I would like to thank all four of my interlocutors for taking the trouble to comment on my text, and for the clarity and cogency of their contributions. They have forced me to think long and hard, and indeed to question my own conclusions. For me at least, and I hope also for readers of *Archaeological Dialogues*, this has been a debate worth having, and it has been going on as much in my own mind as between myself and my critics. From the comments I picked up seven lines of criticism to which I would like to offer some response. They are: (i) that I have left the people out; (ii) that without a concept of materiality one cannot address the social and historical significance of things in people’s lives; (iii) that I am on the run from the contemporary world of industrial artefacts and their consumers; (iv) that this escape is driven by nostalgic yearning for the direct perception of an unsullied nature; (v) that my depiction of material-culture studies is a caricature, in so far as such studies have long recognized the entanglement of objects in networks of relations; (vi) that my argument goes against the thinking of people in many parts of the world who are preoccupied with materiality and the possibilities of its transcendence; and (vii) that to emphasize materials in and of themselves is a retrograde step that threatens to take us back to the tedious enumeration of different kinds of stuff without regard to their meanings or contexts of use. In what follows I shall tackle each of these criticisms in turn.

To the first, I would respond that far from being absent from my account, people are at the heart of it. They are there, carving wood and knapping stone, making felt or spinning hair for tents, building and plastering houses, preparing ink and parchment for writing, and so on. They are present, however, in the same way that all living organisms are, as complex bundles constituted by the flows and transformations of materials across the interface between their bodily substances and the media that surround them. So when Chris Tilley complains of the ‘virtual absence’ (p. 19) of people from my discussion, or when Carl Knappett remarks that they ‘seem to take a back seat’ (p. 23), it must be because they are looking for some superorganic dimension by which the life of people exceeds their organic life. In classical theory, of course, this dimension has been denoted by the word ‘social’. And, sure enough, it is people’s social relations that are perceived to be missing. To touch the stone on your desk as you sit alone in your study is, says Knappett, ‘a rather asocial, solitary experiment’ (p. 21). By the same token, presumably, touching another person would be deemed deeply social. Many people would probably say the same about stroking their cat. But I am not going to speculate on where to draw the line between a social relation with another person and an asocial relation with a thing, because I do not believe there is a line to be crossed. As I have argued elsewhere (Ingold 1997, 238), the ‘webs of significance’ in which persons are commonly said to be enmeshed are
not suspended above the paths they tread in their material lives but comprise these very paths.

My critics are absolutely right to observe that the fate of the concept of materiality is bound up with that of the social, and that by downplaying the one – or even seeking its elimination – the other is also imperilled. Indeed the habit of placing the word ‘social’ before ‘context’ entails a certain redundancy, as does that of placing the word ‘material’ before ‘world’. Are there contexts that are not social, or worlds that are not material? I was once discussing the argument of this paper with a graduate student in archaeology who was interested in the use of mud as a building material in ancient Egypt. ‘So’, I said, ‘you are working on mud-bricks’. ‘No’, she responded very firmly, ‘I am working on the materiality of brick’. Having read Tilley’s comment, I now realize that in her response ‘the materiality of brick’ was actually a kind of shorthand for ‘understanding brick in the social and historical context of the use of mud by humans’. Just as the concept of the social is supposed to take us beyond the existence and interactions of human beings as mere organisms, so we need the concept of materiality, according to Tilley, in order to go beyond ‘brute’ materials and their properties. Paradoxically, this leads him simultaneously to advance and to counterpose two concepts of materiality: the first referring to the physical world as it is given quite independently of the presence, activities and purposes of humans; the second to the world as it is caught up in these activities and lent significance by these purposes. ‘The concept of materiality’, says Tilley, ‘is required because it tries to consider and embrace subject–object relations going beyond the brute materiality of stones’ (p. 17). Notice how, in this passage, the word ‘materiality’ appears twice, with each of these contradictory meanings.

