discussion article

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Artefacts between disciplines. The toothbrush and the axe

Duncan Garrow and Elizabeth Shove

Abstract

This paper takes the form of a dialogue between an archaeologist and a sociologist. In recent years, interdisciplinary working has become increasingly fashionable within academia. The aim of our exchange was to establish exactly what implications this way of working has for understandings of material culture. Our methodology was simple, involving the 'archaeological' and 'sociological' analysis of two different objects. In undertaking this work, we hoped to bring about new or different understandings of the objects under scrutiny. The process was indeed successful, but not necessarily in the ways we had expected. Ultimately, it revealed a complex set of questions about how the materials of culture are conceptualized and understood, and led us to a renewed appreciation of the theoretical and methodological qualities of what we do within our respective disciplines.

Keywords

interdisciplinary working; material culture; archaeology; sociology; toothbrush; axe

> How thoroughly interdisciplinary is it possible to be? Are we lightly transferring a set of terms from one practice to another, as metaphor, *façon de parler*? Are we appropriating *materials* hitherto neglected for analysis of the kind we have always used? Or are we trying to learn new *methods* and skills fast, which others have spent years acquiring?
>
> (Beer 1996, 115; original emphasis)

Introduction

This paper takes the form of a dialogue between an archaeologist and a sociologist. In recent years, interdisciplinary working has become increasingly fashionable within academia – on paper at least. The exchange presented here aims to establish exactly what implications this way of working has for our understandings of material culture. Within the paper, we work across and between our respective subjects through an exercise in studying two objects. In fact, the paper might be seen not just as a dialogue between two people,

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but between two academic disciplines, two frames of reference, and indeed two objects.

The result is a somewhat contrived and on occasions forced analysis, the very artificiality of which has proved to be an extremely useful attribute, serving to highlight issues which in normal circumstances would almost certainly have remained invisible. Our self-set challenge was to explore the viability, the problems and the benefits of interdisciplinary dialogues. In doing so, we also hoped to produce understandings of our objects that would be different to accounts produced by either a sociologist or an archaeologist alone. In Beer's terms (ibid.), we did indeed 'appropriate' each other's materials. However, as will become clear, the process was by no means as straightforward as simply 'learning new methods and skills'. The result is an experimental and relatively open-ended paper, designed to raise a series of questions for further discussion about the nature of interdisciplinary working rather than to produce a definitive account of either of the artefacts or the disciplines on which we focus.

Our method was simple: we each selected a piece of material culture and gave it to the other person to 'analyse'. We adopted this strategy in order to make ourselves think critically about the selected objects and about archaeology and sociology. In 'applying' distinct approaches, we expected to reveal different methods of conceptualizing and describing each object, and to use any surprising and intriguing observations to reveal otherwise taken-for-granted features of our own ways of working. We wanted to establish approximately what it means to engage with an object *archaeologically* or *sociologically*. The fact that the objects under discussion came to occupy unusual locations during the course of our work was also significant for the ways in which they were understood. Questions of geographical origin and experiments in viewing 'matter out of place' were variously influential in how we approached our respective objects. That said, the driving ambition of this paper is not one of material geography; rather it is an experiment in challenging and in connecting methodological and academic spaces of enquiry.

As mentioned above, the paper takes the form of a conversation between Elizabeth (sociologist) and Duncan (archaeologist) about an axe (selected by Duncan) and a toothbrush (selected by Elizabeth). The plan was to start by simply describing each of the objects in question, but it was immediately apparent that the disciplines of archaeology and sociology provided significantly different ways of seeing. No simple description was possible because we each had different versions of 'the same' artefact. This is to be expected; after all, description is unavoidably 'theory-laden' (Hanson 1981; Shanks and Tilley 1987), freighted with prior knowledge of context and relational significance. A less expected problem was that in thinking about what these objects 'were', how they might be analysed and why they might be interesting, we quickly ran into disciplinary dead ends. We both ran out of things to say. In each case, this was arguably because we reached the limits of our familiar territory, running out of context – not only with respect to the object, but also in terms of an organizing thread of theoretical debate and a guiding logic of enquiry. What started as a simple exercise, a game even,

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Figure 1 A Neolithic stone axe 'roughout' from the Great Langdale axe quarry in Cumbria.

therefore opened up a rather more complex set of questions about how the materials of culture are conceptualized and understood.

