
discussion article

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The symmetries and asymmetries of human–thing relations. A dialogue *Ian Hodder and Gavin Lucas**

Abstract

This paper presents a dialogue about the question of symmetry and asymmetry in human–thing relations, and the links between such asymmetries and those encountered in power relations amongst humans. The conversation discusses various issues, such as whether symmetry is possible in any kind of relation, how one defines asymmetry, whether there are different kinds of asymmetry, and how inequality between humans is related to the asymmetries in human–thing entanglements. The last issue is considered especially important in light of the various critiques that have been levelled at actor networks and other relational materialisms for their weakened political stance insofar as sources of inequality and injustice are so widely distributed that they become, in effect, apolitical.

Keywords

Entanglement theory; asymmetry; power; dependency; humans; things

Introduction

The ‘return to things’ within archaeology, which has dominated much discussion in archaeological theory over the past decade, has a diverse set of influences and equally diverse modes of articulation. Among the earliest and seminal texts are those from within the movement of symmetrical archaeology that drew strongly on actor-network theory and especially the work of Latour and others in science and technology studies (Domanska 2006; Olsen 2007; 2010; Olsen *et al.* 2012; Shanks 2007; Webmoor 2007; Witmore 2007). Actor-network theory (ANT), of course, has had a much wider influence in archaeology than symmetrical archaeology (e.g. Graves-Brown 2000; Knappett 2005; Knappett and Malafouris 2008), not to mention in other disciplines in the social sciences and humanities. However, although it remains one of the most prominent influences in the turn to things, other genealogies and cartographies of what is often called the ‘New Materialism’ need to be acknowledged (Coole and Frost 2010; Dolphijn and Van der

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Tuin 2012). Yet it is not an easy field to delineate and the very term ‘New Materialism’ misleadingly implies a more coherent terrain than is actually the case. Acknowledging this, Witmore (2014) has recently offered a useful summary of key themes he sees as most relevant in relation to archaeology. We won’t pretend to offer our own detailed analysis here, but it is important to mention some salient features. Three in particular are worth brief comment: agency, animacy and assemblage.

The agency of things is a topic central to ANT, but also for the work of other scholars such as Alfred Gell (1998) and Karen Barad (2007), coming from very different directions. Gell’s work, for example, took inspiration from other anthropologists working on art and religion, especially Pascal Boyer, while Barad draws from Judith Butler’s work on performativity in developing her ideas of agential realism. Both these writers have been influential for archaeologists (e.g. Jones 2005; 2007; 2015). A second topic is animacy and the explorations of the boundaries between the organic and inorganic, living and inert matter; the vital materialism of Jane Bennett (2010) is prominent here, but one might also acknowledge more generally the work in feminist theory on body materialism and the blurred boundaries between humans and things, as originally articulated by Donna Haraway (1991) in her cyborg manifesto, subsequently a core theme in post-humanism (Braidotti 2013). The third topic is that of assemblage, a theme which might be stretched to cover ANT’s networks or collectives (Callon and Law 1997; Latour 1996), Ingold’s meshwork (Ingold 2007) and DeLanda’s assemblage theory (DeLanda 2006; 2016), all of which have had an important impact within archaeology (e.g. Lucas 2012; Fowler 2013). Despite the differences between these approaches to assemblage, all share a common ancestor in the work of Deleuze and Guatarri (1983; 1987) and their rhizomatic philosophy, though DeLanda is the most explicit in acknowledging this debt.

Indeed, Deleuze and Guatarri seem to be the most commonly shared point of reference for many of those writing within the terrain of New Materialism, which is not surprising given their stress on relations over essences – what one might dub a variant of process philosophy, whose most famous modern advocate was Alfred North Whitehead (1978). For ‘relationalism’ – where an object or entity is defined more by its relations to other objects than by any stable essence – is a theme common to all three topics of agency, animacy and assemblage and one which also resonates with other recent developments such as the increasing use of network analysis in archaeology (and other disciplines: Brughmans, Collar and Coward 2016; Knappett 2011; 2013; on relational archaeologies more generally, see Watts 2013). Indeed, relationalism could even be linked more generally to the postmodern critique of essentialism, and one reading of New Materialism might suggest it has simply replaced the relationalism of signs under post-structuralism with a relationalism of things or matter. Such crypto-continuities are reinforced by terms such as ‘material semiotics’, used as an early synonym for ANT (e.g. Latour 1996). However, this is not to suggest that this focus on relational or process philosophy is what underpins and unites all those writing within this New Materialism, because very much opposed to it is the movement of speculative realism, especially the object-oriented ontology of Graham Harman (e.g. Harman

2016), who has an increasing presence in some of the archaeological literature connected to this ‘New Materialism’ (Edgeworth 2016; Witmore 2014; also, for Harman on Hodder, see Harman 2014). Furthermore, one might cite other scholars who seek to draw on non-Western ontologies altogether, taking most inspiration from anthropological research such as Viveiros de Castro’s Amerindian perspectivism, and regard the New Materialism as largely about an ontological turn (Alberti, Jones and Pollard 2013; Alberti 2016; Jones 2012; Conneller 2011; Henare, Holbraad and Wastell 2007; de Castro 1998; 2004).

The point of this brief excursus on the family of ideas which might be collected under the rubric of New Materialism is that it is a very diverse church and one not easy to characterize in a few paragraphs. Indeed the plural designation, New Materialisms, is no doubt more apt. At the same time, it has been necessary to sketch this field as a prelude to our intentions in this paper. Our concern is with the idea of symmetry in the relation between humans and things. To some extent this pertains to the broader topic of anthropocentrism, which could have been cited as a possible fourth theme of New Materialism alongside agency, animacy and assemblage and one which conceivably does have a broader consensus. The critique of human exceptionalism – or at least decentring the human – is common to many scholars, represented for example by the advocacy of distributed agency with ANT, the arguments against correlationism underpinning speculative realism, or the reconfiguration of the human explored in post-humanism. However, like the other three topics, anthropocentrism is a complex field and one we cannot address with any merit in such a short space. Instead, we would let the reader draw their own connections from what follows, which simply seeks to address the possibility – or impossibility – of symmetry in the relations that humans have with the material world.

Symmetry as a concept has been used in different ways in this literature, so we need to first map these uses in order to properly situate the conversation that follows. The idea of symmetry was first used in early science studies, specifically by Bloor (1976) to characterize a stance taken when looking at how scientific knowledge is constructed, specifically the demand that explanations for successful knowledge claims should have the same form as those for unsuccessful claims. It was devised to counter a strong asymmetry in earlier studies which cited social factors when accounting for scientific failures but ignored them when discussing successes. Latour extended this idea with his concept of symmetrical anthropology, which argued that one should study Western scientists in the same way as one studies non-Western societies (e.g. Latour 1987). It was also through Latour, however, that the idea of symmetry migrated to apply to the status of actors, i.e. who or what counts as an agent when mapping the construction of knowledge. No longer was it just scientists and their ideas, but the laboratories, instruments and other non-human agents, that needed to be drawn into an explanation. This analytical strategy of not privileging who or what is to count as an agent is also more broadly related to Latour’s advocacy of pulling down entrenched dichotomies such as between Nature and Culture, which he regards as an artificial act of purification (Latour 1993) and, in

doing so, echoes Whitehead's (1978) earlier critique of the bifurcation of nature.

It is this ANT reworking of symmetry that became the basis of symmetrical archaeology's claims for foregrounding things and decentering the human. Nonetheless, there is a danger that the term 'symmetry' does conflate two different senses: one is an attitude or stance to the ways of understanding the world, the other an ontological flattening which stresses the continuities between beings or things. Of course, ANT adopts the second as a strategy to enact the first and so the two are easily conflated. One of the consequences of this conflation is that such an ontological flattening can become misread as a statement that all beings or things are the same and/or have similar agency. Olsen and Witmore (2015) recently responded to these and other criticisms of their principle of symmetry and underlined what is perhaps their key point: symmetry is a starting position, a strategy or stance to adopt when trying to understand the world; it is not arguing for an erasure of differences, whether in the agency or constitution of beings, only for a suspension of an acceptance in *inherited* divisions, such as that between humans and things, animate and inanimate matter. The task precisely lies in tracing these differences and their effects empirically, not presupposing them – because when you do, you find that the world looks very different.