This argument reminds me of much older debates for and against the ‘human nature of human nature’, which likewise oscillated between a notion of brute animality common to all creatures and one of an essential humanity by which the social life of persons was thought to be raised onto a plane of being over and above the purely biophysical (Eisenberg 1972; Ingold 1994, 19–25). In speaking of the world of materials rather than the material world, my intent has been precisely to escape from this oscillation, both by returning persons to where they belong, within the continuum of organic life, and by recognizing that this life itself undergoes continual generation in currents of materials. For Tilley, a stone can be treated as a lump of matter and analysed for its physical properties, as by the geologist in his example, but it has meaning and significance only in the context of human affairs. In the world of materials, however, humans figure as much within the context for stones as do stones within the context for humans. And these contexts, far from lying on disparate levels of being, respectively social and natural, are established as overlapping regions of the same world. It is not as though this world were one of brute physicality, of mere matter, until people appeared on the scene to give it meaning. Stones, too, have histories, forged in ongoing relations with surroundings that may or may not include human beings and much else besides. It is all very well to place stones within the context of human social life and history, but within what context do we place this social life and history if not the ever-unfolding world of materials in which the very
being of humans, along with that of the non-humans they encounter, is bound up?

To escape from the oscillation between the two materialities – the ‘brute’ materiality of non-human nature and the materiality that things acquire from their insertion into the domain of human society – is not, then, to regress from the latter to the former. Indeed Daniel Miller’s comment that my argument reveals a streak of primitivism, or a yearning for a world in which people would engage directly with ‘virgin materials’ as yet unsullied by any processes of human industry (p. 26), perfectly exemplifies the illusion, at the heart of material-culture studies, by which materials are contrived to vanish, swallowed up by the objects made from them. The illusion tricks us into thinking that materials can only exist in a raw, untransformed state, since as soon as they are worked into artefacts they cannot be materials any more. Most human beings alive today, Miller insists, ‘deal almost entirely with artefacts far removed from any claim to be natural substances’ (p. 26). Thus we have to be concerned with the life histories not of wood and stone, but of mobile phones, washing machines, tractors and so on. Yet as I have pointed out, the naturalness or artificiality of things can never be unequivocally determined, and in any case has not the slightest bearing on the fact that these things are still made of materials. It is a matter of opinion whether a child’s toy made of plastic is more ‘artificial’, on that account, than one made of wood (Ingold 2000, 53). Plastic is a material as much as stone is, and I could have exemplified my argument as well with the one as with the other. This argument, to repeat, is that even when materials are consolidated into the forms of artefacts, they are still there, and continue to be caught up, along with their users, in the fluxes of the medium.

It may be ‘blindingly obvious’ (p. 26), to Miller as to other students of material culture, that in today’s world people deal with artefacts to an extent that would have been unimaginable to our prehistoric forebears. But this seems to have blinded them to what is equally obvious to people themselves, namely that even as they go about their artefact-assisted lives they have to contend with the elements. The householder worries about a leaky roof, rot in his floorboards or the roots of trees threatening his foundations. The weather forecast, broadcast on television, warns the motorist to beware of heavy rain, fog or icy patches on roads. The holidaymaker purchases sunglasses and lotion to protect her eyes and body from intense radiation. Is it primitivist to acknowledge that we inhabit a world of earth, sky, wind and weather, in which the sun shines, rain falls, trees grow and water can turn to ice? Life as we know it depends on all these things. Throughout our lives we breathe the air, more or less as we find it. I am not worried that it would be somehow inauthentic if we ceased to do so. I am worried that we would all be dead. The quality of the air is a matter of great concern to many people, especially as industrial pollution tends to increase the incidence of respiratory disease. It is something we have to deal with. Moreover, the more we deal with artefacts, the more we have to contend with their wear and tear, brought about through the reaction of the stuff they are made of with the materials with which they come into contact. Thus the water pumped through a washing machine can
eventually cause the metal to rust, and the abrasion of earth and stones wears
down the hard rubber tyres of the tractor.