The objects

The axe Duncan gave me (Elizabeth) a lump of blue-grey stone, wedge-shaped, flat on one side and marked with little swirls along the ridges, carefully wrapped in a slightly worn plain grey 'Habitat' tea towel. This intriguing combination – a rock covered in a tea towel – has been sitting on a table in my office for some six months. It has attracted attention. Stones are not commonly located in offices (especially sociologists' offices) and numerous people have reached out and picked it up, whether invited to do so or not. It has prompted several to talk about geology, one person thought it was a piece of clay, and others have immediately wielded it as if it were a weapon. The piece of stone fits the hand quite well. It is heavy and puzzling.

For me and sometimes for other observers too, the tea towel is at least as odd as the rock. The stone is not dirty and it is not flaking. The tea towel is not there to protect the world from the rock so it must be the other way around. But why should a stone need the protection of a tea towel? Sociologically, the most plausible explanation is that the wrapping signifies that the object is a gift (Cheal 1988). This is partially correct; although it is a loan and not a gift, there was an element of 'handing over' involved.

What have the visitors to my room, some of whom are students of material culture, made of this object? What is there to say about it? The more perplexed have asked, 'What is this thing?', and most have been satisfied with my answer.

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I have said what I was told: that it is a 'blank', an unfinished stone axe from a local axe factory at Langdale in the north-west of England.[1] This explanation has almost always brought the conversation to a close: idle distraction over, my visitors and I turn to the business of sociological research. Why is there no more to say? Apart from the obvious reason that the real purpose of the meeting was always something else, there is no more to say because my visitors have no further access either to the rock or to the world from which it came. As an abstracted lump it is surely material but it seems to have lost its culture. In my office at least, it is literally homeless.

There are two aspects to this. First, there is nothing more we can gain through close inspection. When it comes to stones, sociologists are generally blind: we cannot tell for sure if those little ridges are natural or man-made, we do not know whether it is common or distinctive as a type of rock, we do not know its origins and we have no more data to process. Second, if we were to make any headway at all with a raw-material cultural analysis of this item, we would need to locate the stone in relation to a problem and then in relation to other things and people and to the various practices and social arrangements of which it has been a part.

Analysis cannot proceed without a question and without some line of enquiry the stone is nothing. This is normal. In sociological and anthropological writing, material artefacts are important not in their own right, but as part of some other narrative. Coca-Cola matters because of globalization (Miller 1998), sugar is interesting for the relation between sweetness and power (Mintz 1985), dirty socks indicate the dynamics of becoming a couple (Kaufmann 1998), shells reveal and reproduce the politics of value (Appadurai 1986), the mass production of cotton clothing provides insight into systems of provision and technology (Fine and Leopold 1993), door closers help in demonstrating human delegation to non-human actors (Latour 1988), and so we could go on. The stone could figure in a number of these stories: globalization, family relations, identity and innovation are all possibilities, but which is an appropriate frame? If the stone is some kind of evidence, then what is it evidence of?

The stone, plus the explanation 'this is a blank, an axe head in the making, from Langdale', do not help. On the other hand, the explanation itself points to a simple common-sense question. What went wrong? Having asked, 'What is it?', the visitors to my office are most interested to know how the stone fell from the pathway of axe-dom, how did it become a residue of failed accomplishment, ending up as a non-axe?

In framing their enquiry this way, my visitor–analysts define and frame the object in front of them in relation to the enterprise of effective axe-making. For them, the stone is important as a tangible record of past practice. Not all dimensions are visible but this one item represents a quite specific configuration of material, image and competence. For example, it involves and embodies reference to an image of a 'finished' axe (which it is not), it represents the skills (or incompetences) of 'stoneys' (Crace 1988) in turning rock to axe, and it reveals qualities of the material itself – which might be flawed and which might not fit the bill. If it is an unfinished blank, why was the work of fashioning it into an axe begun and then abandoned?

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By whom and for what reasons? Which link broke? For the sociologists who call by, it is possible to imagine an inquisition, as in Latour's (1996) discussion of a failed technological system, Aramis: what killed the axe? But it is impossible to conceive of how the detective work would proceed: how would one discover the kinds of relations and sociotechnical networks that would have meant the stone became a finished axe, and how to get access to relevant concepts of competence, to regimes of valuing or to images of good-axe-ness?

Another approach, and one that is perhaps better suited to the discarded status of this unfinished thing, is to view the stone as a material record of the social organization of rejection, or of waste-making. The stone could perhaps be situated in terms of the processes of meaning-making described by Thompson in his analysis of the creation and destruction of value (1979), or with reference to waste as a necessary dimension of consumption and production (Strasser 1999).