To a large extent, this argument has great purchase. However, one of us has argued (Hodder 2014) that while the critique of subject–object, culture–nature binaries is of great importance, there is a danger in embracing the notion of symmetries between humans and non-humans. Where actor-network and relational theories see networks of relations, entanglement theories see dependencies. In the entanglement perspective (Hodder 2012; 2016b), there is a productive dependence (reliance) between humans and things (HT and TH), things and other things (TT), humans and other humans (HH). But there is also an asymmetric dependency in that the existence of one human or thing is constrained or limited by another. For example, Fuller, Allaby and Stevens (2010) and Fuller *et al.* (2016) have shown how, in the process of domesticating plants, humans came to rely on plants but the physical characteristics of the plants and their interactions with soils and environments drew humans into expending increased labour. Taking another tack, Lucas has argued that even if symmetrical approaches do not exclude humans in their accounts, there is still a danger in failing to acknowledge the central role humans have as the primary matter of concern in a discipline such as archaeology (Lucas 2012); even if we mainly study things, the *selection* of things – or those qualities of things – that we choose to study is defined by their connection to humans. This is what one might call a perianthropocentric rather than anthropocentric position (Lucas 2015b, 80); it is not saying that things stand as proxies for humans, as mere props or symbols, but it is recognizing that the kinds of thing we devote our attention to as archaeologists are circumscribed by their relations to humans.

Both of these points have critical significance when it comes to our understanding of power and the political. One critique of actor networks is that they appear to produce a flatness in which all nodes seem symmetrical and equivalent. Power seems to be dispersed through networks so that it has

no origin; there is no source of injustice (Bauer and Kosiba 2016; Fowles 2016; Shapiro 1997; Whittle and Spicer 2008). But the political is a quality distinctive of human relations and so one of the key questions becomes, how does the symmetry or asymmetry of human–thing relations (HT and TH) articulate with the political symmetry or asymmetry between humans (HH)? This is a key issue raised by Malm and Hornberg (2014) in their critique of the Anthropocene discourse, which, they argue, overlooks intra-human (HH) asymmetries in understanding human–environment (HT and TH) relations. However, where they tend to imply a reversion to conventional politics as an answer, we suggest the need for closer analysis of the connections.

The following dialogue explores further the question of symmetry and asymmetry in human–thing relations, and the links between such asymmetries and those encountered in power relations among humans. It is based on an email exchange between the authors and was initiated as a conversation about one of the key themes in *Studies in human–thing entanglement* (Hodder 2016b): asymmetry. The paper concludes with a joint statement summarizing the main issues discussed.

Does symmetry exist?

Gavin: Entanglement theory frames relations or entanglements in terms of dependencies, which does carry a strong connotation of asymmetry. But surely not all entanglements are asymmetric, are they?

Ian: If we just focus on human–thing relationships (putting aside for the moment the question of what is a human or a thing), I suppose an example of a symmetric entanglement between humans and things might be where humans harvest, forage, collect the wild fruits available in the landscape in a socially unconstrained way. But immediately there seems to be an asymmetry in that too much collection can lead to an inability of the landscape to reproduce its fruits. The human is constrained by the complex interconnections, the seasonalities, the symbiotic relationships that may only play out over time (unintended consequences). So humans have to be careful, knowledgeable, respectful. This respect may be perceived as a symmetry, a co-living, an exchange. But in the end the exchange is constrained by the material limits. It is also constrained by the social limits on what can and cannot be collected, what fruits are given value, significance or taste.

Or with domestication, the plant gives its food and in exchange the human helps it to reproduce. But is the amount given or exchanged by each side equal? And how would one measure the exchange as equal since different things are being exchanged? As long as both provide reproductive success to each other, is this a positive co-evolving symmetry (Rindos 2013)? Only if you ignore the labor and social investments that are needed – then there is asymmetry, as Fuller, Allaby and Stevens (2010) and Fuller *et al.* (2016) have shown.

Humans and all biological beings depend on material things. Many of these things, from stable isotopes to the amount of oxygen in the air to the amount of sunlight, remain relatively stable. But made things are relatively unstable.

There is thus an asymmetry. If humans want to be dependent on things, they get drawn into their care – there is always the double bind. Animals such as beavers are dependent on unstable things, as birds are on nests, and they have to look after and mend and manage them. But humans went down an evolutionary pathway (*homo faber*) of investing a lot in the production of things, and indeed making that an important distinction from other animals. Things allowed humans to move up the food chain. They thus had to deal with and were drawn along by the asymmetries in the networks that were produced.

But there are also other ways that humans get drawn into, entangled in, things. Things extend the power of humans to do things. As social beings humans can both cooperate and compete. Things enhance cooperation and competition. They allow humans to cooperate together, work together, to increase food and survival. They allow greater productivity and so enhance sharing. They allow humans to communicate more effectively. They release energy for the social group. But they also cause problems of management and distribution. Things can be shared, but they can also be kept (Weiner 1992), restricted and secreted. In certain contexts, they can become the focus of violence, of rivalry. They can become instruments of violence. Dominant individuals can use things to enhance dominance and underpin violence. Things can be dangerous.

So I am not sure there is symmetry anywhere in human–thing relations/networks. Maybe there is symmetry in some TT relations with reference to material things? The pot depends on the hearth to cook, and the hearth depends on the pot to contain the food that is cooked. The food depends on the pot to be cooked and the cooking pot would not exist without the food to be cooked. So cooking pot, cooking hearth and cooking food are all symmetrical with respect to cooking. But even here the relations are asymmetrical in that there is an operational sequence – things have to be done in an order; there is a directional flow, even if recycling, reuse, repurposing are involved.

So my challenge to you is: where do you see symmetrical entanglements?

Gavin: My first thought when you asked about where a symmetrical entanglement might exist was to think about human relationships (HH), like friendship or love – of course these can be classically asymmetric, but they also reveal something of the issues at stake: how do you measure equality when different things are being compared? You posed the same question when asking about human relations with other living beings in the context of domestication and I am not sure you really answered it. Or rather, you implied that you can answer it, but the answer changes depending on the quality under comparison: reproductive success or labour/investment. In the one case there is symmetry, but in the other, not. So in the case of human relations to other organisms, it seems that there can be symmetry in some senses, but not in others. But let us stick to human relations to things, since the asymmetry you argue for here would appear to be less contingent – besides being a property shared also by other species, as in your examples of bird nests and beaver dams. In what does this asymmetry consist?

If we think of a tool such as a hammer, we could say that humans depend on it to do things, but also the hammer depends on humans for its existence. There is a kind of symmetry. But here the nature of dependence is very different, which therefore also raises a question over the nature of the symmetry. The hammer is reduced to sheer existence; it only depends on humans (as well as other things of course – iron, wood etc.) to bring it into being. This is what one might call an existential dependence. The human dependence on the hammer, however, is not existential – we don't need hammers to bring us into existence or guarantee our reproduction as a species. For us, the hammer relates to our social life, by which I mean our ability to enjoy a certain type of life. This is a social – or what you might even call an aesthetic – dependence. The hammer needs humans only in an existential sense – beyond that, it can lie in the workshop unused for centuries. In contrast, humans need the hammer in a social sense – humans can live/survive without hammers, but it does make their life easier!

