

The ethics of sustainable archaeology

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In their debate piece, Hutchings and La Salle (2019) give three different definitions of ‘sustainable archaeology’:

- 1) The study of the ways in which people in the past lived sustainably, i.e. how they maintained the natural resources on which they depended, as opposed to living unsustainably and exceeding the carrying capacity of their environment.
- 2) Ensuring the survival of archaeological sites and artefacts. This includes the preservation of sites that are threatened by environmental change, construction or industry, and the conservation and management of site archives and artefacts to ensure that they do not deteriorate.
- 3) The sustainability of the profession of archaeology (i.e. keeping the profession going).

The authors disregard the first definition—which is my own area of research—and touch very briefly on the second definition, although this represents the central issue in rescue archaeology. They then focus on the third definition, with the principal discussion concentrating on ethical issues within North American archaeology—although these issues are presented as if they were global concerns. The authors state that 90 per cent of all excavation is undertaken by archaeologists with no connection to the cultures that they are excavating—a figure that is probably unrepresentative of the true state of archaeology around the world. They go on to suggest that the discipline of archaeology is inherently ‘unethical’.

Hutchings and LaSalle (2019) argue that archaeology is self-interested and exploitative, and they do not discuss the things that archaeology can teach us about conservation and sustainable living; they do not, for example, discuss their own first definition of sustainability and archaeology. I would argue that the investigation of sustainability in the past is not only ethical, but that it also has practical applications that could benefit the planet. Take, for example, the practice of intercropping, or the growing of different crop species together as companion plants, which is an important aspect of farming in the past and in modern sustainable agriculture. It can include the cultivation of very closely related species, known as maslin agriculture, in which different varieties or species of grain are planted together in a single field. This practice was common in the past, and in Europe it can be traced back to the Neolithic, where charred seed assemblages tend to comprise mixes of different strains of wheat (van Zeist 1968). The practice of mixing species continued throughout later prehistory and into historical times (van der Veen 1995). Anthropological and historical studies demonstrate that maslin agriculture was a worldwide practice, and its cessation was largely

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the result of industrialisation and the Green Revolution, which encouraged the cultivation of single species—usually hybrids—which have replaced the broad range of ancient varieties (Guttman-Bond 2014). Reviving maslin agriculture builds resilience into the food supply, as each grain variety is resistant to different extremes of climate or to different diseases. Furthermore, local strains were developed to flourish in specific local conditions. Today, the practice is particularly well suited for developing countries, where crop failure can be disastrous.

In my 2019 book, *Reinventing sustainability*, I discuss a variety of pre-industrial methods used in sustainable agriculture, making the case that many of these practices are now being successfully re-deployed in both developed and developing countries. I also discuss the importance of local building styles and traditions, as archaeologists and architects are discovering the resilience of Indigenous architecture in the face of climatic extremes. There is a growing emphasis on local styles for local people—another area in which I cannot see any moral failing on the part of archaeologists. Governments and NGOs are restoring ancient water-collection systems across many arid regions (Manuel *et al.* 2017), and Middle Eastern architects are reinventing the ancient Persian system of natural air conditioning in the form of towers with vents that capture cool breezes and channel them through the buildings (Jomehzadeh *et al.* 2017). The use of mud-brick in construction is another method of keeping buildings cool in the heat of the desert, and the practicality and sustainability of building with earth is so effective that this method is now re-emerging in Europe after centuries of decline (Guttman-Bond 2019).

My research on sustainability and archaeology has been dismissed by some critics as being overly fanciful, impractical and doomed to failure, but the ideas I have been proposing over the past 15 years are now being put into practice on every continent (Guttman-Bond 2010, 2019). I have been disparaged for my optimism by archaeologists who are convinced that the world is now doomed because of global warming, but I see no advantage in surrendering to despair. Yes, global warming is proceeding apace, and melting ice caps and thawing permafrost are creating feedback loops that will cause further warming, but we have an array of potential solutions to address these problems. One possible approach, which requires no technology and which can be implemented anywhere, is to plant trees. Re-forestation—particularly around the equator—will take greenhouse gases out of the atmosphere. In 2016, India created a world record by planting 50 million trees in a day, and Ethiopia may have recently broken this record (BBC 2019). The planting of mangrove trees on the shorelines of regions threatened by sea-level rise would protect inland settlements and infrastructure, while also expanding wetland habitats for wildlife, *and* the trees would take up greenhouse gases. We can also re-create the prehistoric Amazonian dark earth soils, which store vast quantities of carbon in the soil in the form of biochar. We can switch to conservation tillage, which would save modern farmers a fortune in fossil fuel costs, while restoring degraded land and storing exponentially more carbon in the soil. There are many achievable and financially viable adaptations that can be made to address these global problems, and we already have the technology. All we need now is the will to initiate the change.

Hutchings and La Salle (2019) describe sustainable archaeology as if it were merely the self-interested pursuit of employment by archaeologists, who are preying upon the Indigenous population of the Americas. This is a narrow, anti-intellectual outlook that casually dismisses the great benefits that are gained by understanding the past—and at a time of environmental crisis, we are going to need all the information that we can gather. Sustainable

archaeology can help us to create a better future, and there is nothing unethical about working towards a cleaner, greener planet.

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