Alternatively, we could treat the rock not as a trace of something that once took place, the material remains of a once vibrant social practice, but as an object that is now the focus of attention. In which case the question might be, how on earth did it find its way into Lancaster's sociology department? Contemporary enquiries of this kind would reveal that the stone had been selected by an archaeologist in order that it might feature as the centrepiece of a so far inconclusive game of interdisciplinary flailing around.

These somewhat limited options suggest that it was possible to generate broadly sociological questions prompted and inspired by the stone but not to provide a 'sociological analysis' of it. Not as it stood. An archaeological account of this same item comes later, but first we introduce the other object of this discussion: a toothbrush.

The toothbrush Elizabeth gave me (Duncan) a pink and white toothbrush.[2] Like the axe, it is also sitting in an office, prominently displayed on a desk next to the phone. Although this is again an unusual spatial arrangement, in the several months it has been in that position, not a single person has commented on it.

In trying to think about why this should be so, especially when a 'lump of rock' attracts so much attention, I was immediately confronted by one important sense in which archaeology and sociology work in different ways. That toothbrush seems, most definitely, to be *of* our time and our place, not another. As a result, unlike Elizabeth, I was able to interpret and categorize this piece of material culture immediately; it required no 'expert' translation. It might, I suppose, have crossed people's minds for a second to wonder why I should have a toothbrush in my office at all, especially sitting on my desk. But, ultimately, the familiarity of the object overpowered those questions, and no one ever asked. The Neolithic axe, on the other hand, does not 'belong' in the same way. While it is not far from its own place, having moved only from the Lake District to Lancaster (even if, with me, via various other places on the way), it is definitely not of our time. The *un*familiarity of the object made people ask questions. Why? What? How?

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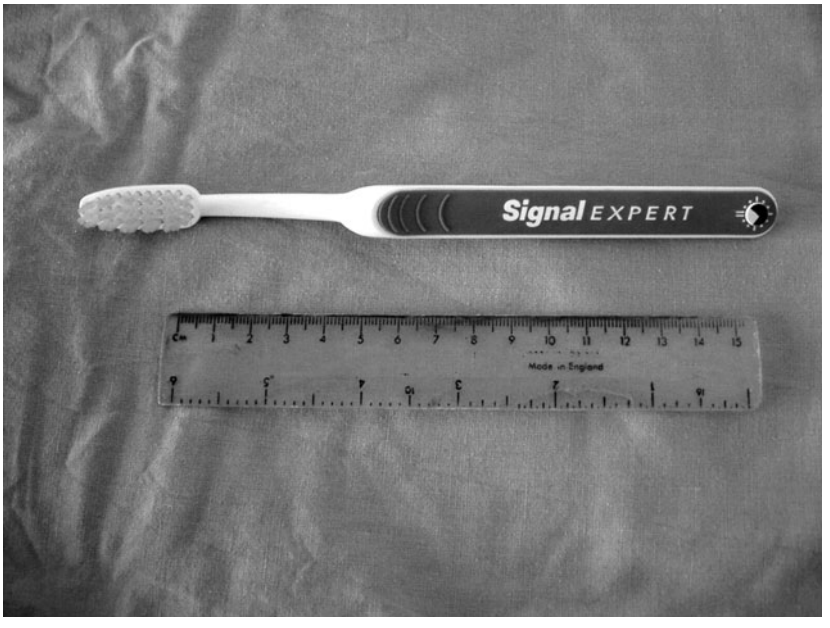


Figure 2 A 1995 (?) pink and white plastic 'Signal EXPERT' toothbrush from (?).

Putting aside the slight feelings of jealousy that arose because of the differences between our parallel projects – people were helping Elizabeth to think about the axe, but I was entirely on my own with my toothbrush – I reminded myself to think, archaeologically, about the artefact I had been given. The object's familiarity placed me in an unfamiliar position in this regard: I had to describe it 'archaeologically', but it was not an 'archaeological' artefact in any straightforward way.

The first thing that struck me about it was its slightly unpleasant colour – it would probably be called a dusky pink, on white. My toothbrushes at home are always blue. Overall, the brush measures 19 cm long, and at its widest is 12 mm across. Most of it is manufactured from a very shiny white plastic, in which a seam (probably from a mould) can be made out running down its length. At the business end, the head is rectangular, although at the very tip it tapers in. Eleven rows of bristles echo the shape of the head, and when observed in cross-section form a zigzag, presumably to help its user get into those awkward and troublesome gaps. Most of the handle of the brush is covered in a pink rubbery substance, front and back. On the front, the words 'Signal EXPERT' are printed in white, in what seems a slightly outmoded font. Four upstanding curved lines stand proud from the rubber at the top end of the handle, presumably designed to stop your thumb slipping whilst you brush. They are matched by four straight lines on the reverse; and above them, four more, moulded this time into the brilliant white. A dimple at the other end of the rubber handle seems to be a further trace of the manufacturing process, the point where the pink stuff was poured into a void

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Figure 3 Toothbrush dial detail.

in the white. If you look very closely, next to the dimple, a number – 4283 – can be made out, stamped (not moulded) into the white plastic. It does not seem to be a use-by date, but can each brush really have its own number? If so, it is good to know that – in some small way – these stereotypically mass produced objects are more individual than we think.

