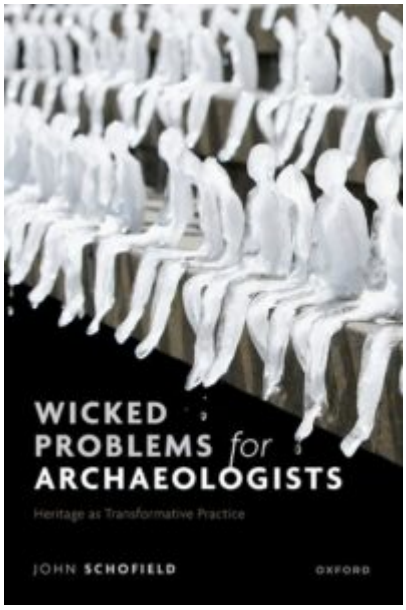
How Archaeologists Can Solve The Earth's 'Wicked Problems'



01-18-2025 ~ We used to have "balloon" debates in school: The hot-air balloon is losing height and, to avoid disaster, people must be jettisoned. To avoid this fate, everybody must justify why they should remain on board and their classmates then vote them "on" or "off."

In reality, the result was determined entirely by one's popularity. But perhaps this is always the case. In seeking to avoid funding cuts, for example, museums or cultural services are often considered easy targets, since archaeologists and heritage professionals are far less useful than doctors, engineers, or mathematicians. Beyond archaeology itself, cultural heritage has few friends, one might argue.

But I present the argument that far from being the irrelevant or outdated subject some politicians, career advisers, and university leaders might consider it to be, archaeology is essential to the future of humanity and planetary health. This is for three main reasons. First, archaeologists have the capacity to think about and to understand humanity of the past, and to project that insight into the future. Second, archaeologists are uniquely placed to comprehend the many and complex ways in which humans, over time, have related to their environment and environmental and other processes, such as the changing climate, migration, or pandemics. And third, archaeology provides opportunities for everyone to benefit, whether in terms of physical (by undertaking surveys or excavations) or mental health (through social interaction or artifact handling, to address loneliness or anxiety, for example).

York Archaeology's Archaeology on Prescription project is one example of this: The program enables adults facing various conditions to gain a detailed understanding of life in a specific area of York, and in the process to improve their health and well-being, on top of volunteerism's generally positive health effects, as demonstrated by a 2024 article.

In my new book, *Wicked Problems for Archaeologists*, I examine a few creative ways that we can use archaeology to help directly address some of the global challenges that threaten both human and planetary health. The book's main argument is that as archaeologists we need to stop thinking only about the past and also think about the future. We also need to engage more with policymakers to help them address their challenges and opportunities.

Wicked Problems

Wicked problems emerged from research in the late 1960s to devise ways of using outcomes from the United States' NASA-funded space program to help resolve urban problems such as crime and poverty. The definition of wicked problems as those that are "complex, intractable, open-ended, and unpredictable" captures both the scale of these problems and the difficulties they entail. We also now have "super-wicked problems" that introduce the additional dimension of time (or the lack of time to be precise). Super-wicked problems are in addition to the original 10 characteristics of wicked problems, defined by Horst W.J. Rittel and Melvin M. Webber:

Time is running out;

There is no central authority, or only a weak authority, to manage the problem; and

The same actors causing the problem are required to help solve it.

Both climate change and environmental pollution are examples of super-wicked problems in which archaeologists have recently become involved, including my own work in the Galápagos and the wider South Pacific region. Social injustice, crime, and conflict are widely used as examples of wicked problems.

Small Wins

I suggest that the only realistic way to achieve success with wicked and super-wicked problems, and ultimately to make a difference, is by adopting a small-wins

framework. These small wins (also referred to as small gains or nudges) align well with what universities in the UK refer to as impact, which, for the purposes of the UK's Research Excellence Framework is defined as, "an effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia." Small wins have been defined by theorist Karl Weick as, "a series of concrete, complete outcomes of moderate importance [that] builds a pattern that attracts allies and deters opponents." The strategy of small wins incorporates sound psychology and is sensitive to the pragmatics of policymaking. Examples of small wins include the plastic pollution work in the Galápagos and neighboring coastal South America, and the Archaeology on Prescription project, referred to previously.

But even with small wins, we need to be careful. Wicked problems are deeply entangled with one another, meaning that any solution to one problem may exacerbate other problems elsewhere. Climate change and social injustice are a well-known example of this entanglement.

Promoting Success

Once small wins have been achieved, as archaeologists, we need to tell influential people about the outcomes so that our museums and galleries, local services, and archaeology departments are not threatened with closure by people who fail to understand the significance (or the potential) of the work we do.

For this conversation to happen, we need spokespeople who are good at communicating and have access to data and projects that deserve to be talked about. Archaeology needs influencers, or policy entrepreneurs as they are sometimes referred to. As archaeologists, we have not always been very good at this. It is probably why climate scientists on the IPCC don't take much notice of us.

Preparing Archaeologists for a Wicked Future

We also need to think about how we manage people, resources, and priorities within our profession and how we prepare students for wicked futures. Management leadership scholar Keith Grint has explained how, across disciplines, academics need to be collaborative and passionate leaders inspiring an even more collaborative and passionate next generation. These, he thinks, are essential qualities for creating structures conducive to successfully addressing wicked problems.

We should also be looking to create (and teach our students to prepare for) some entirely new business models that provide the foundations for success: for example, new board structures that provide opportunities for younger people. Often advisory boards and boards of trustees are composed of older people with more experience. Younger idealists are often not welcome because they lack real-world experience. But for a world of wicked problems, we need to be much more creative. The old ways have not worked, so we need to try some new ones.

The Council for British Archaeology's Youth Advisory Board is an excellent example of what can be done easily and immediately. And as archaeologists, we must continue to teach students how to find, research, interpret, and conserve the places and the materials from which we create an understanding of the past and its relevance in the present. These skills are fundamental to archaeology. But we need to go further.

To ensure that the relevance of archaeology is widely felt, students also need to learn how to communicate with non-specialists. To engage with wicked problems they must also learn about global challenges, and activism, and think more about the future. We need to produce what Paul Handstedt calls "wicked students."

By John Schofield

Author Bio: John Schofield is a professor of archaeology at the University of York, United Kingdom, and the author of the new book *Wicked Problems for Archaeologists: Heritage as Transformative Practice* (Oxford University Press, 2024).

Credit Line: This article was produced by Human Bridges.