansen has discussed the “Europeanness” of archaeology in Europe elsewhere, going so far as to state that it is “impossible to discuss the concept of Europe without considering this historical and ideological baggage” (2008:6). Yet, when it comes to many large EU projects, the concept is not discussed at all. Instead applications talk about European identities, and results are summarized for the sponsor/public with titles like “A Bronze Age Identity for Europe” (Forging Identities FP-7 2012: <http://cordis.europa.eu/result/rcn/88471>). At one of the most important points of interaction with political spheres, all our reading on critical theory and knowledge about uses of the past does not always make itself known. This gap between *what we know and what we do* is especially visible and potent in the craft of writing narratives of the past. Ironically, this can be exemplified by how Ötzi, one of the most potent “European” characters used in Kristiansen’s text, has already entered German schoolbooks on history as the “first European” and as being of “European nationality” (Sénécheau 2006).

What we need then, is not only more public engagement and new ways of presenting our narratives, but an increased focus on the structure and “meta-stories” (Holtorf 2010) of those narratives, and we find those by valuing what the humanities do best, critique of ideology and qualitative analysis (see also Larsson 2013; Källén 2012). Big Data does not mean better data; after all it is often just the same data linked up. It makes “bigger” interpretations possible, which is great, but this does not equal “better” interpretations. And importantly, just because it is true, it does not mean it is right. Changes in data and infrastructure mean changes in thinking, and while this might be changes for the better, we still have to consider and evaluate the context we operate in already at the beginning of a project, and employ our critical minds in the places where it matters most, such as in the interaction with funding bodies. Otherwise, if this “add and stir” approach dictates the place of critique in a “revised” modernity, if being critical is connected mainly to source criticism (albeit crucial) and to developing critical models of explanation – pushing concerns regarding our contexts as researchers, our theoretical and analytical origins to the sidelines – I believe archaeologists risk contributing to the same structures that upheld practices of exclusion in modernity (what is it, in other words, that is “revised”?).

Like Kristiansen, I too like to dream. I dream about new sources of information in archaeology making things more complicated than ever before, resulting in an avalanche of contradictory results. I dream of finding out new details and nuances in past human experiences through transparent hermeneutic efforts which recognize the value of preceding discourses in archaeology, not using them as straw men and rhetorical fuel to power new revolutions. But an inescapable part of dreaming is the part where you wake up, scrutinize your own questions and methods and actually incorporate what you have learnt and not just deal with society’s receptions later on. While Kristiansen’s dialogue between “dreams and hard evidence, past and present concerns” may inspire “innovative research”, it does not necessarily foster responsible and reflexive research. These are indeed exciting times, but I find them to be equally worrisome.

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