Technologically, it does not strike me as particularly 'advanced' in comparison to the rows of toothbrushes that confront you in chemist shops nowadays: toothbrushes are now made in five different colours, not just two; with batteries that make them vibrate as you brush; and with bristles (no longer perhaps the right word) of three separate materials, some of which warn you when it's time to change to a new model.

This latter feature, a prime example of objects having agency (Gell 1998), brings me to the only really outstanding feature of my particular brush – a curious little dial at the bottom end of the handle (Figure 3). The dial comprises primarily a small plastic disc with scalloped edges. It measures approximately 6 mm across. Three-quarters of its face are red, the remaining quarter is white. With a bit of effort and some sharp finger nails, the disc can be made to rotate. Printed onto the handle of the brush around the disc are a series of lines and dots which resemble the face of a clock: two lines where 12 would be; one line at 3, 6 and 9; dots for all of the other numbers.

The dial reminded me, if anything, of a similar feature on the lid of a tupperware box I once owned. That artefact had been designed to go in the freezer, and the 'clock' was used to remind you of how long it had been in there. The numbers represented months, not hours. This, I assumed, was essentially what I had on my toothbrush – a reminder of when to change to the next one.[3] As dentists say, you must change to a new brush every three months. It struck me as a much less effective reminder than bristles that change colour: they are able to exert *their* agency all on their own. And who would ever remember to turn the dial to two-o-clock on purchasing a brush in February?

My archaeological tendency to use the comparable features of objects to cross-reference their dates seemed to have got me somewhere. The dial added weight to my general impression that the object as a whole was slightly antiquated, confirming my suspicions that this model – the Signal EXPERT – was not quite so contemporary after all. Was it turning out, however slightly, to be archaeology of a sort? At a guess, I would put it at perhaps ten or fifteen years old. Not quite young enough to be contemporary, but not yet old enough to seem out of place on my desk. Had I had a 1940s toothbrush next to my phone, people might well have asked me what it was.

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Having satisfied the archaeologist in me by describing my artefact, and then working out its date, I began to think what to do with it next. After establishing these basics, archaeologically we would try to move on, to find out about the dynamics – social and material – that a given object had been caught up in. Unlike sociologists, archaeologists usually have no people immediately in sight; most of the time we are forced to begin with 'just objects'. That is what we do.

However, in this case, I faltered. The toothbrush seemed to be, literally, just a toothbrush. Whereas the potsherds and flint flakes I am used to dealing with normally come as part of an assemblage of other similar (and different) objects, this one was alone. While we often investigate refitting pieces of pottery across a site (to tell us which pits had been filled at the same time, and what tasks people had carried out where), or try to analyse the 'use-wear' on a flint (looking for diagnostic microscopic traces that could tell us if it had been used to cut meat or harvest wheat), the toothbrush offered little hope in this regard. It had no material allies, and had never been used. As with Elizabeth's axe, the lack of any obvious signs of use raised the question of how this brush had fallen from the pathway to toothbrushdom.

Nor did the toothbrush have a place. While those flint flakes and potsherds are found somewhere – in a rubbish pit or a posthole or a ditch – this object had arrived alone in the post. A toothbrush in a bathroom cabinet, or a supermarket, or a living room, or a suitcase, or a bin, has a physical/material context. This one had none. It was an artefact devoid of context, an 'unstratified find'.

Occasionally, of course, archaeologists also find completely unused objects, and what we would call 'stray finds' (an arrowhead found by a farmer whilst ploughing, a gold torc dug up by a metal-detectorist in a field). In the case of the former, usually, the presence of a context enables us to move on from the artefact itself: a pristine pot or perfect flint knife – in a grave – suggests that the object may have been made specifically for the burial, for example. In the case of stray finds, it is more difficult to say something meaningful. But not impossible. The project I am currently working on involves vast numbers of Iron Age objects with no context – iron swords dredged out of rivers, bronze horse harnesses found on the surface of fields. But even in these cases, we usually have a 'find spot'. We can tell that a sword came from the River Witham near Washingborough in Lincolnshire, or that a bridle bit was found in the Polden Hills in Somerset. It then becomes possible to compare the location of that sword, or that bridle bit, to those of all of the others that have been found. And from there it is always possible to move on. Even stray finds can be given a context of sorts.

