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Interdisciplinary Contentions in Archaeology: An Introduction

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Abstract

It is rare to engage with archaeology nowadays without stumbling upon references to inter-, multi-, cross-, and transdisciplinary research. It seems that any archaeological project that wishes to be successful must engage somehow with disciplines other than archaeology. However, a closer look into interdisciplinary archaeology and its cognates is not as straightforward as it first appears. The aim of this introduction is to outline the context of interdisciplinarity in archaeology and introduce the several topics discussed in the papers composing this current theme issue.

Keywords

Interdisciplinarity, methods, discipline, science, research

Zusammenfassung

Wenn man sich heutzutage mit Archäologie beschäftigt, stolpert man bald über Verweise auf inter-, multi-, und transdisziplinäre Forschung. Es scheint, dass jedes archäologische Projekt mit anderen Disziplinen zusammenarbeiten muss. Allerdings zeigt ein genauerer Blick in die interdisziplinär angelegte Archäologie und verwandte Disziplinen, dass diese Ansicht zu einfach ist. Ziel dieser Einführung ist es, den Kontext der Interdisziplinarität in der Archäologie zu skizzieren und die verschiedenen Themen vorzustellen, die in den Beiträgen des vorliegenden Themenheftes diskutiert werden.

Schlagwörter

Interdisziplinarität, Methoden, Disziplin, Naturwissenschaft, Forschung

Interdisciplinary Archaeology as Ideology

In their book *Evidential Reasoning in Archaeology*, Alison Wylie and Robert Chapman (2016: 15) observe that there is an “epistemic anxiety” inherent to archaeological reasoning, a fear that our knowledge about the past is fragmentary and/or not grounded in objective evidence. To mitigate this assumed problem, archaeologists are expanding their epistemic and methodological apparatus moving into other disciplines or getting involved in collaborations. This has happened through what has been called “interdisciplinary” and its variants “multi-disciplinary”, “pluridisciplinary”, and “transdisciplinary” research. These terms are used in all facets of archaeology, but especially in the context of large projects and the archaeological sciences. Interdisciplinarity and its cognates have become very prominent in archaeology in the last decades, especially in light of what Kristian Kristiansen has called the “Third Science Revolution” (2014).

Although interdisciplinarity can manifest in a wide variety of ways, the way in which it operates in the “Third Science Revolution” is by combining and analysing data through methods derived from different disciplines. The application of scientific techniques from genetic studies on data recovered archaeologically is a classic case of interdisciplinary research. The establishment of correlations between environmental archives and historical records is another good example of interdisciplinary research.

When we think of interdisciplinary archaeology as the straightforward process of applying methods and techniques from a diverse range of disciplines, it is safe to say that archaeology has always been interdisciplinary; archaeology has always been dependent on techniques and methods of other disciplines (Díaz-Andreu and Coltofean-Arizancu 2021). Naturally, if all of archaeology is interdisciplinary to some extent, when the term “interdisciplinary” is used today, to what does it actually refer to? Take the example of the European Association of Archaeologists annual conference of 2020, where at least 20 out of 160 session titles contained the word “interdisciplinary” or a variant thereof. How is the research promoted in these sessions different from the rest of archaeological practice? What most of these references to interdisciplinarity signal is something more than just combining different disciplinary practices. As Liv Nilsson Stutz has pointed out, interdisciplinary research in archaeology follows a rather formulaic logic by combining ideas, methods, and techniques of the natural sciences with those of the human sciences; in this combination, the natural sciences have the upper hand as they are today considered the more objective and reliable source of knowledge (Nilsson Stutz 2017: 51). At face value, interdisciplinary archaeology might seem just another way of conducting archaeological practice, but interdisciplinary practice is much more than that: it is a distinct historical and social product. As Kristiansen (2014: 12–13) points out, a good part of the interdisciplinary archaeology conducted during the “Third Science Revolution” is a result of developments outside of archaeology, such as in DNA sequencing and the creation of the European Research Council, but this does not diminish the agency of those archaeologists who have actively sought and pursued genetic research and large-scale funding. But as the papers in this special issue discuss, interdisciplinary archaeology is more than simply a combination of methods and techniques from different disciplines, it is an ideology.

