

### Just behind the Curve

The study of technology within the archaeological sphere has traditionally lagged behind developments in archaeological theory since Charles Hawkes gave it the lowest rung on the interpretational ladder. In the chronological span of the papers from this week, the study of technology has seen many innovations of its own, but most have happened after the formative shifts of archaeological paradigms. Within each of these position papers, the authors draw on some of the key points of the predominant archaeological paradigm of the day as a way to make technology once again relevant to the archaeologist and to even shape the practice of archaeology itself.

If one were to approach Charles Hawkes in the 1950s and tell him that you were interested in the process of Roman brick production, you would most likely be met with a laugh. In Hawkes' conception, studying such a technological technique from a text-aided period is one of the easiest levels of inference on what Binford later coined "Hawkes Ladder". This concept was created by Hawkes in his 1954 article in which he attempted to take lessons from New World archaeologists to move beyond the questions of where and when to questions of significance. The desires to move from the material analytic approach into the actually revealing of culture fits well within the framework of the cultural historical approaches of the time. But in order to reveal these cultures to their fullest degree, Hawkes notes that

there are several inferential challenges. His assessment, however, places Western historical thought and tradition at the center of the two inferential ladders described in the article. The first, and not as frequently cited, is his structuring of time based on the temporal and geographical relation of particular cultures to historical sources: protohistoric, parahistoric, telehistoric and antehistoric.<sup>1</sup> The second, and most famous, is the ladder of inference listing subjects from the easiest archaeological inference to most difficult. Hawkes organizes this as first material techniques, then subsistence-economics, then communal organization, and finally spiritual life at the end. In my own interests, these two ladders of inference form the basis for how colonial studies from this time period were prejudiced to bias Western, scientifically sophisticated, historically-attested colonists. His understanding of diffusion has also played into early colonial archaeology, but it has severe consequences for to how conceive of technology and knowledge transfer, which for Hawkes, seems only possible in two ways: by people or influences. For technology studies however, the ladder placed knowledge of technique as one of the least challenging subjects for archaeological analysis, and therefore one of the least desirable foci for archaeologists.

Although such a low rung on the ladder of inference placed technology studies at the disciplinary bottom for nearly forty years, Hawkes does have sections within the paper which seem to be pushing the bounds and the methodology of the cultural historical approach. By advocating for the use of X-ray spectrometry for sourcing, Hawkes believes important questions about long-range commerce,

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<sup>1</sup> Hawkes 1954, 159-60

comparative technology, and as should be expected, diffusion, could be handled in a more scientific and factual way. The methods he is advocated foretell of many of the same approaches utilized by the processual wave that was about to arrive in archaeology.

Due to Hawkes' placement of technique on the ladder, anthropological and archaeological study of technology remained blasé for nearly forty years. In his article in *Annual Review of Anthropology*, Bryan Pfaffenberger aims to show that "anthropological study of technology and material culture is poised, finally, for a comeback, if in a different guise".<sup>2</sup> After being the third-rail of archaeology for so long, however, technology studies had a lot of catching up to do. As a result, Pfaffenberger's retooling and creation of an anthropology of technology has a tone and approach that more closely resembles the systems theory approach that was so prominent during the heyday of processual archaeology, leaving out many of the critiques of postprocessualism. Although breaking away from Binford's statement that culture is an "extrasomatic means of adaptation", many of the terms created by Pfaffenberger closely resemble those used by Binford in the same article, such as *sociotechnic*. Pfaffenberger nicely incorporates society as an important part of technology, but any diversity within the society is ignored. He even references Gidden's structuration theory within the article, but only applies this at the broad societal level, not at the level of individuals.

Where Pfaffenberger does move the discussion forward, however, is in his statement and deconstruction of the Standard View of Technology. By explicitly

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<sup>2</sup> Pfaffenberger 1992, 491

stating what the traditional view of technology is, Pfeffenberger creates a useful starting point for critique, which he handles well throughout the article. The ideas of technology only the sake of function, of a unilinear progression over time of technological advances, and of the Great Divide of the Industrial Revolution are all broken down. One of the other beneficial statements made was that technology actually required successful integration with multiple parts of society to work properly. For archaeologists, this gives the study of technology even more credence than as a field unto itself. If successful technology dips into the entire fabric of society, it gives us great possibilities for studying these other aspects of society through technology. Rather than being the isolated rung that Hawkes fashioned, technology is actually a crucial component in the web of society.

In order for archaeologists to be able to answer these questions, however, some postprocessual scholars advocate that archaeology itself needs to change as a discipline. Only four years after technology reassessments by Lemonnier and Pfaffenberger, Shanks and McGuire are calling for a new practice of archaeology as craft in their attempt to join their postprocessual theory with the actual field work of archaeology. In this article we see craft, technology and art flipped in archaeological study into something that archaeologists should emulate. The Arts and Crafts movement, which sought to bring together high art and the more product-driven conception of craft, is used as an analogy for how archaeology should now bridge the divide between theory and field work practice. This conception of a new method for archaeology is interesting for the change in the trajectory of archaeological study of technology. It comes, however, well after the

onset of postprocessual archaeology, following the lag-time seen in the work of Pfaffenberger and Lemonnier. The complete shift from archaeology considering technology as at the bottom of the interpretative ladder to technology being a field which can provide a useful example for how to conduct archaeology is a larger reversal over only sixty years.