I had no such information about my toothbrush. Without a particular location, it seemed to have little more to tell me. My frustration with the toothbrush's placelessness made me worry. I was becoming daunted by this supposedly 'sociological' object with its lack of context.

Elizabeth's toothbrush In thinking about what to provide for 'archaeological' analysis I wanted to introduce something made of synthetic materials: plastic was as good a case as any. So why the toothbrush? The capacity to produce

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nylon bristles made it possible to mass produce toothbrushes – not just this one, but the toothbrush as a class of object – and this close-coupled relation between material and artefact would seem to be interesting for any archaeologist. Any plastic toothbrush would do, but I happened to have this pink-and-white one with the unusual little dial at the end. As Duncan spotted, this dial represented an attempt to script or 'configure' (Woolgar 1991) the toothbrush-user and 'tell' him or her that it was time for a change. It was because this effort at sociotechnological configuration had failed that the Signal EXPERT toothbrush came into my possession. It was given to me by someone working for Unilever who used it to illustrate the difficulty of effective material inscription.

For me, the object fitted perfectly into an ongoing debate about the relation between design and everyday life, and about the relation between material artefacts and practices including those of brushing teeth (Shove *et al.* 2007). Setting aside the sub-plot of the dial and the prompt to replace, the object raises all kinds of questions about what else the social and material world must be like in order that the brush makes sense. For example, how are the brush and associated practice (the brush-in-use) positioned with respect to changing ideas and understandings of science (it is the Signal *EXPERT*), health and beauty, not to mention an array of related 'technologies' ranging from toothpaste through to the bathroom itself.

In the event, Duncan's account skips over almost all of these themes. Because he instantly recognizes the object as a toothbrush he thinks there is nothing left to explain. Potential lines of enquiry are cut short by focusing on the brush and not on the brush in actual or potential action.

Further, he is for some reason interested in details of origin and production. He tries to work out when the toothbrush was made, and where it came from (its 'find spot') and he looks for signs of use. He also provides a detailed description of the item itself: how long is it, how many bristles does it have, even giving dimensions in millimetres. I had never even thought to do so for the axe or the tea towel – for me it was enough to say the stone 'fitted the hand quite well'.

Other aspects of Duncan's description are just as intriguing. For example, he does not hold back on matters of aesthetics: he does not like the pink or the outmoded font. And he is happy to subscribe to a linear narrative of technological progress in which he positions the hapless brush, referring to it as 'not particularly advanced'. By contrast, I would not even try to locate the axe in such a scheme – not only because I lack the necessary knowledge of what came before or of what came later, but because technological progression would be a less compelling (possibly even suspect) theme than the more practice-oriented questions identified above. On the other hand, I recognize and sympathize with his frustrations at the lack of context and the slightly 'unreal' way in which the toothbrush just arrived in the post. Knowing more about the world of goods to which our objects belong(ed) is important for us both.

Duncan's axe In picking an object to hand over to Elizabeth I did not have a wide array of choices. Archaeological objects, especially those I come across

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in my work, do not generally reside in private hands – they sit in museums and public archives, on dusty shelves. The axe was one of the few 'archaeological' things I actually own. Nevertheless, it did seem a very suitable object of study – it is clearly old, being Neolithic (the period I have most written about before). It also had an appropriate air of mystery about it, not even resembling something that would be made today; as Elizabeth said, it is 'heavy and puzzling'. In addition, I liked the idea of the axe returning home – as we have said already, it comes originally from an axe quarry in the Lake District, not too far at all from where it is currently sitting on Elizabeth's desk.

For me, the axe is significant for a number of reasons. The place it comes from, a spectacular and precarious outcrop high above the Great Langdale valley (see Edmonds 2004) is somewhere I have visited several times. The hillside around the spot where people quarried the distinctive blue-grey stone, from about 4000 B.C., is littered with the scars and flakes of Neolithic stoneworking – scree slopes created entirely through the process of making axes. Langdale axes, like those from numerous other stone sources around Britain and Ireland, seem to have been important objects in the Neolithic. They were moved from Scotland to Cornwall and from Cumbria to the Fens, perhaps even acquiring value as a result of the distance over which they were exchanged (Bradley and Edmonds 1993). The issue of *place* has been a very important line of enquiry in relation to Neolithic axes – one reason why I felt frustrated with the toothbrush's placelessness.