So even with things, there are two kinds of dependence or symmetry to consider: existential and social, which perhaps corresponds with your earlier distinction between reproductive success and labour/investment. In the case of the first, things are more dependent on humans than vice versa (hammers need humans to come into being), whereas in the case of the second, the asymmetry is reversed (humans need hammers to obtain a certain quality of life). But the existential asymmetry is also fairly uncomplicated, since one is reducing it to a very simple quality: sheer existence. Social asymmetry, however, is rather less straightforward, because quality of life is a much more complex notion than sheer existence. For example, social life may be enhanced by a hammer, but in place of a hammer, a rock or brick will do, if needed – depending, of course, on what the hammer is needed for (hitting a nail requires different attributes of the 'hammer' than smashing glass). In other words, most things carry varying degrees of fungibility which will mitigate, if not even neutralize, the consequences of social dependence. Can we argue that humans are asymmetrically entangled with hammers if they can replace a hammer with something else which does the same job?

Social dependence or asymmetry is then much more context-specific, but also one possibly loses a universal measure of equality to even make generalizations of asymmetry. I guess my basic point is – how do you define asymmetry? My challenge to you.

Defining asymmetry

Ian: I have tried to respond to your challenge.

I do not see the hammer surviving in the workshop as a question of sheer existence. Whether it survives depends (for example) on what microorganisms are present in the workshop to attack the wooden handle, and that depends on whether anyone is living in the house and looking after the workshop. So the existence of the hammer is the result of heterogeneous entanglements. The human need for the hammer is also heterogeneous, and for many tasks a hammer with a rotten handle or a stone or brick will not suffice. So it would overall be very difficult to sort out what was existential and what was social

dependence in these relationships between human and hammer. One has to look at the entanglements of the human–hammer relationship as a whole.

One could say that the exchange of two objects is the exchange of equivalents. If I give you an object and you give an equivalent one back to me, then one could say the matter is closed and a symmetric relationship has occurred. But that would only be true if everything else between us was equivalent. If I am vastly wealthier than you, then to give an equivalent gift may be seen as inadequate. How does one decide what is commensurable? So again it all depends on other links in the entanglements.

Having got to this point, I do, however, think that there are cases in which one might argue that you were right in your original statement that not all entanglements are asymmetric. For example, take the three to five bolts that hold a wheel onto a car. They are all equally dependent on each other to keep the wheel attached to the car. Or take the tiles on the floor or wall of a bathroom, or the bricks in a wall, or the two interior prongs in a four-pronged fork. Or identical beads in a necklace. These are all symmetrical dependences. And they are indeed fungible. What distinguishes these symmetrical dependences is that they all involve things that are more or less similarly placed in the entanglements. The tanglegram or ego-network of each would be more or less identical – unlike the case listed earlier of the hammer.

But even in these cases of symmetrical and fungible equivalents there is an asymmetry, especially if time is brought in. For example, in production one tile or brick may be put down first and the rest are placed in relation to that. Or one fork tine or necklace bead may wear down first or be broken first, so affecting the others asymmetrically. Or one brick, because of its location in the wall or in relation to the foundations, may experience more pressure/force than others, do more work than others, supporting others more. Some bricks may be over subsiding soil, leading to asymmetry in the process of collapse. So whether these cases are really symmetric depends – on other things in larger entanglements.

In all the examples above, asymmetry seems related to the positioning of a thing in relation to a larger entanglement. In other words, the entanglement defines the symmetry or asymmetry.

So, for example, human dependence on a hammer and the simple act of hammering in a nail lead to massive global trade, mining, industrial factories, the cutting down of trees etc. to make hammers. All this benefits humans (humans today need hammers), and it creates jobs and wealth, but it also draws humans into far-flung and complex entanglements (including trade agreements, bank loans, transport systems, bureaucracies) that are difficult to get out of. So there is a gross asymmetry between the human–hammer dependence and the entanglements that make that dependence possible.

The more that humans realize, make use of, create opportunities from the affordances of things, the more they get drawn into entanglements that channel the direction of change and set the future parameters for existence and being. The asymmetry occurs because any particular human–thing dependence also draws in thing dependence on humans, thing dependence on

things and human dependence on humans. Or, more generally, asymmetry occurs between the human dependence on things and the vast entanglements that are drawn in to make that dependence possible. According to this perspective a symmetrical situation would be very rare in modern or historical times. It would only occur when a human dependence on things implicated very little else – going back to my earlier examples of picking berries from bushes, or very simple technologies using readily available materials. Asymmetry is not about culture/nature, subject/object; but cross-cutting these, it is about how entanglements increasingly entrap humans as a result of the human dependence on things.

It still seems to me that symmetry is very rare, especially nowadays.

Gavin: With the hammer, I don't think what you discuss changes this. Yes, the hammer is dependent on care of humans, on the absence of microorganisms etc. – all this is true; its existence is entangled in a web of different agents. But we are still just talking solely about existence. The hammer's dependence is still purely an existential issue. The hammer user's dependence is much more diverse – their existence, their very being, is not what is at stake, rather it is their *quality* of existence – how much better/easier their life is with the hammer, even if that means they are deeply entangled in a wide web of relations from mining to trade to factories etc.

But I think one thing you said really got to the core of the issue: 'In all the examples above, asymmetry seems related to the positioning of a thing in relation to a larger entanglement. In other words, the entanglement defines the symmetry or asymmetry' (p. 126).

My earlier comments above considered asymmetry purely as a dyadic relation between two entities; indeed, this is perhaps too obvious a way to look at it, like a mathematical equation. The same perspective also relates to the issue of commensurability: I give you x , you give me y – is it a fair trade? I have more of x , but you have more of y – does this make us even or does my x override your y ? Et cetera. But clearly you are thinking of structures, systems, networks – call it what you like. And as you suggest, even the examples you gave of possible symmetrical structures like a tiled wall or necklace might not be, because of subtle differences or the order in which they were assembled. Now, I think I probably do agree with you that all structures are asymmetric in the sense you are arguing – but at the same time, is asymmetry really the right word? You can talk about hubs as they do in network theory, or directed and non-directed vertices, and power laws, but isn't asymmetry really a concept that presupposes a dyad? You might think I am just quibbling over words or definitions, but I wonder whether the word 'asymmetry' is not up for the job you want it to do. Is it just too simple to capture the complex web of dependencies you describe in entanglement?

I still think the problem lies in how we define asymmetry: first, what is it being applied to – a dyadic relation or a web of relations? Second, how do you measure it and how do you get round the problem of commensurability. My tentative answer would be: (a) asymmetry is only a dyadic relation and (b) *either* you measure it through the question whether existence is ultimately what is at stake for only one of the pair in this relationship, but then this

becomes very limiting and reductive, *or* you measure it in terms of social dependence, as you are suggesting, but then this also becomes much harder and involves the problem of commensurability.

Different kinds of asymmetry

Ian: You ask if asymmetry presupposes a dyad and I agree that it does; I see that asymmetric dyad in the general relationship between humans and things. There is a link between human–thing asymmetries and power asymmetries as I try to discuss in the online book (Hodder 2016b), but I do not see them as the same thing at all.

I still don't see how it makes sense to say that the hammer is just about existence – one can, of course, talk about the sociopolitical life of a hammer, its cultural relevance and social standing. You say that it may be too restrictive to argue that existence or bare life is ultimately what is at stake for one of the pair in a relationship. And I think that is right. That sounds very reductive and very limiting – and surely not relevant to most human–thing dependency.

As an example, it is possible that in the original domestication of the dog in the Upper Palaeolithic there was a degree of symmetry in that dogs helped humans to hunt and in turn dogs were protected and fed. The symmetry is clear especially if we argue that dogs domesticated themselves and in so doing helped humans to domesticate themselves. But over millennia the HT dependence on dogs led to a proliferation of breeds. In recent centuries many of these breeds that have been produced have led to different shapes and forms in which the dogs themselves suffer considerable pain, often having difficulty breathing or running or holding their heads up. This is a power asymmetry – power over dogs causing pain and hardship. But it led to another type of asymmetry, what I call a double bind. By producing these new breeds humans both depended on dogs and had to put more labor into preserving those dogs. For example, some breeds (bulldog and chihuahua) often have to be birthed using C-sections. The breeds have become artificial creations that need a lot of surgical and veterinary intervention. So we see here the difference between power asymmetries and entanglement asymmetries.

Gavin: In many ways for me the most critical point is, how different/similar is power asymmetry from entanglement asymmetry? And indeed, are asymmetries different for different kinds of things?