Once the maintenance and repair of artefacts becomes more trouble than it is worth they are generally discarded, leaving a residue of materials that we have still to deal with. I have no idea whether a hundred years from now humans will still be using mobile phones. Perhaps by then they will have been replaced by some other device, or perhaps we will have found ways to live that do not depend on such a massive volume of remote communication. What is certain, however, is that the heaps of plastic waste from millions of discarded phones, contaminated by large concentrations of heavy metal, will continue to blight the landscape in some parts of the world, posing a lasting threat to human health. Compared to the duration of these heaps, the time span of mobile phone communication will probably seem like a mere blip. To make materials critical to understanding humanity, Miller claims, I would have to return to the age of stone. I could, however, just as well travel to the future, and imagine a world of materials left over after all the manufactured artefacts of today have been thrown away. In short, to put materials first is not to privilege the distant past over the immediate present, but to adopt the perspective of the very long term. I entirely agree, with Björn Nilsson, that more than any other discipline, archaeology can offer such a perspective, and for that reason I believe that archaeologists have a unique contribution to make to understanding the world of materials. But I do not believe, as Miller seems to, that ethnography is – by contrast to archaeology – tied to the present. Ethnography is tied to people’s lives, and in life the past is continually active in the present as it presses into the future.

If it is the perspective of the long term that brings materials and their properties to light, so conversely a focus on the present, to the exclusion of past and future, makes them disappear. In the extreme case such a focus yields a snapshot of people ‘caught in the act’, as portrayed in the dioramas of open-air museums. Nilsson tells us that the celebrated Swedish geographer Torsten Hägerstrand favoured the diorama as a way of capturing a world full of movement. Rather than being lined up in sequence on museum walls, in the diorama artefacts could be placed in contexts of human use. The waxwork blacksmith, for example, could be poised ready to strike with his hammer at the forge. Yet in truth nothing in the diorama moves or breathes. We see artefacts-in-context, a network of relations between a person – in the figure of the blacksmith – and the things he uses. Such network images have become commonplace in studies of material culture, and are nicely epitomized by the logo for Material world, the new weblog for material- and visual-culture studies (see www.materialworldblog.com), which shows a number of medallions depicting commonplace objects (a book, a bicycle, a bag, a boot, a bracelet and so on) connected up in a web of straight lines. ‘Network thinking’, as Knappett suggests, ‘encourages a focus not only on entities but also on connections’, making possible a ‘relational perspective’ (p. 22). Miller, for his part, claims to have adopted a relational perspective all along, and cannot see how the approach I advocate differs from, or adds anything to, what he and his students have long been doing already.
Here is the difference. In place of the image of the network I suggest that of a meshwork (Ingold 2006, 13–14). The meshwork consists not of interconnected points but of interwoven lines. Every line is a relation, but the relation is not *between* one thing and another – between, say, an artefact here and a person there, or between one person or artefact and another. Rather, the relation is a line *along* which materials flow, mix and mutate. Persons and things, then, are formed in the meshwork as knots or bundles of such relations. It is not, then, that things are entangled in relations; rather every thing is itself an entanglement, and is thus linked to other things by way of the flows of materials that make it up. So while the material world might be depicted as it is in the weblog logo, as a network of interconnected objects, the world of materials would be better described as a meshwork of interwoven substances. This is what I had in mind when I wrote, for example, of the multiple trails of growth and transformation that converge in the page of a manuscript. And it is this meshwork that is covered up as soon as we treat that manuscript page as a finished object in relation to other objects, rather than as a bundle of materials whose constituent strands may be tied up with other materials, in other bundles.