The historical, social, and theoretical context of interdisciplinary archaeology has flown largely under the radar; to many scholars, interdisciplinary archaeology is simply something that is practiced. This contrasts with the processual programme of the 1960s and 1970s, to which a lot of the scientific interdisciplinary archaeology of today is compared (Sørensen 2017; Ribeiro 2019). Whereas processual archaeology had distinct underlying theoretical and methodological premises (e.g., Binford 1965; Clarke 1973), often linked to functionalism, systems-theory, the deductive-nomological approach, the hypothetico-deductive approach, or cultural evolutionary theory, to name only a few, the interdisciplinary archaeology of today forms a similar set of ideas and practices but lacks much of the theoretical background of processual archaeology. The lack of theoretical background literature does not mean that interdisciplinary archaeology is just a form of *praxis*, devoid of any theoretical or political clout. Much on the contrary, interdisciplinary archaeology is steeped in theoretical and political consequences.

As has been pointed out by one of the most prominent scholars currently studying interdisciplinarity, Julie Thompson Klein, interdisciplinarity is inherently meaningless (2005: 63). We assume that what Klein is saying is that interdisciplinarity is not really anything in and of itself, but rather something that scientific practitioners shape and dictate through their actions (see also Sørensen this issue). What is of interest to us is how archaeologists have shaped the practices that today can be qualified as “interdisciplinary”.

More Is Less

More than just a combination of different ideas and methods, the interdisciplinary archaeology of today is heavily data-centric, and it refers to the methods of data retrieval, their analysis, and ultimately, their display in publications. Thus, while interdisciplinarity might have different meanings according to different archaeologists, it is most often evoked when *addressing the use of scientific techniques to obtain and analyse archaeological data*. In practice, interdisciplinarity is most explicit in large-scale funding, large-scale projects, where teams are composed of specialists of very specific techniques and methods. Isotope, data modelling and aDNA are currently the most popular specializations in archaeological research today. The data studied through isotope or through scientific modelling must nevertheless be archaeological – in this sense, the role of archaeology is that of retrieving data that is then studied through scientific methods. The classic case of this type of research is aDNA research, such as the first genomic histories of Europe (e.g., Haak et al. 2015). This type of research is interdisciplinary insofar as the material under analysis through DNA methods is recovered archaeologically. However, more often than not, the field archaeologists who have ceded the data have little say in their interpretation. The comparison of different archaeological proxies is also a common way of conducting interdisciplinary research, where different forms of data serve as a stand-in for what was happening in the past, for example radiocarbon dates as a proxies for settlement intensity, foraminifera as a proxy for past climate, and diverse pollens as proxy for past diet strategies. In this type of research, the central aim is consilience, that is to say, the combination of data obtained through different disciplines in order to strengthen an argument.

Both the study of ancient DNA material and the modelling of proxies have their advantages and disadvantages. The advantage of this type of research is that through large-scale funding, it becomes possible to obtain a much wider picture of the conditions of life in the past. Whereas archaeologists who rely exclusively on the direct and readily available data provided by excavation are limited to knowing and understanding what that excavation evinces, the interdisciplinary archaeology of today can also provide additional information concerning farming practices in the past across entire regions, the climatic history over hundreds of years, the intensity of occupation of a certain region during thousands of years, or very accurate and detailed chronologies of occupation, to name only a few. This type of research, in turn, has opened up archaeology to wider disciplinary networks, making it common for archaeologists to grace the pages of very high-impact factor journals, and in the process, access even larger sources of funding.

The disadvantage of this type of interdisciplinary research has been discussed quite comprehensively (Ion 2017; Sørensen 2017; Ribeiro 2019) but it bears reminding what some of these are. First, since most of interdisciplinary archaeology is explicitly scientific, that is to say, reliant on advanced scientific techniques and equipment, it becomes clear that interdisciplinarity is only truly available to those countries and institutions that have the economic power to build high-quality labs and train people to use the equipment required. Not only do richer economies have easier access to equipment and experts, they also have more capital to expend on research. Thus, it comes as little surprising that interdisciplinary archaeological projects are more prevalent in richer economies, such as Northern Europe or the the USA, while virtually absent everywhere else. According to a paper by Quirin Schiermeier in *Nature* (2020), in the last Horizon 2020, a large-scale funding programme for research initiatives, out of the €60 billion funds, 40% were shared by “the EU’s three biggest economies: Germany, France and the United Kingdom”, whereas “Poland, Slovakia, Bulgaria and Romania were among the least successful participants, securing a combined total of just over €1 billion”.

