*PNAS*, 115(23): 5920–25. doi: https://doi.org/10.1073/pnas.1721372115

Jehne, M. 2017. Web Essay F: Caesar the Politician. In: K.A. Raaflaub, ed. *The Landmark Julius Caesar Web Essays*. New York: Pantheon Books, pp. 6–12. [online] [accessed 10 November 2020]. Available at: <http://thelandmarkcaesar.com>

Jervis, A. 2017. Web Essay HH: The Gallic War as a Work of Propaganda. In: K.A. Raaflaub, ed. *The Landmark Julius Caesar Web Essays*. New York: Pantheon Books, pp. 236–40. [online] [accessed 10 November 2020]. Available at: <http://thelandmarkcaesar.com>

Keeley, L. 1996. *War Before Civilization: The Myth of the Peaceful Savage*. Oxford: Oxford University Press.

LINDSEY BUSTER
*Department of Archaeology, University of York, UK*

doi:10.1017/eaa.2020.60

Charles Perreault. *The Quality of the Archaeological Record* (Chicago & London: The University of Chicago Press, 2019, ix and 254pp., 57 figs, 8 tables, pbk, ISBN 978-0-226-63096-0)

'Archaeology has a problem', in capital letters and red font, starts the blurb of this book, written by Charles Perreault, Associate Professor at Arizona State University. Perrault argues that archaeological research is trying to understand microscale processes (that typically extend over decades or less) using macroscale data generated over centuries or millennia and great distances. A central concept in the book is 'underdetermination', or the idea that archaeological data are insufficient to distinguish between different hypotheses of their formation. Each chapter identifies a set of (perceived) weaknesses in archaeological reasoning and practice, before the book ends with a call for a focus on cultural history and long-term perspectives on human behaviour. The narrative in the book was clear and easy to follow and the discussions of archaeological theory, method and data provide an introduction to critical reading. It was an interesting read that left much food for thought.

Perreault emphasizes archaeology as a historical science (e.g. Ch. 1) and later (p. 137) writes that he comes from a perspective of cultural evolutionary theory (see overview in Creanza et al., 2017). He ends the book (p. 192) by referring to a more than century old tradition in archaeology of reconstructing cultural history. It is unfortunate that he never pauses for a clear definition, review, or discussion of 'cultural history' and archaeology or his use of the term. The term 'culture-historical archaeology' and its roots is by many, myself included, associated with Montelius, Childe, nationalism, and searches for origins (e.g. Trigger, 2006: 148–206; Feinman & Neitzel 2020). This kind of archaeology fostered myths of Europe as the cradle of proper civilization and fed colonial interpretations of sites and phenomena. The stone-built architecture of Great Zimbabwe, for example, was considered of non-indigenous origin and its development, thus, not properly investigated for a long time (Chirikure & Pikirayi, 2008). Indeed, the recent (and not so recent) calls to decolonize archaeology (e.g. Atalay, 2006; Schmidt & Pikirayi, 2016; Porr & Matthews, 2020) have

pointed to a continued westernized perspective and attitude in archaeological research. Perreault misses an opportunity to counter the reader and their stereotypes of the concept 'cultural history', to explain his use of the term, and to include a wider range of voices and perspectives in his argument.

An essential term in the beginning of *The Quality of the Archaeological Record* is 'the smoking gun' (Chapter 1). This is the find or trace that will allow the researchers to discriminate between mutually exclusive hypotheses (p. 5). These smoking guns must be found in nature and through fieldwork, not through simulations and models, ethnographic analogies, or experimental archaeology (pp. 14–18). Perreault concedes that the archaeological record is fragmentary and this means that there are hypotheses we will never be able to test properly. His solution is a call to focus on research where we can potentially find smoking guns that provide reasonably secure answers (p. 22). I have to admit that it took me some time to fully process this section. I agree, as an experimental archaeologist, that there are limitations even to long-term experiments. Archaeologists can test hypotheses and examine formation processes over years or decades in projects such as the Butser Ancient Farm in southern England (Macphail et al., 2004), but the past can never be completely recreated in any setting. Discarding all forms of analogies would, however, mean discarding many types of research questions as well as whole archaeological projects. Furthermore, searching for a 'smoking gun' reminds me of treasure hunts and not meticulous excavations. This last section of Chapter 1 nevertheless left me wanting more details and discussion on the proposed solution (i.e. 'macroarchaeology') and, as such, functioned as a gateway to the rest of the book.