What of the criticism, then, that my thinking ignores ethnographic realities? In ethnography, Miller writes, ‘one constantly comes across people who do see the world in terms of immateriality and degrees of materiality’ (p. 25). Such views are central to Hinduism and Buddhism, for example. I can claim no expertise in the field of South Asian religion, and am therefore not qualified to comment on whether ‘materiality’ has quite the same meaning in the context of Hindu or Buddhist worship as it does in the anthropological or archaeological study of material culture. I suspect not. Be that as it may, I doubt whether even Miller would subscribe to such a thoroughgoing theoretical relativism as would justify the use of any concept under the sun on the grounds that it is an accepted part of the world view of the people studied. My complaint, however, is that students of material culture have never come clean about what they mean by materiality. Instead, they are tying themselves up in semantic knots of the kind to which I have already drawn attention in Tilley’s comment. But as scholars and academics, are we not all caught up in semantics? This seems to be Miller’s point. My paper, he observes, ‘is actually not a stone but a text’ (p. 25). As such it seeks to convey something about the world by means of the written word. In writing the text I have therefore had to confront the same issues of representation that other students of material culture, whose stance I criticize, have had to grapple with. Perhaps, then, we have more to say to one another than I let on.

Of course it is true that no academic writer can escape these issues. However, my purpose in introducing the stone was not merely to offer apt illustration of an argument that could have fared equally well without it. It was rather part of a wider project, which presently guides my teaching as well as my writing, to re-embed the practices of reading and writing, and above all of thinking, within our observational engagements with the world around us. I teach my students not only to think and write about what they have observed, but also to observe thoughtfully and (particularly through experiments in handwriting and drawing) to make the graphic act itself a
practice of observation. Thoughtful, writerly observation seems to me to lie at the heart of good ethnography. Thus in my paper I wanted to demonstrate that the world of materials is not only a world we can think about but one that we can think with, or reciprocally, that is with us in our thoughts. I began the paper with a reference to Henry Hodges’s *Artefacts*. Tilley recalls how, as an undergraduate, having to read this book and others of its kind almost led him to abandon the study of anthropology and archaeology. Why did he find books like this so tedious? Because they were concerned only with the properties of materials, in and for themselves. Lacking any concept of materiality, they could not even begin to consider the meaning and significance of these properties in the social and historical contexts of human lives. Having no contexts in which to place his observations, Hodges’s book reads like a compendium of pointless and irrelevant information. Is that really a beacon for where I want anthropology and archaeology to go?

Of course not. But I would venture to suggest that if carpenters, metalworkers and potters were required, as part of their training, to read works in the tradition of material-culture studies, they would find them just as tedious and irrelevant as Tilley found *Artefacts* to be to his training in an academic discipline. Why? Because the interpretations they offer, of the social meanings of things, are divorced from any practically grounded understanding of materials and their properties. It is the same with a cookbook that – with its endless lists of ingredients and quantities – would look dull and boring on the scholar’s shelf, but in the kitchen could be a source of inspiration and insight. Now I am not suggesting that we should all stop writing academic texts and start producing the equivalent of cookbooks instead. I am rather trying to find a way of moving beyond what I, and I think most students, find to be a stifling division between academic study and observational practice. I want to bring the two back together. Hence the stone. Miller is wrong to assert that my paper – if by that is meant what I offer the reader – is not a stone but a text. It is a stone with a text. The one is as much a part of it as the other. Beginning and ending with the stone, the reading of the text is deliberately framed within an observational practice. For, when all is said and done, I believe our aim should be to read the world, not the texts that have been written about it, and the purpose of written texts should be to enrich our reading so that we might be better advised by, and responsive to, what is going on there.

References


Ingold, T., 1997: Life beyond the edge of nature? Or, the mirage of society, in J.D. Greenwood (ed.), *The mark of the social. Discovery or invention?*, Lanham, MD, 231–52.


In his response, Yiftach Fehige chooses not to engage with my argument that the biblical data support supernaturalism, but rather criticizes me on the basis that: 1. my claim that a supernaturalist account of miracle does not imply that the laws of nature are in any way violated does not contribute anything of value "to existing vindications of a supernaturalist model of miracles," and 2. my defence of a supernaturalist understanding of miracle does not support my "claim about the compatibility of Christianity and science."