

COMMENTS ON A. JONES, ‘ARCHAEOLOGY AND MATERIALITY: MATERIALS-BASED ANALYSIS IN THEORY AND PRACTICE’, *ARCHAEOLOGY*, 46(3), 327–338, 2004, AND REPLY*

COMMENTS I: POST-TEXTUAL ARCHAEOLOGY AND ARCHAEOLOGICAL SCIENCE

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Is it too soon, or indeed too pretentious, to speak of a post-textual archaeology? Unduly provocative, perhaps, but signs of growing unease with the dominant linguistic paradigm in archaeology are difficult to ignore (e.g., Buchli 1995; Graves-Brown 2000; Boivin 2004b and 2004c; Pollard 2004), and Jones is right to draw attention to the importance of the archaeological sciences to emerging perspectives that stress materiality over meaning. As theoretical archaeology gradually swings away from the extreme emphasis on the abstract that dominated its discourse in the 1980s and early 1990s, the scope for a *rapprochement* between the once mutually antagonistic spheres of archaeological science and archaeological theory similarly increases.

Evidence for an emerging new perspective on material culture, and indeed society as a whole, is evident on a number of fronts in both archaeology and anthropology. Perhaps most influential have been studies that have foregrounded the body, and recognized that minds are embodied, so that neither social processes nor human interactions with the material world can be studied as though they were dissociated from bodily encounters and somatic processes (Jackson 1983; Connerton 1989; Csordas 1990; Meskell 1999; Hamilakis *et al.* 2002). Closely linked to this new bodily orientation has been a growing interest in the senses, and the role that they play in human relationships and cultural processes (Stoller 1989; Howes 1991; Classen 1993). The sensual properties and sensory experience of material culture have accordingly emerged as key areas of interest (Kus 1992; Gosden 2001). An increasing concern for the aesthetics of material culture also marks a move away from a pre-eminent focus on abstract processes of signification, and again draws interest towards the experiential rather than representative qualities of material culture (Morphy 1989; Coote 1992; Pollard 2001). Another emerging perspective has stressed the materiality of natural and biological processes, such as decay and transformation (Bloch 1995; Pollard 2004), that sometimes become powerful, recurrent leitmotifs within society.

The relevance of all of these developments to the archaeological sciences is clear. Whereas the material world under the textual paradigm was simply an abstract code for the signification and representation of higher concepts (Boivin 2004b), the material world in the ‘post-textual’

paradigm is responsive and challenging. Rock art is not just images, but images on rock, and the way in which the physical properties of rock are experienced has in many cases been shown to be key to the way in which rock art is understood. Cracks, surface textures, geological features and the sound properties of rocks are just some of the features that may be drawn upon in what maybe as much an experiential or performative encounter as an attempt at representation (Whitley *et al.* 1999; Ouzman 2001; Bradley *et al.* 2002; Boivin 2004a). Particular pot tempers or animal shapes may be selected not for economic or purely symbolic reasons, but because of the way in which they are experienced and aesthetically valued (Coote 1992; Sillar 1996). Technologies may be introduced less because they achieve greater efficiency of production than because they achieve a particular desired transformation, such as the creation of an aesthetically valued colour change or the mimicking of a natural process. Bloch's Zafimaniry houses provide a good example (Bloch 1995). The elaborate wood carvings inside houses do not represent events or symbolize concepts, but instead must be understood within the context of a cultural emphasis on the process of 'hardening', understood to pervade all aspects of social, biological and material life.

As the field most closely linked to the investigation, description, recording and analysis of the physical properties of the material and biological worlds, archaeological science is clearly crucial to the development of novel approaches that emphasize material engagement and sensory experience (Boivin 2001). As Jones' paper points out, the growing emphasis on materiality in archaeological theory offers substantial potential for bridging the science–theory divide that has long pervaded archaeology. Theoretical discussions of the importance of the senses to material engagement need to be followed up by studies that explore material properties in detail, and formulate ways to more systematically assess the sensory properties of material culture. Rock art studies need to incorporate geological and physical methods to measure and assess mineralogical and sound properties, ceramic studies need to examine tempers and technologies as much as forms and decorative motifs, and investigations of metal objects need to turn to archaeometry to assess whether particular colours, sound properties or sheens were deliberately targeted.

Similarly, a growing theoretical interest in material agency (e.g., Gell 1998; Jones 2002; Boivin 2004b and forthcoming) needs to now be linked up to an investigation of the material properties of objects and environments and the way in which their very physicality 'resists and enables, shutting down some alternative plots, and opening up others' (Boivin 2004b). As I have discussed, '[w]hether objects or materials are durable or ephemeral, rare or common, stationery or mobile, heavy or light, soft or hard, or small or large will make them more or less useful in practices associated with creating social difference, marking time, indicating value, signalling ethnicity, memorialising events, or denoting sacred places, for example' (ibid.). To provide one tangible example, shells exchanged in the well-known Melanesian exchange system known as the Kula are understood to mark time and history, and gather prestige as they are traded amongst more and more individuals. Shells enable such a system because the process of handling them results in the actual removal of their epidermis, leading to the formation of red striations on the shell surface. Shells are not empty signifiers, but physical entities whose unique properties enable the creation of particular social strategies and cultural forms (ibid.). So far, remarkably little attention has been paid by archaeologists, in either archaeological or ethnoarchaeological studies, to the way in which the physical properties of the material world constrain and enable social and cultural developments. Material properties deserve more detailed investigation, especially by scientists, whose familiarity with the physical, natural and biological worlds makes them in many ways ideally suited to unravelling the complex interplay between materiality and society.