Chapters 2-6 contain thorough descriptions of underdetermination, the shortcomings of the archaeological record and recording, and the problems with the microscale approach. Chapter 2, for example, explains how scope, sampling interval, resolution, and dimensionality in the archaeological dataset lowers its quality. Later, in Chapter 5, data from selected journals and databases are analysed to show that the temporal resolution of the data is often larger than one generation. The analysis provides an interesting addition to the arguments. Perreault concludes (p. 134) that the archaeological dataset with its poor resolution is badly suited to discussing behavioural or societal aspects such as foraging or gender.

It is impossible to me not to agree that archaeological questions, analyses, and inferences are dependent on the archaeological record, or, indeed, that there are answers we might never be able to find (or agree on). However, the archaeological record spans from small grains of sediments (e.g. Mentzer, 2014) and small objects representing moments in time (e.g., Henshilwood et al., 2002) to larger structures representing one or more generations of events (e.g. Chirikure & Pikirayi, 2008). The provenience of raw materials, the placement of camps and cities, and the food eaten represent but a few choices made within cultural contexts and societal systems. We cannot always pinpoint the year, or millennium, of decisions or events. There is not always sufficient data to draw detailed conclusions on individuals. Nevertheless, the archaeological record is full of small hints of microscale behaviour that can be used to explore various societal aspects including relative status within and between people of different genders or age groups. Perreault calls for future developments in archaeological methods. Archaeologists have experienced how methodological developments can change both our understanding of resolution and the types of

https://doi.org/10.1017/eaa.2020.61 Published online by Cambridge University Press

questions that can be asked. The study of fire-related behaviour has, for example, benefitted from developments in micromorphological and microcontextual analyses of combustion features. We can now find information on spatial use, frequency of visits, and fuel collection among other aspects (Mentzer, 2014), thus expanding the range of possible questions. There are also examples of artefacts and artefact groups acting as 'smoking guns', changing our perceptions and opening new avenues. The discovery of engraved ochres in Blombos Cave, South Africa, for example, opened new perspectives on the development of early *Homo sapiens* (Henshilwood et al., 2002). These are but two examples illustrating that archaeological methods and the kind of questions asked are in constant development and that the current status for archaeological research might not be as grim as one might think while reading Perreault's description.

Chapter 7 sets out a new program for archaeology, focusing on macroscale studies. Perreault here draws on examples from macroecology and paleobiology as he has found few published examples of macroarchaeological studies (p. 169). Examples from other fields are highly welcome and help the reader to understand the message of the book. It means, however, that relevant (archaeological) studies are left out. Studies of cultural phylogenetics (Straffon, 2016), cognitive evolution (Overmann & Coolidge, 2019) and macroevolution (Bettinger, 2009) are but a few examples of study areas that could have been used to illustrate and strengthen the argument and demonstrate the power of macroscale studies.

*The Quality of the Archaeological Record* is an ambitious book in that it aims to shift the focus of archaeological research. It is not a neutral synthesis of archaeological theory and method, but a critical discussion of the very nature of archaeology: What kind of questions should we be asking and how can we go about answering them? Perreault argues well for his position but has chosen to omit detailed discussions of terms and research history. Nevertheless, the book is an interesting read and a starting point for critical reflections on archaeology.

## References


Atalay, S. 2006. Indigenous Archaeology as Decolonizing Practice. *American Indian Quarterly*, 30 (*Special Issue: Decolonizing Archaeology*): 280–310. https://www.jstor.org/stable/4139016

Bettinger, R. L. 2009. Macroevolutionary Theory and Archaeology: Is There a Big Picture? In A. Prentiss, I. Kuijt & J.C. Chatters, eds. *Macroevolution in Human Prehistory: Evolutionary Theory and Processual Archaeology*. New York: Springer, pp. 275–95.