If we take your example of dog breeds where you suggest there is a difference between power and entanglement asymmetry, I am not sure how clearly I see this difference in your example. You suggest the power is about pain and suffering felt by dogs because of human breeding – and yes, in a sense, humans control this breeding and thus affect the dogs. You could even say, if they stopped intervening, e.g. giving C-sections to some breeds, the dog breed would simply die out. But then you imply, because humans need to give this care to dogs, that they are entrapped or entangled, so there is a different asymmetry going on there.

Now question would be, why are these two asymmetries different? Why is one about power and one about entanglement? And if they are different, can you compare power and entanglement asymmetry in any way, perhaps

even to suggest which is more asymmetrical? I would argue they are both about entanglement – but still in different ways. One is existential, the other social. Humans are trapped into caring for dogs and dogs are trapped into being dependent on humans. But to me, here is the difference: one form of entrapment is reversible, the other is not (on reversibility see Lucas 2007). However much a human needs to care for the dog, they can – if they really make the effort – walk away. The dog, on the other hand, cannot – the breed will literally die out without human care. So in this particular dyad, one asymmetry is greater than the other. It comes down to reversibility.

Now, of course, the immediate objection is that, yes, humans may walk away, but if they give up the dog, don't they just turn their attention to something else? A cat, for example? And so the entanglement continues . . . probably yes, but that does not negate the basic difference in this particular dyad. You suggest that because things can run away from humans – they break down etc. – humans will always be worse off in this relation. But for me, the opposite is the case. Humans can always run away from things too, which relates to my earlier point about the fungibility of things. But the difference is, when humans run away, things' very existence is threatened (not all things, of course, but a lot – especially material culture), but when things run away, humans can just find a substitute.

Now none of this is to suggest that it is easy for humans to walk away from dogs, or anything else for that matter. And certainly there would be an inbuilt inertia in such systems to make it very hard to change this. But here is the problem – if, as you have claimed (Hodder 2012), change happens more rapidly as entanglements become ever deeper and more widespread, then maybe such inertia also decreases, and thus reversibility. That is, paradoxically, the more entangled we become with things in general, the easier it is to become disentangled with any particular thing. Is that true? I don't know.

I think what is thus at stake here is perhaps the distinction between entanglement as a general condition of human existence and entanglement as a specific, concrete set of relations. I agree, over time, humans are more and more entangled and thus more and more dependent. But for any given entanglement, reversibility is – almost always, if not always – a possibility. For things entangled with humans, though, I am not so sure. After all, the archaeological record is living proof of all the things which humans disentangled themselves from and which ultimately died out – whether it is Beaker pottery or chambered tombs or whatever. Yet humans live on.

The double bind – and how to circumvent it

Ian: You say that 'humans are trapped into caring for dogs and dogs are trapped into being dependent on humans' (p. 129). In my view the basic difference between these two forms of entrapment is in the terms 'caring for' and 'being'. It is true that these are two forms of entrapment but the important issue for me is that 'caring for' demands energy, resources, an attention to care for something other. This is the double bind. 'Caring' differs from 'being' in that it draws the carer, the human, into new forms of relationship. Of course, being involves dwelling in the world and its relations, it involves

care (Heidegger 1971; 1973). So being leads to care. But I do not argue that material things have 'being' in this sense. For this reason the dog is perhaps a bad example since it has being. But a hammer does not have being that leads to it caring for the world around it.

You say that humans can walk away but things cannot. You say that when humans walk away the very existence of things is threatened. Am I wrong to sense a certain fetishization or anthropomorphization of things creeping into your argument? In your concern about the bare facts of existence in relation to things, can you be accused of treating things as if they matter in some existential sense? Does it really matter if things are left to decay, rot, disappear? Of course it matters to humans (and there is the care again), but things do not have rights (though I know that in some cases one can argue in law that they do), and I do not want to return to the old debates about whether things have intentional agency. Today I would argue that the 'very existence' of things is not something we should be concerned about, except for ourselves. I know this seems a difficult argument since we are, of course, concerned with the environment, with the Earth, the planet. But the point is that the environment is not concerned with us; it is blind in its workings. The care is not symmetrical.

Conversely I do not think that humans can walk away from things. I think we agree that humans cannot exist without words, things, sounds, smells etc. You are right that they can substitute one thing for another, but only to some degree. The entanglements very much constrain what can be done. It would be very difficult to switch from driving on the left to the right in the UK, and it would be very difficult to find a global deterrent as effective as an atomic or hydrogen bomb. We are very much trapped in our own entanglements. But nevertheless I agree that some substitution is possible. And yet you agree that anything substituted will draw in its own domain of care. So humans cannot escape.

It makes ethical sense to care about human entrapment in things (as that entrapment leads to global warming, the destruction of habitats and exploitation of other humans). And also to care about the existence of animals and perhaps all living things. But I do not see that it makes ethical sense to worry about material physical thing entrapment in humans. My conclusion on this returns me to the question of power. I do not think we need to worry about the bare facts of the existence of things. But I do think that we need to worry about the ways in which the asymmetries between humans and things can be linked to asymmetries between humans, to such an extent that some humans come to be treated as things that do not have rights.

If one takes a society (often conjured up by archaeologists) made up of elites and non-elites, one can say that elites are entangled in banks, loans, stock markets, trade deals, new technologies, higher education, good health and their costs. Non-elites are entangled in labor unions, the daily routines of work on the shop floor, and low levels of education, health and capital. And elites and non-elites are entangled with, dependent on, each other. But elites are more able to walk away; their entanglements are less entrapping. Non-elites are more entrapped; even if they walk away they are still caught in poverty traps, lack of education, poor health. It is not enough to attempt

to resolve the unequal distribution of power and wealth because there are also all the entanglements that lie behind and within inequality. You can pass laws to give elites and non-elites the same opportunities, to level the playing field. But it rarely works – inequalities often seem to increase. This is at least partly because of all the entanglements that create lack of education, poor health, poor transport etc. for non-elites. Addressing poverty in the ‘global South’ involves more than aid and shifts of government; it also involves wholesale disentangling – that proves extremely difficult. This is the political reason why I think it is necessary to separate power (the control of and dependence on others) from entanglement (the dependence on things). It is not enough to deal with power asymmetries, because those asymmetries are themselves caught up in human–thing entanglements. The poverty trap has many dimensions beyond human exploitation and domination. It also involves education, health, transport etc.

To put it more directly, the human–thing asymmetry differs from the human–human power asymmetry because we should be concerned about the entrapment of slaves (their bare existence) but not about the bare existence of things. On the other hand, the bare existence of things is entangled with the bare existence of humans and the power asymmetries of humans. So we need to be concerned about the bare existence of things, but only because we care about humans. Are we getting to the point where we might agree?

Gavin: The first point I want to make concerns this issue of care and also your hint at my fetishization of things. I don’t think I do fetishize things – though I admit one has to be careful when talking about things needing or depending on humans. Some of the differences between us may simply reside in the ambiguity around this word ‘dependence’ or ‘need’, which can be used in contexts where care is integral (as in the phrase ‘I depend on/need you’) and in others where only generic causation is implied (as in the phrase ‘the car depends on/needs petrol to run’). Thus when we say that the hammer depends on humans for its existence, in no way is this necessarily the same kind of dependence as humans needing/depending on things through the idea of care. And I also agree that ethically and politically, there are deeply troublesome aspects when you start to treat things and sentient beings in the same way. But the question remains – why treat the asymmetry of care as more primordial or more asymmetrical than the asymmetry of existence or causation? Couldn’t one turn things around and suggest that you are fetishizing humans? I am not sure how I even feel on this issue so I won’t dwell on it further.