The axe itself is an interesting piece of stone. The places where flakes have been knapped from its surface are clear (to the trained eye). However, one section remains untouched, where a vein of brown can be discerned running through the otherwise smooth and faultless stone. It is this vein, I imagine, that made someone in the Neolithic cast this piece aside; it was this that ended its path to axe-dom. Presumably the vein was perceived as a weakness, a fault in both senses, making this roughout either difficult to work any further or impossible to use with any force once made.

Thus, for me, the axe *is* able to speak about its past. The distant places in which similar axes have been found suggest that people moved or exchanged objects over very wide distances; these material objects may have been used as much as tokens of social relationships as for cutting down trees. The fact that Neolithic people chose to quarry these tools from such a spectacular spot, when other less precarious outcrops were readily available, suggests that an element of danger during their manufacture may even have been an important aspect of their mystique (Edmonds 2004). The fact that a fault in the stone brought this not-quite-axe's life to a premature end suggests that either its aesthetics, or functionality, or perhaps an element of both, were viewed as not quite right by the people that made it; we get an insight into someone's way of thinking, nearly 6,000 years ago. Despite appearances, this axe was actually far from being 'just an axe'.

In Elizabeth's version of the axe, which she persistently refers to as a lump of rock, perhaps unsurprisingly its present-day context is immediately evoked, the 'Habitat' tea towel surrounding it being seen as 'at least as odd as the rock'. While, in many ways, this is of course true, archaeology has long recognized,

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and necessarily come to terms with, the strangeness of both its subject matter (oddly shaped stones) and its practices in the present – which deem those stones precious enough to be 'protected from the world' (see, for example, Holtorf 2002). The frustrations that Elizabeth felt with the materiality of the axe made clear to me just how important archaeological knowledge is, in terms of understanding materials: having some idea of the multiplicity of 'things' that this object fitted into, of roughly when it was made, that the flake scars are indeed human-effected. In terms of the object's context, I became acutely aware of the amount of work upon which archaeological understandings are built. Over the past 150 years or so in which archaeology has existed, huge effort has been invested in understanding the Neolithic (as a period in the past), in recognizing these rocks not as a 'faerie's weapons' or 'lightning bolts' but as tools (see Trigger 1989, 52–55), of plotting all of the known Langdale axes across Britain so that patterns of exchange become visible. Only as a result of this work has it become possible to move beyond these objects and their mystique, to discuss issues – such as 'the various practices and social arrangements of which it was a part' – that, for Elizabeth, seemed to be entirely absent. It is possible for questions to emerge from the material at many different levels. But these are not given to you lightly. When you are not dealing with the present, context and understanding only come through attention to the material: measuring, describing, plotting, identifying technological *change* (which in no way implies technological *progress*, as Elizabeth accused) – the archaeology I tried to 'do' on the toothbrush.

Discussion: artefacts between disciplines

In approaching the 'problem' of interdisciplinary enquiry, we chose not to transfer a set of terms as Beer suggests in the quote at the beginning of this paper, but instead swapped materials which would act as 'boundary objects' (Strathern 2004). While questions of epistemology and ontology are never far away, and while they lie behind much of the conversation sketched above, it was never our intention to explore these in any great depth. It would certainly be possible to provide a more philosophically detailed analysis of the theoretical and methodological positions juxtaposed in this article but our more modest aim was simply to take a break – to cast new light on our respective disciplines and on the branches of archaeology and sociology that we inhabit, by making short journeys into neighbouring territory.

We end by commenting briefly on those aspects that were indeed thrown into sharp relief by this exercise in intellectual tourism, exploring the implications it has in relation to interdisciplinary working more generally. In confronting the axe and the toothbrush, we both enacted and tacitly reproduced many normally unspoken conventions of description and analysis. Duncan reached for a ruler. Elizabeth used the axe-rock as the centrepiece of a social survey, focusing more on responses to the object than on the artefact itself. Other differences emerged when taking photos: what should be foregrounded, and how should these items be framed? In short, the process of analysing *un*familiar objects – which at times strayed almost into methodological pastiche – brought *familiar* ways of working into focus, revealing sets of normally unthinking methodological reflexes. In

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'appropriating' these artefacts, as Beer would have it, we were not so much learning new methods as relearning old ones, which we ourselves had spent many years acquiring.

