RESPONSE TO APEL AND DARMARK: EVOLUTION AND MATERIAL CULTURE

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As Jan Apel and Kim Darmark rightly observe, the conceptual approaches that we employ in archaeology have fundamental implications, affecting not only the questions that we ask about the past, but the way that we understand both our evidence and the place of our investigation within contemporary society. Theory matters, and debates like the present one are critical to the continued vitality of our discipline. However, I disagree strongly with their arguments for an evolutionary archaeology of material culture, which seem to me to rest upon a series of misapprehensions. It is fair to say that the natural and human sciences have developed distinct ways of understanding the world, since they are interested in answering different questions, and that these can be seen as complementary, if ultimately mutually incommensurate. They reveal different aspects of reality. The attraction of a single framework that could integrate the study of cultural and biological phenomena is undeniable, since there is only one world, while the division between culture and nature is an acknowledged fabrication. However, when such a thing is attempted it all too often results in a form of reductionism, and this appears to be what Apel and Darmark are offering here. They give themselves away when they repeatedly claim that the perspectives on culture offered by the social sciences have had the effect of 'marginalising' the topic. Now, thousands upon thousands of scholars in anthropology, sociology, cultural history, social geography, politics, art history and numerous other disciplines cur-

rently make use of some form of cultural theory, and it would be news to most of them that their investigations are considered of 'marginal' interest. What Apel and Darmark mean, of course, is that contemporary cultural theory is unsatisfying to many practitioners of the hard sciences. That's fine; but what they propose is no more than an extension of the conceptual framework of the natural sciences into the domain of culture, rather than any genuine form of integration. It is a kind of academic imperialism.

Apel and Darmark's first mistaken assumption is that all cultural theory presumes that human beings are free, unencumbered, decision-making individuals. On this basis they propose the familiar argument that evolutionary and 'action' theories operate at different levels of analysis: thus humans appear to be free to act in the short term and at the small scale, but on a larger canvass it is an adaptive logic that is at work, unbeknownst to the actors involved. The sterility of this kind of argument has often been identified: one cannot neatly separate different scales of investigation, since the meshing of practices and processes with different temporal and spatial extents is of key significance. One cannot reduce human action to a mere response to stimuli at the large scale, nor discount the importance of long-term developments to individual acts. Herein lies the fallacy of the shibboleth of the Standard Social Science Model, as presented by Cosmides and Tooby (see Barkow, Cosmides and Tooby 1992). As far as I am aware, very few social scientists would accept the notion that there are 'limited, if any, biological constraints on human behaviour'. We cannot walk on water or fly in the air, we all have to eat and sleep. Physical and biological conditions set the ultimate parameters for what human beings can and cannot do, but constraint is not the same thing as determination (hence the notion of 'determination in the last instance'). Only some of the interesting things that people do can be reduced to biological necessity, and if one focuses exclusively on these the results soon become very dull indeed. Again, this does not mean that humans have complete freedom of action. As someone once put it, 'men make their own history, but they do not make it just as they please; they do not make it under circumstances chosen by themselves, but under circumstances directly encountered, given and transmitted from the past. The tradition of all the dead generations weighs like a nightmare on the brain of the living' (Marx 1968:96). People find themselves enmeshed in and constituted by cultural traditions and power relations, and act

on the basis of imperfect understandings of their circumstances, often with unintended consequences.

Culture, though, is at the core of the argument, and Apel and Darmark appear a little confused about exactly what they mean by culture. At different points in their paper they describe cultural knowledge, cultural objects, and cultural behaviour, although they appear ultimately to accept the Neo-Darwinian conception of culture as composed of information, which is transmitted between individuals (note here the distinction between information and knowledge, where only the latter is judged to have a meaning-content). This ambiguity reflects long-running debates on the character of culture. Especially salient here is the distinction between culture as the products of human achievement, and culture as the means by which these products are brought into being (for instance, 'man's extrasomatic means of adaptation') (Kroeber and Kluckhohn 1952:145). Boyd and Richerson's (1985:33) 'dual inheritance theory' appears to shift the emphasis toward the former, in presenting culture as an assemblage of traits, which are transmitted between organisms in a system comparable to but separate from the biological transmission of genetic material, and which can affect an organism's fitness. Ironically, this shares important features with the vision of culture proposed by Franz Boas (1948), which Apel and Danmark erroneously connect with post-processual archaeology (presumably on the grounds of particularism). They propose that 'the evolution of any phenomenon can ... be regarded as a temporal change in any ensemble of elements'. The most serious error in their argument lies in this characterisation of culture as a set of monadic entities.