Regarding more generally the issue of care, though, I think this is vital. In many ways, the difference you highlight between beings who care and other things which simply exist can be mapped onto the point I was attempting to make in distinguishing existential dependence from social dependence. When I discussed earlier about the difference between the hammer and the hammer user, I believe I was trying to make a similar point about the asymmetry of care involved. The hammer’s dependence is purely an existential issue – *but only for the hammer itself*. The hammer does not care about the hammer user (or microorganisms, or anything else). On the other hand, the

hammer's dependence on humans *for humans* is a different matter (as is the human's dependence on the hammer) – that is about social existence, about care.

But let's now discuss this relation between care and power as a special kind of asymmetry. I was left a bit unsatisfied with the way you discussed this – for example in your last paragraph on elites and non-elites, while I can agree that the poor are more trapped than the rich, I am not sure why this is the case. Your suggestion that the elites can walk away more easily does not really say why they can – or indeed if this really is true. So I have been thinking a lot about this issue. How are HH asymmetries related to HT asymmetries?

Let me take a very simple, almost mythical, scenario. Two humans have an equal relationship; one of them 'invents' or acquires a knife. Now this human has an entanglement with a knife – and because they need to sharpen and care for that knife if they want to use it, the human is asymmetrically bound to the knife. But having a knife now gives this person an edge (forgive the pun) over a second human – they can make this second human do things because the knife gives them a power advantage. We can then say the HT entanglement/dependency of H1 enables H1 to create an asymmetry with H2. But it goes even further: because H1 can make H2 do things, H1 can make H2 spend time making whetstones so H1 can sharpen his knife. So H1 can force H2 into a dependency with another thing (whetstone), which does nothing for H2 but instead helps to sustain the power H1 has over H2! What this means in effect is that one human is moving some of the burden of care he/she has for his/her thing onto another human.

Now this is, of course, a bit contrived – it presupposes one human has no care for another human, but rather only for the knife. It also seems stretched because most power asymmetries do not seem to be based on this kind of violence (though one could argue, historically, that they will all boil down to primordial violence) – simply because we do care for fellow humans, even if this can be graded into more or less, depending on which human it is. So I will take another example. I make pots – I depend on them for my livelihood, so I am trapped into making them because I need the money I make to support myself and my family – and make those repairs to my house. But what if I hire another human to do this for me instead? Am I not simply replacing one dependency for another – HH for HT? Yes, so what is gained? Nothing – unless the care given to the employee is less than the care I would invest in making the pots myself. And why does that make the relationship asymmetrical? Because unlike the pots, humans care – including this second human I hire. In other words, substituting or inserting a human between myself and the thing allows me to shift the burden of my care for the thing onto the second human. Yes, in return I now have the extra care of another human, but this is a very calculated care and one which permits exploitation.

In a sense, this is all already covered in Marx, especially his important discussions on what he calls the organic composition of capital (OCC) and the ratio of living to dead labour (i.e. humans versus machines; Marx 1976, Chapter 25). In a nutshell, as power asymmetries/inequalities grow, so does the ratio of living to dead labour. I find this link to Marx especially compelling, but for me it also gets to the heart of why elites seem to be less entangled

than non-elites. I don't think they are – rather they have just delegated much more of the care for things to non-elites, or, put another way, substituted HH relations for HT relations.

Ian: I would like to clarify that I do not accept any distinction between being and care. All living beings, but especially one thinks of humans, have being in the sense of *Dasein*, being in the world. And this thereness necessitates a care, for other beings and for the world, the Earth, the air, all that makes being possible. Since inert things cannot care, they cannot therefore have being, though they have presence or existence. Such an approach denies the reality of animistic or perspectivist traditions without denigrating them or minimizing their importance and influence (de Castro 1998; Descola 1994). One can say that a house cares for, shelters, its occupants, but this would be anthropomorphization.

I very much like your analysis of the different forms of asymmetry and your exploration of why elites appear to be less entangled than non-elites. I had rather assumed that the answer was simply that the more resources one has the more one can use those resources to get out of fixes. As a contemporary example, those people who can escape from Syria appear to be those who can pay middlemen to arrange extremely dangerous boat trips from Turkey to Greece; I presume that those who cannot pay have fewer choices and may have to stay behind to face the extreme dangers of war at home. Your analysis suggests that elites are not less entangled. Maybe that is right but anecdotally they seem to get away with a lot! The bankers of Wall Street walked away with generous fortunes after the 2008 crash they had instigated, whereas it was low-income households that were stranded with debt. (Though maybe it does not always work – your Iceland prime minister resigned in 2016 as a result of the disclosures in the Panama Papers.)

So I would like to work through your second example – the potter. Here a human male potter has a family and a house that depend on him and so he is dependent on his pots and the money he gets from them, and he is drawn into care for the pots. But if the human potter hires another human to make the pots for him then he would have to increase his income in some other way in order to pay this person, which he might do by increasing the numbers or quality of the pots sold. It therefore becomes in his interest to exploit the hired human as much as possible even while (in his own interests) caring for him. But he also comes to depend more on things in order to increase productivity or sales price, perhaps trucks to bring larger amounts of clay to the workshop, or a machine to mix the clay, or a better and more efficient kiln. So the HH entanglement involves a proliferation of the first human's dependence on yet more things. Never mind all the TT relations between all these things. So increased inequality is associated with increased entanglement. And you are right that both humans seem equally entangled; it is their joint relationship that gets caught up in a proliferation of things.

So I agree that it is difficult to argue that elites are less entangled. But I would still claim that they are more able to walk away; less entrapped for the reasons I gave above. The 'walking away' may not result in a disentangling, just a disentangling from one context and into another, as indeed in the

case of the migrants who have little choice but to make dangerous sea crossings.

I would also like to use the pottery example to return to the question of the difference between power and entanglement asymmetries. The HH is clearly a dependence and a dependency in my terms, and there is a clear asymmetry because it becomes in the interest of H1 to exploit H2 and treat him/her as a thing even if it is also in his/her interest to care for H2. But the HT, TH and TT entanglements proliferate because of the fact that pots and clay cannot reproduce themselves. It is not possible for H2 to just produce pots for H1; in order for that to work and for the two to stay solvent, they get dragged into new machines, new technologies and new dependencies on other humans. So this relation has to be set within HT, TT and TH relations. The power asymmetries and the entanglement asymmetries fuel each other.

One might say that H1 invents a knife (or, better, a handaxe) so that H1 can dominate H2. But the dependence on the handaxe also draws H1 into its care. Caring for the handaxe also involves all the other things that are needed to care for it. But the asymmetry of this dependence means that it is in the interest of H1 to coopt H2 into that care. There is now a symmetry between H1 and H2 with respect to things, leading to the potential for violence and conflict over which human controls things. But in order for H1 and H2 to care for or compete with each other they need yet more things, which also increases the potential for cooperation or domination with respect to things.

The difference between asymmetries of power and asymmetries in entanglements can, as a result of our discussions, perhaps be encapsulated by saying that whereas power asymmetries deal with domination and exploitation of beings by beings, the asymmetries of entanglements result from the differences between human and non-human relations. The physical and chemical processes that produce the lives of non-human, inert things create messy and contradictory consequences into which humans get drawn. Or, more properly, these inert things cannot reproduce themselves; they decay, go wrong, die out, so that humans are caught up in their care. Types, categories, ideas, institutions are also inert, demanding humans to tend them. Credit default swaps are also things that entrap humans, creating double binds.

Gavin: But the key issue in all this is the relation between human power and thing entanglement, and of course your points about the thing entanglements proliferating are all true – I guess I wanted to keep my examples simple to underline the point about delegating care of things onto other humans. At the end of the day, I think elite power over non-elites is somehow linked to this question of thing entanglement. For me, this starts with a seeming paradox – why, if elites are *less entangled* with things, do they seem to *have more* things? You mention it yourself – the refugees who got away have more resources. What are resources, if not things (made liquid through cash)? And why, if the poor are more entangled, do they seem to have fewer things? (I know there are many assumptions here about the equivalence of greater quantity = greater entanglement, but as a generalization I think the paradox still holds). For me, this paradox can be solved if we accept that care for

those things owned by the elites is shifted onto the non-elites. Thus non-elites care for more things than elites, but elites still enjoy or profit from those things.