In terms of the intellectual focus of the two disciplines, our study demonstrated that in many ways we both wanted to address essentially similar questions: what is (or was) the social, cultural and material world in which our objects made sense, and why was this so? For both of us, investigation of the artefact alone was a dead end. Although the toothbrush is recognizable and familiar, whereas the axe requires a trained eye to identify it, in neither case do we really know what each object is 'for' or into what sets of practices it fits. More is required to locate, position, frame and interpret or attribute meaning: 'contexts and the clarity they bring do not just happen, they have to be discovered' (Barrett 2006, 194); or, perhaps more accurately, they have to be constructed.

When dealing both with the past and with the present, insights into material culture are the result of intellectual labour, but, as this exercise suggests, the nature of the heavy work involved is indeed somewhat different. Despite sharing the same question, our reflex methodologies reflect and embody different traditions born of working either with the past or with the present. We are actually dealing with substantially different worlds, which seemingly require different ways of working. As a result, temporary interdisciplinary transgression was not as easy as we had at first hoped.

For many sociologists, the people, practices and context of an object are routinely taken for granted or folded into the background of their enquiry. Others view artefacts as 'congealed social relations' (Grint and Woolgar 1997, 97) and it is in the spirit of this approach that our specific object, a Signal EXPERT toothbrush, was actually asked to stand for a whole series of other practices. Elizabeth wanted the toothbrush to be situated in terms of broader traditions of practice and networks of technologies. It was in some senses used as a metonym – a single object which could represent many other things and other ideas (the 'affordances' of different materials, concerns about health, beauty in the modern world).

Within an archaeological framework, it is more difficult to situate individual artefacts within their wider context in such a straightforward way. As a result, specific objects – like the Langdale axe under discussion here – come to be scrutinized in detail. Analysis is focused much more on the artefacts themselves because past practices cannot be assumed; they need to be inferred from direct material evidence (either on the object itself, as with the flake scars on the axe, or in the relationships between artefacts). In the same way, because we are not dealing with globalized distributions and mass consumption in the Neolithic, networks of objects are not immediately visible. As a result, the measurement, dating and distribution of material culture takes on greater significance – it simply matters much more.

Our study raised further questions in terms of the relation between physical space and temporality. Whilst the axe on Elizabeth's desk evoked comment from almost everyone who saw it, Duncan's toothbrush – also on a desk – was totally ignored. Although both objects were in equally unusual or unexpected places, they prompted quite different types of reaction. This brought home

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the extent to which temporality informs our understanding of objects and the spaces they occupy and make: the contemporary toothbrush was capable of travelling (from bathroom to office) without comment but not the axe. Was it the movement from the Neolithic to the present day that made this stone more visible, was it a matter of size, or of incongruity? The point is not to answer these questions but to notice that items can be 'out of place' because they are also 'out of time', and that the relation between these two dimensions is relevant for the status and visibility of material culture.

It was an accident that the toothbrush and the axe were both sociotechnical 'failures', but this aspect prompted us both to reflect on the erosion of material culture. Duncan's toothbrush is no longer made and has failed as a design, yet toothbrushes – as a generic class of goods – continue to be produced in very large numbers. This is not so for stone axes in Britain (if not in other parts of the world – see, for example, Pétrequin 1993), an observation which begs the further question, what led to the demise not just of this one axe, but of axe-based society in general? Thinking ahead, it is conceivable that archaeologists of the future might find themselves asking similar questions of a pink and white brush (and other versions made in blue) turned up in 20th-century landfills. It is possible that they may ask what it was that killed brush-based society. Was it the development of genetically engineered teeth, new technologies and conventions of beauty, a change in diet, or social disapproval of putting filthy objects into the mouth on a regular basis? However, it is equally possible that toothbrushes will never come into focus for the present in the way that axes have done for the Neolithic. There are so many objects now, distributed across the globe, that our focus, our scales of enquiry, may have to change and adapt in order to answer different questions (see Strathern 1991 for a discussion of the implications of working at different scales).

This consideration of 'future archaeologies' (Brace and Harvey 2006) brings us back to the role of the past in our work: a superficially obvious attribute of one of our two disciplines at least. At one level, it could be argued that while archaeology is easily able to draw on the antiquity of its finds and the mystery of the unknown, sociology has to work harder at creating alterity. For sociology, mystery is not created by time but resides even in the most familiar, everyday objects – like a plastic toothbrush. Making seemingly normal arrangements strange is stock in trade, and an often essential part of sociological enquiry (Becker 1998). By contrast, it might be argued that much archaeological work is about making strange things ordinary: all of the plotting, measuring and describing does indeed serve to render the unusual and diffuse coherent. However, that is not where archaeology necessarily ends. Part of the attraction of the past – of the axe – is its strangeness, and we must be careful not to erode that (Thomas 1999, chapter 1). It can even be argued that archaeology has a political duty to convey that sense of otherness in order to challenge the present (e.g. Shanks and Tilley 1987). Both disciplines therefore have a role to play in making the present unfamiliar.

