



INTERDISCIPLINARIA ARCHAEOLOGICA NATURAL SCIENCES IN ARCHAEOLOGY

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Disciplinary in Archaeology

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Archaeology is inherently cross-disciplinary, borrowing from geophysics, computer science, geology, biology, art history, and other fields. Many projects today are multi-disciplinary, bringing in experts from different fields, and working in this way has become standard practice. IANSa, established in 2010 to take advantage of “A Window of Opportunity”, was founded to “to increase professional interaction” with “approaches to archaeology grounded in scientific methods and cooperation with the natural sciences” (from the editorial of the first issue of IANSa). However, there are persistent questions about how archaeologists accomplish these goals. Do we waver uneasily between subject groups, or are we integrating different kinds of knowledge? In what ways do the paradigms of different disciplines influence the questions explored and the knowledge generated? Is it appropriate to talk about inter-disciplinarity? How are multiple disciplines integrated within actual research? These questions provided the framework for the 4th Annual Central Europe TAG (Theoretical Archaeology Group) conference, aimed at understanding Disciplinary in Archaeology.

The conference, organized by Katharina Rebay-Salisbury, Roderick B. Salisbury and Estella Weiss-Krejci at the Institute OREA of the Austrian Academy of Sciences, was supported by the ERC-funded project VAMOS and the HERA-project DEEPDEAD, and took place over 16 and 17 October 2017. IANSa was presented at the conference as an appropriate journal to disseminate papers about exactly these kinds of questions, as well as research integrating archaeology and the natural sciences.

The first day focused on the theme Reflections on Inter-disciplinarity, explicitly questioning whether the discipline of archaeology is cross-, multi-, inter-, or trans-disciplinary, and whether our discipline has been well enough defined to even ask these questions. Archaeological methods rely heavily on technological advances in science, medicine, and computers and digital technology. Unfortunately, the methodological aspect of archaeological practice does not necessarily move at the same speed, or even in the same direction, as changes in archaeological theory. Papers presented on the first day

addressed some of the challenges of engaging in multi or inter-disciplinary research, including language barriers, conceptual differences between scientific disciplines, wider conceptual differences between the sciences and humanities, and differences in traditions of doing archaeology in Eastern Europe, Western Europe and North America. All of these differences can lead to epistemological misunderstandings. By the end of the first day, however, there was a general agreement that a pluralist approach to method and theory is more constructive than less inclusive epistemologies, and that archaeology is strongest when combining the skills and conceptual tools of the natural sciences and humanities.

The second day comprised of a series of case studies on the theme of Practicing Inter-disciplinarity. Most archaeologists recognize the need for incorporating the results of “hard science” analyses in their work, and this remains one of the motivations of the IANSa journal. Archaeological research now includes everything from human bioarchaeology to digital image analysis to palaeoenvironmental reconstructions. In the papers presented, it became obvious that archaeologists need to understand the limitations of scientific methods so that we do not over- or underestimate the reliability or precision of the methods we employ. On the other hand, our natural science collaborators are not always aware of, or willing to accept, the limitations of archaeological data. In some cases, archaeologists become data suppliers, and concerns surrounding the comparability of small data sets have been ignored. These presentations provided important insights into how scientific results can be subsumed by archaeological assumptions, or conversely how archaeological contributions and concerns might be lost in the structures and jargon of science.

CE-TAG 2017 provided excellent examples and discussion of issues surrounding language, regional traditions, epistemological concerns, and inter-disciplinarity as a distinct subject. Another theme that arose was of dissemination to other archaeologists and presentation to the public. Dissemination now requires the ability to communicate across multiple platforms, in multiple genres,



Figure 1. CE TAG Conference in Vienna 2017. Photo by Estella Weiss-Krejci.

and to multiple audiences, as discussed in this issue by D. Hagmann.

The breadth of presentations was a strong indication that drawing from multiple disciplines strengthens archaeology and enables us to address larger societal concerns. It is important to engage with each other's disciplines intensively to overcome the challenges in moving across disciplinary boundaries, and to address real concerns about how and why certain methods are deployed in archaeology.

The content of this issue is very diverse. It begins with the paper already mentioned by Dominik Hagmann reflecting the use of social networks as an interactive tool for data dissemination in digital archaeology. The second article written by Mohammad Hossein Resaei *et al.* presents the results of XRD and XRF analyses applied on Late Bronze Age pottery from the Iranian site of Shahrak-e Firouzeh. The next submission is written by Verónica Pérez de Dios *et al.* and describes the results of geochemical analyses (ICP-MS, XRD and spectrometry) conducted on Roman *tesserae* (tiles used in creating mosaics) excavated in Salamanca in Spain. In the study written by Mária Hajnalová *et al.* the results of archaeozoological and archaeobotanical analyses made on finds from the Roman Age Structure excavated in Hurbanovo in Slovakia are described. Finally, Martin Janovský and Jan Horák publish a paper presenting the possibilities of using geochemical analyses in the archaeological research of deserted medieval villages taking the example of the deserted village Hol near Prague in Bohemia. The thematic

review section of this issue is devoted to starch analyses and their use in archaeology. Jaromír Kovárník and Jaromír Beneš describe the principles of this modern method and add some case studies. In the Book Reviews section Anna Pankowská presents a book of proceedings called *Children, Death and Burial, Archaeological Discourses (Archaeology of Childhood)*, edited by Eileen Murphy and Melie Le Roy and published by Oxbow Books in 2017, while Slavomír Haberajter reviews a book called *Ancient Iran and its Neighbours* edited by Cameron A. Petrie and published by Oxbow Books in 2013. Finally, in the Back-story (A Look in the Region) section Barbara Horejs presents some projects of the Institute for Oriental and European Archaeology (OREA) of the Austrian Academy of Sciences in Vienna.

Concerning the latest news regarding the IANSa journal, Roderick B. Salisbury has agreed to be the new Chair of the Advisory Board, and Sofia Stefnovic has replaced John Chapman on the Advisory Board, thus bringing new ideas and emphasizing the role of human bioarchaeology in current scientific and interdisciplinary archaeology.

We hope that due to the wide range of topics discussed in this issue, it will attract a wide audience of archaeologists and natural scientists interested in archaeology. We are glad to announce that the next issue (IANSa 2/2018) will be devoted to the papers from the 14th Conference of Environmental Archaeology (CEA), which took place in February 2018 in Modena (Italy).