If I own a house and I am wealthy enough, I can pay other humans to look after it – to clean it, to fix it and maintain it. My care for this house is transferred to other humans, although I am still the one to benefit from what it does for me. It has often been said that the 20th century ushered in a new form of the capitalist economy, one centred on services rather than manufacture (Mandel 1975). Of course this largely applies to wealthy Western nation states, but it is no coincidence that such a service economy has developed alongside the greatest proliferation of things ever seen in human history. Even if a consumer society was born in the 18th century, and even if the rich have always had servants, it is a different order of magnitude that characterizes our current situation. Yet it is not the differences that are important in the context of this discussion, but the deep continuities. Slaves, servants, cleaners, even tenants – these are cases of humans being coopted by other humans to shoulder the burden of care for their things. The origins of property could be said to have emerged by making a distinction between the negative and positive poles of thing entanglement – keep the positive, shift the negative onto another human. Land rent is a classic example. I own the land – but you (the tenant) care for it and we split the returns of that care. Something for nothing.

Ian: I think we were right to argue that both elites and non-elites can be equally entangled, but perhaps the nature of that entanglement differs. In my 2016 account of power and entanglement, I discuss the poverty trap in which non-elites get trapped by lack of education and a whole compounding set of factors so that they cannot leverage themselves out of poverty. But elites have more ability to use their privilege and positioning in entanglements in their own interests. This is thus a definition of inequality (through things). There is an overall spatiotemporal ‘tanglescape’ in which different people are differentially situated; some people can use this positioning to be powerful in relation to things and in relation to other humans.

So far this is neat but not particularly new. What I think is new derives from what you said about transferring or delegating care. Humans and things are caught in a double bind of humans depending on and having to care for things. But I think you are right that some humans can use their privileged position in relation to things to offload the burden of care onto others. I think this works well – that humans depend on things that depend on humans, but some humans do most of the dependence (an enabling relationship) while others do most of the dependency (the care that is associated with entrapment and constraint). This also explains why elites can have more things (in a reliance, dependence way) and non-elites fewer.

I think we have to be careful that, in arguing that elites shift the burden of care onto non-elites, we are not just reprising the old argument that elites focus on restricted and controllable resources (e.g. quarry sources, sources of water etc.) so that they can control others. Or in Schiffer’s terms, that elites control aspects of the operational/behavioural chain that are

key – such as procurement and production – while others deal with maintenance and discard. I understand our argument to be different because it deals with the double bind – that the bind means that both elites and non-elites are entrapped, but their different positioning results in making use of the bind differently. It is the context and politics of entanglement that add something new to the discussion.

Summary and conclusions

In many ways there appears to be a symmetry between humans and things. Humans need things to exist and made things need humans to exist. Humans need things (food to gain energy, tools to make the food etc.) to reproduce and things need humans (to be produced and maintained) to reproduce. Humans make things and things make humans (cognitively, sensorially, socially, economically, physically). One might even say that humans care for things and things care for humans (for example, in providing shelter). Similarly there is a symmetry between HH and TT relations. Humans need other humans and things need other things (a waterwheel generates energy but it needs the water). But these apparent symmetries are based on the false notion that things of different types (humans and things of varied sorts) are equivalent. In fact in the sentences above it is more correct to say that humans need things to reproduce and things need humans to be reproduced. Humans make things and the things made by humans make humans ('man makes himself'). And, as already noted, to say that things care for humans is an anthropomorphization too far. And in the case of HH and TT relations, while it is true that many HH relations depend on things and many TT relations depend on humans, there is an asymmetry in that biological reproduction is not matched by physical, material reproduction and transmission.

We began this discussion by affirming the importance that, while all things equally exist, they do not exist equally: things are irreducibly different. This difference is what results in the asymmetrical relations that form between things or entities. It is worth repeating that our discussion of asymmetry is about the relations between entities, not an ontological commitment to privileging the status of some things over others, i.e. humans. Our concern here has been to look at a central difference which surrounds the relationship between those entities whose being involves care – humans, but also other living and especially sentient beings – and those which don't – material, especially humanly produced, things. While we acknowledge the danger that such a position entails in terms of returning us to a world of binaries, one could argue that there is nothing wrong with binaries per se – they inevitably emerge from any positional contrast. Rather the danger lies in ossifying *strategic* binaries into fixed *essentialist* categories. If one were to take another quality than care, doubtless the lines between entities might be drawn in very different ways, resulting in a different set of binaries.

Given that our concern has been with care, much of our dialogue explores how HH asymmetries can be linked up with HT asymmetries. Humans care for hammers; this care is not reciprocated, and this results in a double bind. On its own, this results in an overall asymmetry between these two entities. All the apparent symmetries identified at the start of this conclusion actually

draw humans asymmetrically into the management and production of things. The more humans become entangled with things, the more asymmetrical this relation becomes. One way to quantify this asymmetry is in terms of reversibility – the ease with which humans can disentangle their relationship from things. The greater the entanglement, the greater the irreversibility. Yet there is a way to soften or partially circumvent this double bind and its amplifying effects.

For humans, animals and plants are differently situated in the entanglements such that some humans, animals and plants manage to offload care onto other humans, animals or plants. As a result, asymmetrical human–thing relations are bound up with asymmetrical relations of power. Elites may often be more entangled than non-elites in that they accumulate more things and more relations between things; at the same time, their entanglements are more enabling and less entrapping than those associated with non-elites because they can delegate the care for those things onto other beings. This observation enables us to show how the HT asymmetry can lie at the basis of HH asymmetry, or, more importantly, how the two forms of asymmetry are inextricably connected. Moreover, it explains the apparent paradox that those humans with more power appear also to have more entanglements.

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Comment on ‘The symmetries and asymmetries of human–thing relations. A dialogue’ *John C. Barrett**

Gavin Lucas questions whether Ian Hodder’s analysis of the ‘entanglements’ between humans and many other things necessarily assumes an inherent asymmetry. The quick answer is that it is more than likely, and we might wonder why Lucas thinks that this is a problem. The recent ‘ontological turn’ in archaeology has sought to treat the differences between all things ‘symmetrically’ and ‘without a priori subsuming them into an asymmetrical regime of radical divides’ (Olsen and Witmore 2015, 188). One such radical divide would be between living things (such as humans) and non-living things (such as hammers): it is the potential asymmetry across this divide that Lucas seems to want to avoid.

Symmetrical analysis was introduced by David Bloor (1991), who showed that all forms of knowledge must be understood ‘symmetrically’ in as much that they are all structured by the social contexts within which they are

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formulated. What we might regard as truth about the world does not emerge out of a socially disengaged empiricism, any more than errors of judgement need be forms of knowledge tainted by social demands.

Archaeology, which I take to be the study of human history from hominin evolution to the ‘contemporary past’, might have been expected to follow anthropology in treating all human diversity ‘symmetrically’; that is, as diverse ways of becoming part of the same world. Thus Azande witchcraft is not the wrong way to think about reality, while Western rationality is the right way to think about it. Instead both trace different paths towards becoming human (Ingold 2016). This does not deny us the possibility of ethical judgements (an asymmetry): xenophobia is, for example, a path towards becoming that must be rejected because it denies the principle of symmetrical tolerance that I have just outlined.

Unfortunately, some archaeologists have taken a rather different path, one whose products verge on scholastic irrelevance. They note that existence is a matter of relationships where various entities emerge, and have effects, in their relations with other entities, such that each entity might be treated as an ‘actant’ (Latour 2005, 54). Consequently, ‘until the requisite work has been accomplished’ (whatever that involves) we are advised that it is best to hold symmetry in place ‘to help us get to those differences without decreeing what they are in advance’ (Olsen and Witmore 2015, 188). Symmetrical archaeology does not describe an analytically balanced approach towards diverse ways of becoming, but rather an analytically balanced approach towards things: it does not deny that things have their differences, but it precludes prior judgement as to the status of those differences. Is this useful?