The second disadvantage is epistemological: while postprocessual archaeology did, in fact, create diverse mutually exclusive ways of understanding the past (see Kristiansen 2004), the interdisciplinarity practices of today are doing the exact opposite. They are reducing archaeological interpretation to two or three oversimplified epistemologies. Take the study of proxies as an example: archaeological proxies are only possible when elements that are quantifiable are available because proxies have to be represented numerically. Thus, aspects of the archaeological past that cannot be quantified have been ignored by most interdisciplinary archaeology, aspects such as ritual and religious beliefs, identity and personhood, social institutions, agency, etc.

For some scholars, the advantages outweigh the disadvantages: interdisciplinarity has granted archaeology resources, experts, and popularity. For other scholars, the disadvantages outweigh the advantages, in the sense that if we proceed in conducting interdisciplinary archaeology as it is understood today, we will be sacrificing

the countless ways we can practice archaeology. That is the irony of interdisciplinary archaeology; it simplifies and narrows down how archaeology is practiced. In order for archaeology to accommodate the many scientific disciplines that contribute to it, archaeology has to gradually eliminate those elements that the natural sciences do not make use of.

The New Status Quo or the New Buzzword?

Rather than truly identifying the connection of archaeology with other disciplines, both natural science and humanistic, “interdisciplinary” archaeology and its cognates seem to work as a buzzword that identifies the type of archaeological research that is scientific, expensive, and fast (see Cunningham and MacEachern 2016). Some critiques and suggestions about how to proceed with interdisciplinary research have already been put forward. However, archaeologists have only barely scraped the surface when it comes to discussing the theoretical, political, and historical implications of interdisciplinarity.

The papers included in this special issue are a result of a session on interdisciplinarity organized by the authors at the 2020 EAA annual conference. What we are aiming for with these papers is more than just critique of the current *status quo* in archaeology: we want to find ways in which archaeology could improve its inter-, multi-, cross- and transdisciplinary practices. To start off, Alexandra Ion discusses the idea that not all data is translatable from one discipline to another, and that many disciplines have different ontological perceptions of their data. Instead of the transfer of data between different disciplines, it might make more sense to recognize interdisciplinarity as a “trading zone”, a flexible context where new knowledge can be produced. Liv Nilsson Stutz approaches the concept of interdisciplinarity in light of the “Third Science Revolution” in archaeology, pointing out that this way of engaging with archaeology ultimately marginalizes the humanities, which in turn could have very long-lasting and detrimental effects on the discipline. Nilsson Stutz describes how the neoliberal university has developed an obsession with output and productivity, which are threatening a truly rich and engaged form of practicing archaeology. In his paper, Tim Flohr Sørensen contends that interdisciplinary research should actually be highlighting the radical differences in terms of ontologies, epistemologies, research designs, and definitions of various disciplinary contexts. Sørensen relies on postmodern eclecticism to highlight how this approach allows for the perception of the multiplicity of epistemologies when engaging with archaeology. In her paper, Torill Christine Lindstrøm points out that interdisciplinarity is perhaps best recognized as a continuum or a spectrum, where in one end of the continuum, disciplines are very connected, and towards the other end, the disciplines are very disconnected. She argues that what we qualify as “interdisciplinary research” in archaeology fall somewhere between the ends of this continuum. Lindstrøm also points out that the different methods that archaeology could make use of are more complementary than we assume at first, and that they can be “mixed” with archaeological practices fairly easily. Daniël van Helden points out that many of the issues surrounding interdisciplinarity in archaeology concern communication. At the base of cooperative practices there is the real issue of cultural differences, of concepts having vastly different meanings depending on the disciplinary context. Van Helden emphasizes the importance of those who translate between disciplines. Finally, Artur Ribeiro outlines the epistemic limitations of interdisciplinary practice. Instead of interdisciplinarity, he suggests for archaeology the methodological anarchism of Paul Feyerabend, which would provide archaeology a more flexible and transgressive mindset towards research.

In general, all of these papers aim at establishing more flexible, equitable, and richer ways of pursuing archaeology. The idea is not to argue that interdisciplinarity in or for archaeology is something either good or bad, but to expand our ways of understanding the past, all through multiple disciplines and forms of knowledge. Additionally, what is more important is the attitude inspired by these papers. Rather than just accepting the way things are or to fully embrace our own ideas, we argue for an archaeology that accepts the attitude that things can be improved.

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