Concluding comments

Our interdisciplinary experiment – and the dialogue that resulted from it – revealed both similarities and differences in the aims and methods of our

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respective subjects. The first, and in many ways firmest, conclusion to emerge out of our conversation is that interdisciplinary dialogue presents specific challenges. Whilst, in some senses, archaeology and sociology have similar goals – to make the familiar strange, to understand objects' contexts, to appreciate the materials of culture and the relation between things and practices – we came to realize that the ways in which they achieve these are in fact very different. These differences are not, however, an accident of disciplinary separation or a case of parallel evolution, but have come about for very good reasons. Each discipline (and each sub-discipline within) deals with a very different set of materials and concepts, and can and therefore does take entirely different things for granted. Being already framed this way, the materials of different subjects resist 'inappropriate' forms of analysis: techniques cannot simply be transferred. Similarly, the learning of different analytical methods and skills cannot be an immediate process: there are good reasons why others have spent years acquiring them. It is important to approach interdisciplinary work with these observations in mind; as we discovered, slipping into another discipline is not necessarily something that can just be 'done'.

A second, in some ways more positive, conclusion is that interdisciplinary dialogue can have significant benefits. For a start, our conversation revealed some of the well-founded reasons why we do feel at home in our respective disciplines. In venturing briefly into another world, we both learnt much about our own ways of operating; the familiar was made unfamiliar in that sense too. As a result, we will now approach our axes and our toothbrushes, as archaeological and sociological objects, with a renewed appreciation of the theoretical and methodological qualities of what we do. In addition, despite the fact that we both quickly ran into disciplinary dead ends, we did learn things from each other's ways of working. Duncan, for example, will approach his archaeology reminded of the fact that new materials (such as plastic 'bristles') can themselves have serious effects on the distribution of 'their' respective objects. He will also take care to consider the macro-scale trajectories (globalization, power, love) in which seemingly straightforward objects (Coca-Cola, sugar, dirty socks, axes even) are caught up. Elizabeth on the other hand has a renewed interest in objects as 'traces' of social relations and in the everyday materials of material culture. Also curious about the potential of what were, to her, new techniques of description, representation and measurement, she will now carry a ruler with her at all times.

Finally, it is important to recognize that this has been a highly restricted dialogue involving only two objects, disciplines and authors. Having started like this, it is tempting to speculate on the kind of conversation that might have ensued had other things, theories and people been involved. What if sociology had been replaced by geography, or if geology had stood in place of archaeology? What new points would have emerged had we included a historian and an anthropologist in our discussion? Would a four-way debate have generated substantially different observations from those identified above, and if so, what would they have been? Fundamental questions of theory and method are the stuff of philosophical debate and there is a sense in which such debates resolve or at least outline familiar

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tramlines of enquiry. Our exercise has probably not generated any really new philosophical challenges, yet our more practical and also more playful approach suggests that there is scope for undertaking experiments and exercises that revisit such territory from different points of view. By using objects, rather than concepts or terminologies as our initial point of departure, we have found new ways of enjoying and appreciating features of method and orientation, catching glimpses of the everyday significance of difference that are paradoxically but typically obscured by heavy-duty theory. This is not meant as a criticism of the philosophy of enquiry: abstraction and reflection of this kind are surely important. But in everyday research, and especially in relation to interdisciplinary enquiry, it is important to develop ways of making these positions tangible, accessible and therefore amenable to review and innovation. It is in this spirit that we end with a practical suggestion: next time you embark on an interdisciplinary project, start by swapping some small object and spend a moment discussing and describing it as we have done above. If our experience is anything to go by, this method, derived more from the school playground than from the lecture room, promises to be intriguing, surprising and intellectually rewarding.

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Notes

[1] In what follows, I believe this story but I have no basis on which to do so other than trust.

[2] The fact that Duncan's toothbrush was pink, and Elizabeth's rock blueish grey, was entirely coincidental. We were not intending to introduce, or indeed subvert, any gender stereotypes.

[3] This interpretation was subsequently confirmed by Elizabeth.

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Objects as such and objects in contexts. Things and equipment

Hans Peter Hahn

In the last two or three decades, material culture as a topic of scientific study has experienced a real boom. Focusing on everyday objects, their contexts and meanings, material culture studies offers important approaches for several disciplines within the humanities. The aim of this new wave of research

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