The historical conditions that interest archaeologists are the complex processes by which each living thing made itself as a body of biological order over its lifetime. Life necessarily exists across an energy gradient and it does this by metabolizing food sources from its environments. It is within these environments that it also seeks security. The processes of becoming necessarily operate within the context of the second law of thermodynamics, and they have the effect of dissipating energy (Schrödinger 1944; Schneider and Sagan 2005). The implication, as far as I can see, is that life in the context of its relationships is embedded in an asymmetry. All forms of life orient themselves towards their world (and as such they display purpose and direction), and different forms of life can be distinguished by the ways that they read the available information to navigate themselves into their world. Humanity is but one particularly diverse form of life.

There is no archaeology of the Jurassic as far as I am aware (although I am sure I will be told that such an archaeology exists in virtue of the field collections, laboratory archives and discursive practices by which that pre-hominin geological period has been defined). I therefore assume that we do archaeology because there is a human history that interests us. Our investigations are made possible by means of contemporary material conditions and the various strands of theoretical archaeology should enable us to clarify and evaluate how we go about that investigation. For me, at least, the Hodder–Lucas discussion fails in this respect.

The symmetry–asymmetry continuum of human–thing and human–human relations *Stephen A. Mrozowski**

There's an old Ry Cooder song – written by Bobby Miller – entitled 'If walls could talk' (not the Celine Dion song), whose refrain is 'Ain't you glad that things don't talk'. Archaeologists clearly wish things could talk because we, more than most, appreciate the power of things and the close relationships that exist between humans and things and their shared histories. I was struck by this one day sitting reading a book in my bedroom. I glanced up, looked around me and realized that everything in that room would be there the day after I died – everything. In fact my things would clearly outlive me, and regardless of what attachment or lack of attachment I might have to any of those things, I would not be the ultimate arbiter of their fate. That would be left to others who for a whole host of reasons might not share the same relationship with these things that I had. Most would probably be discarded while others might be kept. Those choices are just one example of the kinds of emotions and calculations that surround human–thing (HT) and human–human (HH) relations.

By focusing on the symmetries and asymmetries of HH and HT relations, Ian Hodder and Gavin Lucas focus squarely on arguably the most fundamental issue that runs through the various threads of symmetrical archaeology and thing theory more generally. It is not surprising they find themselves spending much of their time trying to imagine symmetries in HT and HH relations as compared to the asymmetries that have cast such a long shadow over much of human history. Along with their consideration of entanglement theory and notions of dependencies (see Hodder 2012), this timely exchange generated an interesting set of questions that fuelled their dialogue. There are several points they raise that I would like to amplify and a few that I think need to be considered more deeply.

I want to start with one omission on the part of the authors. In their well-crafted opening section they note that Olsen and Witmore (2015; see also Olsen 2010) see the need for HT symmetry as a starting point. In the process of discussing the issues surrounding HT and HH relations the authors do not return to this point, but it is a point worth remembering. Archaeologists have a tendency to focus much less on HT relations than on HH relations, despite the fact that things are often our primary data set. Things often share long and rich histories with humans that are to be celebrated. Hodder and Lucas evoke the vibrancy of matter outlined by Jane Bennett (2010) as an obvious framework for examining potentially symmetrical HT relations. Through the lens of entanglement they also note the affordances (see Gibson 1979;

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Ingold 2015) that things and materials provide humans, and I want to second this point. These affordances are both practical and spiritual and as such they speak to the depth of HT relations. Over the past decade archaeologists working with local indigenous groups in New England have found that quartz – long used for stone tool production – played a multidimensional role on colonial-era farmsteads (see Bagley *et al.* 2015; Cipolla and Quinn 2016; Mrozowski 2013; Mrozowski *et al.* 2009). There is evidence that quartz cobbles were being purposely heated to expedite the removal of crystals that were then buried and spread in and around the foundations of meeting houses and residences. It is equally possible that indigenous families may have chosen to locate their homes in areas where quartz debitage was present because of their known connection to ancestral populations (Bagley *et al.* 2015).

The significance attached to quartz, and quartz crystals in particular, is not unique to New England. It has been an important medium of HT relations for thousands of years (Mrozowski 2013). And it highlights the depth of the intersection of HT and HH relations – that a material appreciated for its crystalline structure would play such an important role in the religious life of a people because of its deep historical association with indigenous society. Is it any wonder that quartz helped them in maintaining identities throughout the vagaries of European colonization and their continuing political struggles today?

The intersection of humans and things is an interesting and important topic, especially for archaeologists. But I also understand why Hodder and Lucas find themselves having the hardest time imagining symmetrical HH relations versus the asymmetrical relations that are all too easy to envision. Their discussion of the assumed differences in the affordances wealth would provide for elites and non-elites in a place such as war-torn Syria is a challenging context in which to examine asymmetries in HH relations. Here I have a question – if the wealth they discuss is embedded and represented by real estate in Damascus or Aleppo, just how liquid has this wealth been? The poor, on the other hand, have much less to lose and so their mobility may have provided them with equal freedom. Perhaps this is a naive point, because I personally would assume that the elites would have more opportunity to escape. But when I think about the entanglement between people and the places they live in, I am struck by just how fickle such entanglements can be. Unemployed workers in Youngstown, Ohio cited their connections to their families as a major reason they wanted to remain there rather than migrate to find employment. In this instance, symmetries of care and support stand as impediments to the affordances offered by a neo-liberal economy characterized, ironically, by the very economic asymmetries that resulted in the loss of their jobs in the first place (Rushe 2017).

The experience of Youngstown (*ibid.*) is just one example of what I have labeled ‘historical gravities’ (Mrozowski 2016). In Youngstown the gravity that keeps people comprises the shared histories and memories that are entangled with a landscape comprising in turn a rich assemblage of surfaces, weather and atmospheres (see Ingold 2015) – some shaped by natural forces, some shaped by human hands – that had, until recently, provided many of the affordances needed to sustain a community. Other, much earlier examples

of historical gravity can be found in notable landscape features such as Stonehenge in Britain or Gamla Uppsala in Sweden that represent attempts to implicate particular histories by purposefully constructing landscapes designed by their builders to entangle their followers and their descendants. The effort involved in the cutting, moving and orienting of the megalithic stones of Stonehenge (Bender 1999; Parker-Pearson 2012), or the construction of burial complexes such as Gamla Uppsala (Ljungkvist 2006; Ljungkvist and Frölund 2015), often involved changes and shifts in visual perspective carried out over hundreds of years. While we may never know the cultural context in which decisions were made, the resources and energy needed to construct such landscapes most likely involved attempts to entangle the histories of particular families or groups with a self-identified place of memorialization. Were such landscapes constructed to maintain symmetries or asymmetries in HH relations?

If landscapes are viewed as the transformation of spaces into places, then how should such spaces be conceptualized? Deleuze and Guattari (1987) and more recently DeLanda (2016) have argued for the conceptual superiority of assemblage theory, and Hodder and Lucas seem to endorse these ideas. From this perspective, space comprises a multiplicity of assemblages rather than a series of oppositions such as elite/non-elite, rich/poor, man/woman. I would argue that it is perhaps better to conceive of the symmetries and asymmetries that characterize HT, HH and thing–thing (TT) relations as a continuum rather than as oppositions. The reason is that binaries tend to dichotomize life, helping to mask broader and deeper connections. In the case of Youngstown the asymmetries inherent in neo-liberal economics ignore and devalue the historical gravities that bind its residents, thereby challenging the sustainability of such a community.