It is therefore clear that there is much potential for the archaeological sciences to contribute in a substantial way to addressing the new questions that theoretical archaeology has posed. What perhaps requires more emphasis, however, is the fact that archaeological science also has a role to play in driving theoretical developments in archaeology. This is true at a number of levels. At a basic level, it is true because the collection of data is always theoretically informed. In selecting variables to record and properties to describe, archaeological scientists fundamentally influence the questions that can be posed of the material culture that they analyse (Boivin 2001; see also Boivin 2004c). If sound properties, colours or textures are not recorded, then it becomes impossible to analyse the patterning of sound, colour and texture, and their relationship to other variables in the archaeological record. As I describe with respect to the application of the geoarchaeological method of soil micromorphology:

... looking down the microscope to set eyes for the first time on our supposed 'data' is from the outset an interpretive process (contra Courty et al. 1989). What we look for is part of this interpretive process, just as what our eye decides to settle on, to favour, is part of it. Description too is, contrary to the generally accepted position within the discipline [of geoarchaeology] (see Bullock et al. 1985, 7; Courty et al. 1989, 64), an interpretive process, a series of choices that are not nearly as objective as we tend to think. (Boivin 2001, 259)

Thus archaeological scientists, in deciding what to favour with their gaze or their instruments, decide what questions they will ask of material culture, and affect what questions it becomes possible to ask of the archaeological record. This is one reason why the science–theory divide is so debilitating—if theoretical practice and scientific practice are dissociated, then scientific practice generates data that answers one set of questions, while theoretical practice focuses perhaps on an entirely different set of issues, using an inappropriate data set.

Science is, however, also capable of taking on an even more fundamental role in driving archaeological theory than that which I have just described. My own experience illustrates this point. My recent theoretical writings have strongly critiqued the dominance of the linguistic paradigm in archaeology, and advocated the kind of focus on materiality that Jones describes in his paper (e.g., Boivin 2001, 2004b and forthcoming). This perspective, which is increasingly shared by others, was adopted by me not as a result of my engagement with the archaeological and anthropological literature, which at any rate was dominated by concerns of signification and representation, but rather as a result of my engagement with the material world as an archaeological scientist while carrying out ethnoarchaeological field research in western India. While sympathetic to post-processual issues of symbolism, ideology and individual agency, I was also forced to recognize during the course of my research that some of my findings did not fit comfortably within standard post-processual interpretive models, and demanded a different perspective on material culture. My exploration of not only human concepts, but also the physicality of the world in a small Rajasthani village in India, using geoarchaeological methods, led to a recognition that material culture possessed many non-codifiable qualities, and also had a certain will of its own, that was capable of influencing how humans interacted with each other and the world. I attribute these realizations to my perspective as an archaeological scientist, which forced me to pay more than lip service to the material world. Being immersed in the material world gives archaeological scientists a unique perspective, and renders them capable of yielding novel insights into the relationship between materiality and humanity.

Archaeological scientists should therefore not be intimidated by archaeological theory, nor dispense with it as irrelevant. The scientific study of the material, natural and biological

worlds is crucial to our understanding of the human past, and to our development of appropriate theoretical models for understanding that past. Jones' attempt, as an archaeological scientist and an archaeological theorist, to build bridges between theory and science in archaeology is therefore not only commendable but also crucial, and will hopefully meet with the response that it deserves from scientists, theorists and the increasing numbers of archaeologists who consider themselves to be both.

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COMMENTS II: THE UNDERPINNINGS AND CONSEQUENCES OF THE MATERIALITY APPROACH

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Jones' conclusion begins with the observation that he is probably preaching to the converted, and it is undoubtedly true that most (if not all) professional archaeologists would welcome closer co-operation between disciplines that have too long often operated separately (Haselgrove *et al.* 2001, 22; Killick 2001, 486). Many examples, including work under the headings of Science, Technology and Society studies (STS; Lemonnier 1992; Geselowitz 1993), 'Technological Drama' (Pfaffenberger 1992a,b) and agency (Pickering 1995), share materiality's crucial feature of interweaving the social and material. In research carried out by one of us (Bray 2004), examining the history of thought concerning the adoption of iron technology in Eurasia, it was noticeable that there has been a gradual but sustained shift towards examining material culture as a part of a wider, interconnected social system. Rather than just being an important development for the study of material culture, we consider it to be part of a fundamental shift occurring within archaeological thought.

As Jones explores in detail, the division between the traditional domains of science and humanity is based on the ontological position that object and subject are separate. This position has informed the vast majority of archaeological work and can be seen as linking both Processualist and Post-Processualist approaches. Both these movements argued that they could isolate and investigate patterns within material culture, concentrating largely on different halves of the objective/subjective divide (Trigger 1989; VanPool and VanPool 1999). Arguing that there is no divide—by conflating human and non-human into one inter-sustaining whole—shifts the entire basis of our subject. It seems hard to conceive of any area of archaeology that is not affected by this change. As Jones mentions, the interactions between social and material, people and environment, become a continuous stream of actions and reactions, a complex mix of forces that average out to create the past (Pfaffenberger 1992b; Pickering 1995).

The work of Giddens (1984), expressed in his ontology of Structuration, seems to have a great deal to offer to archaeology in these discussions (Barrett and Fewster 2000; Mizoguchi 2000). Structuration has not been applied widely, but materiality appears to be a prime example of this thought in practice. Giddens proposes that what is studied by sociologists is structure and agency, but these are not divided as there are processes of 'mutual mediation'; structures are created by the agency of people, while structures locate agency within the world. There is no object/subject divide, as each relies on the other for definition and creation.