Chirikure, S. & Pikirayi, I. 2008. Inside and Outside the Dry Stone Walls: Revisiting the Material Culture of Great Zimbabwe. *Antiquity* 82(318): 976–93.

Creanza, N., Kolodny, O. & Feldman, M.W. 2017. Cultural Evolutionary Theory: How Culture Evolves and Why it Matters. *PNAS*, 114(30): 7782–89.

Feinman, G.M. & Neitzel, J.E. 2020. Excising Culture History from Contemporary Archaeology. *Journal of Anthropological Archaeology*, 60: 101230. doi: https://doi.org/10.1016/j.jaa.2020.101230

Henshilwood, C.S., d'Errico, F., Yates, R., Jacobs, Z., Tribolo, C., Duller, G.A.T. et al. 2002. Emergence of Modern Human Behavior: Middle Stone Age Engravings from South Africa. *Science*, 295(5558): 1278–80. doi: https://doi.org/10.1126/science.1067575

Macphail, R.I., Cruise, G., Allen, M.J., Linderholm, J. & Reynolds, P. 2004. Archaeological Soil and Pollen Analysis of Experimental Floor Deposits; with Special Reference to Butser Ancient Farm, Hampshire, UK. *Journal of Archaeological Science*, 31(2): 175–91. doi: https://doi.org/10.1016/j.jas.2003.07.005


https://doi.org/10.1017/eaa.2020.61 Published online by Cambridge University Press

Mentzer, S.M. 2014. Microarchaeological Approaches to the Identification and Interpretation of Combustion Features in Prehistoric Archaeological Sites. *Journal of Archaeological Method and Theory* 21(3): 616–68. doi: https://doi.org/10.1007/s10816-012-9163-2

Overmann, K.A. & Coolidge, F.L. 2019. *Squeezing Minds from Stones: Cognitive Archaeology and The Evolution of the Human Mind*. Oxford: Oxford University Press.

Porr, M. & Matthews, J. eds, 2020. *Interrogating Human Origins: Decolonisation and the Deep Past*. London & New York: Routledge.

Schmidt, P. & Pikirayi, I., eds. 2016. *Community Archaeology and Heritage in Africa: Decolonizing Practice*. London & New York: Routledge.

Straffon, L. M., ed. 2016. *Cultural Phylogenetics: Concepts and Applications in Archaeology*. New York: Springer.

Trigger, B.G. 2006. *A History of Archaeological Thought*. Cambridge: Cambridge University Press.

SILJE EVJENTH BENTSEN
*University of Bergen, Norway*

doi:10.1017/eaa.2020.61

Michael Dawson, Edward James and Michael Nevell, eds. *Heritage Under Pressure: Threats and Solutions. Studies of Agency and Soft Power in the Historic Environment* (Oxford & Philadelphia: Oxbow Books, 2019, 336pp., 124 figs, pbk, ISBN: 9781789252460)

John H. Jameson and Sergiu Musteață, eds. *Transforming Heritage Practice in the Twenty-first Century: Contributions from Community Archaeology*. (Cham: Springer, 2019, xiv and 460pp. 103 illustr., 97 illustr. in colour, pbk, ISBN 978-3-030-14326-8)

The heritage landscape has, in many ways, changed during 2020. At the beginning of the year, financial pressure was exacerbated due to museum closures and community engagement weakened due to country-wide cancellations of outreach events. Yet what we have witnessed as we approach the end of the year is the resilience of the sector. Heritage practitioners and researchers have embraced more active decolonisation, emerging digital technologies, and innovating knowledge exchange methods to ensure heritage retains its role in our societies. This is due to the zealous resilience and resourcefulness of the sector in the face of fluctuating fortunes which is the focus of the two compilations below. Both contributions provide overviews of approaches to challenges, whether these constitute natural disasters or increasing heritage awareness during development. As such, both books will support practitioners and researchers alike as they continue to respond to challenges of varying scale and enhance heritage's place in everyday lives.

As the title of Dawson et al.'s volume indicates, the heritage sector is indeed under pressure, with 2020 providing a new wave of challenges. Summarising these challenges is difficult as they vary across continents, governments, timescales and heritage types. Some challenges exacerbate others even rendering traditional methods of documentation and mitigation invalid. These varied and overlapping challenges