If culture is composed of pieces of information, where does it reside? Presumably in the minds of the organisms concerned, so that transmission takes the form of the transfer of representations from one mind to another. In the case of material culture, these representations then form the templates for the manufacture of material things. The adoption of particular traits, and their continued reproduction, takes place in the context of an environment of selective pressures (Bentley and Shennan 2003:46). This therefore relies upon an atomistic conception of mental functioning, in which information is inputted, processed and outputted in a fashion comparable to a computer (Taylor 1985:187). The implication is that we are dealing with organisms that are disengaged from their surroundings, having an internal mental world of representations and templates that is separate from the external world (Taylor 1993:321).

In other words, it is difficult to see how one can have a view of culture as an assemblage of traits unless one also accepts the mind-body dichotomy that Apel and Darmark profess to disavow. That is, unless cultural traits are merely the observable terminal outcomes of some other process, in which case the cultural transmission model ceases to have any explanatory value and is rendered purely descriptive.

In any event, the argument that I wish to pursue is that culture is *not* an ensemble of traits, and that it is *not* transmitted as a series of atoms of information. People learn their culture in concrete settings rather than by an abstract transfer of data, and much of this process is implicit rather than explicit. One of the most powerful accounts of the acquisition of culture is that offered by Pierre Bourdieu (1977). Bourdieu uses the term *habitus* to describe the body of implicit coping skills that people acquire in the course of their lives by virtue of their living within a particular community, and which provide the basis for the ongoing improvisation of everyday life. The *habitus* is never spelt out, and could never be verbalised or listed as a set of formal instructions. It is not fully held in the mind, since it is invoked and reproduced in physical settings and through bodily awareness. Bourdieu's discussion of the *habitus* demonstrates that culture is better understood in terms of practices and performance than as a set of bounded entities. However, there is a further point: culture is holistic, and the intelligibility of any definable element of culture always depends upon the way that it is embedded in a 'background' of practices and tacit understandings (Taylor 1993:326). Reducing culture heuristically to a set of atomized units promotes a misunderstanding of the way that it works, since in the process embodied skills, non-representable human purposes, and the worldly context that enables it to 'make sense' are bracketed out (Wrathall 2000:94). The inter-connected and non-representable character of culture means that it is not 'transmitted' from mind to mind as a transfer of information, but 'grown' by each person, through experience, tutelage, and the common inhabitation of a world.

These issues are all the more problematic when we turn to *material culture*. Material things are not in themselves cultural; they do not contain any cultural essence, and they have not been 'rendered cultural' through the application of human action. Rather, it is *practices* of making and use that form an important aspect of a person's cultural inheritance. These practices do not involve the imposition of an abstract template onto inert matter, as if form entered the world from

some external mental sphere. The modern western practice of *designing* material products is quite unusual in this respect. Instead, people engage with materials within the world, and form emerges out of that engagement (Ingold 2007:11). The Pitted Ware people that Apel and Darmark describe were not attempting to create objects that conformed to an abstract and pre-existing typology of projectile points: they were working a material to arrive at a useful or pleasing outcome. None of this need mean that biological evolution and cultural change need inhabit entirely separate theoretical universes. But it may be that, as Tim Ingold suggests, integration requires that we abandon the notion that physical form in the material world is underlain by formal design instructions, whether as cultural codes or as genotypes (Ingold 1998:30). We should therefore attend to processes of growth that are worldly and contextual.

It is the radically contextual character of both biological and cultural processes that should lead us to be wary of Apel and Darmark's demand for a generalising approach. To recognise that the past was different from the present in fundamental ways is not to exoticise it, but to appreciate the potential for real change to occur in history. We may share much with past generations, but this needs to be demonstrated rather than assumed, or we risk adopting a profoundly reactionary conservatism.

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