The examples above and those discussed by Hodder and Lucas reinforce the importance of examining the symmetries and asymmetries of HH dependencies. Part of what feeds the asymmetries of the kinds they examine is the binaries that are such a nagging feature of our disciplinary discourse. Binaries feed division and difference, and they are only real in the sense that human perception tends to categorize the world in this manner. Yet outside human experience such binaries are quite artificial. Overcoming the false divide between HH and HT relations is one of the more productive facets of symmetrical archaeology. I understand that binaries remain a necessary, but nevertheless problematic, part of intellectual inquiry. There are instances, however, when I think they contribute to abstract boundaries that distract our focus from processes that have resulted in the transformation of things and spaces into instruments of asymmetry, and this is where the real issues lie. Spaces constructed of oppositions tend to reinforce the notion that communities that inhabit the same space are in fact disconnected, resulting in the polarization of views concerning a common future. And in this regard Hodder and Lucas are correct to highlight the dependencies characteristic of HH and HT entanglements. Yet I would also argue that their reliance on binaries to construct their discourse runs the risk of limiting the potential of archaeology as an instrument of engagement. They contribute, for example, to false temporalities such as history and prehistory that reinforce notions

of ruptures with the past that often deny the dignity of colonized peoples (see Rajagopal 2011; Schmidt and Mrozowski 2013). Ultimately Hodder and Lucas's choice to focus much of their attention of the issue of asymmetries in HH and HT relations reinforces the idea in my mind that divides such as past and present need to be transcended (see González-Ruibal 2006; Horning 2011; Lucas 2015a; Mrozowski 2014; Wurst and Mrozowski 2014) so that archaeologists can apply themselves to the larger project of building a more symmetrical future.

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On being and care. Joining the conversation on the symmetries/asymmetries of human–thing relations

*Uzma Z. Rizvi**

Having followed the scholarship related to new materialisms, the call for a symmetrical archaeology, its critiques and subsequent responses, I believe that this dialogue is one of the more interesting ones as it illustrates the problematic and reiterative nature of debate within a symmetrical/asymmetrical framework. There is some clarity achieved through the utterly collegial challenges posited in emails between Ian Hodder and Gavin Lucas; enjoyable as it is at once intimate, rigorous and immediate. This is a useful discussion of something I have come to find to be an unnecessary theoretical insistence (i.e. symmetrical archaeology).

We may repeat a hundred times, as per Olsen and Witmore (2015), as reiterated in Hodder and Lucas's introduction, that symmetry should be considered a starting position, akin to a standpoint in which, for that moment, we disregard *inherited* divisions, such as that between humans and things. That we must reiterate such a foundational point that is made in virtually all other arguments of new materialisms makes me question the utility of such theory. The insistence on a vocabulary of symmetrical relationships belies an aestheticization of theory and discourse in the service of the sublime. I am not interested in launching a critique of symmetrical archaeology because it has already been covered adequately in the literature and re-presented through this discussion by Hodder and Lucas. But I will say that I do not find a productive tension in all dialectical relationships, particularly that between symmetry and asymmetry. In setting the conversation up in relation to the asymmetry of power versus the asymmetry of entanglement, the discussion falls back into older conversations of equality and inequality within the dependent 'tanglescapes'. Such a framework does little for advancing archaeological theory, as both Hodder and Lucas acknowledge within the text.

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However, I appreciated this dialogue because in teasing apart and making apparent the different standpoints that exist within the discourses of new materialisms, and within those establishing the significance of dependencies and the perianthropocentric, the discussion and examples produced more questions that were murky, slippery, uncertain and paradoxical – that is to say, an interrogation of the best sort. Somewhere in that brilliant mess are concepts that I think are worth pursuing and giving deep consideration. The one I am most intrigued by is the question of being and care that is the crux of the final section of the dialogue, although arguably it is a subtext throughout.

I desperately want to believe that being is not distinct from care (as the dialogue leads us to assume), but I do *not* believe that the double bind that both Hodder and Lucas discuss in relation to care exists. Hodder has written repeatedly about the dependency of humans on things and things on humans – but I find that even though examples are used, these metaphors work in a vacuum of the normative. I would argue that in the ‘tanglescape’ that is the ontic sociopolitical, both things and humans have proven to be disposable, and thus care is not an inherent property or constitutive of being. I cannot help but wonder what sort of relation this might have to Giorgio Agamben’s *homer sacer* (1995). I bring Agamben up because the question of the bareness of life and sovereignty links itself to Martin Heidegger’s notion of being, while asymmetrical entanglements and entrapments sound remarkably like the ways in which sovereignty could be framed, where the relation with care as patronage or sovereign power becomes paramount. If being and care are constitutive of one another, then where does the bareness of life stand? And as we consider all things as being, then can there be a bareness to things?

Being is brought up in relation to Heidegger’s notion of *Dasein* from *Being and Time* (1973) – that ‘being’ is a spatial consideration (an ontic distinction) much like his notion of dwelling; it is not really embodied or biological. How can one understand disembodied care? It seems that it is when care becomes constitutive of being that the notion of being as *Dasein* shifts to one of biopower. I would argue that care is an epistemic issue, not one ontologically constitutive of being. We learn how to care, care is recognized differently, and as such I find care to be related to knowledge. And so then the double bind is not necessarily one of being and caring for, but rather is an epistemic one – it has to do with the ways in which epistemic injustice plays out, and where epistemic resistance becomes a necessity when contending with normative frameworks (Fricker 2007; Medina 2013). In the space of dependency, can care be understood through obligation, responsibility or fulfilling its ontological and ontic mission? Can the hammer show care by simply being a hammer when you need it to be one?

Why do we not understand the care of the hammer (just to stay with their example), or any archaeological artefact that we collect as data? What role do these artefacts play when, in the act of collection, in the act of producing them as data, we have been rendered mute in order to ask them to convey to us some past ontic. I consider and call this an *epistemic injustice double bind* – one that simultaneously and systemically blocks us from understanding or decoding ourselves (and our normative values as given) and one that intentionally clouds past meanings of things through a silencing so that

even our contemporary entanglement with them is effectively orchestrated (Rizvi 2015b). I say this because in non-Western epistemic spaces, it is not so difficult to understand or see care in beings that within the Western episteme we may not consider sentient, because, very simply, care is understood and known differently (Rizvi 2012; 2015a). If, indeed, being and care become ontologically constitutive of one another, then being itself might be what needs to be re-examined in relation to sentient care.

What is lovely about conversations is that they are ongoing; they are not meant to provide answers, nor aim to be definitive in their stance. The best conversations are those in which one wants to continue the discussion – and I certainly am keen to see how discussions of being and care find themselves within contemporary archaeological discourse.

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The asymmetries of disentanglement Konrad A. Antczak*

In this dialogue, Hodder and Lucas skilfully manoeuvre the winding trails of archaeological theory during the last decades and critically juxtapose the discussion of symmetry and asymmetry of relations between entities with that of entanglement. Their provocative dialogue compellingly leads to the conclusion that most entanglements are in fact asymmetrical. Whereas I mostly concur with the conclusions of the dialogue, addressing the authors' closing statements I would like to highlight the need to equally (in some ways, symmetrically) consider *disentanglement* as the process opposite to entanglement, along with the consequences of such disentanglement. If we are to understand better the contexts and politics of entanglements – concerns that this dialogue brings to the fore – I furthermore suggest that we more closely scrutinize the *density* (quantity) and *joining* (quality) of entanglements, as well as pay closer attention to memory, emotion and affect in entanglements.

Lucas argues that 'the archaeological record is living proof of all the things which humans disentangled themselves from and which ultimately died out' (p. 129), an important point which is then left undeveloped. Even though disentanglement has been recently approached by Hodder (2016b), in the dialogue's concluding paragraphs disentanglement is largely subsumed under reversibility. Disentanglement, however, could be considered as a process that coexists with entanglement and is not entirely equivalent to reversibility. Reversibility may be defined as returning to the 'original' historically contingent condition, whereas disentanglement includes this possibility, but also incorporates a host of other forms of *dis*-entangling. Entanglements may be abruptly severed, or unravelled more slowly. They can be frayed and whittled down persistently, until they quite literally 'hang by a

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thread'. Disentangling can also entail the cutting of an entanglement and its grafting in with another human or thing. Reversibility and disentanglement should, then, not be merged, but instead clearly distinguished.

It has been convincingly argued by Hodder (2012; 2016a) that over the course of the last millennia humans and things have become increasingly entangled; by and large irreversibly entrapped in their relations to things. Yet has the rate of entanglement really outpaced that of disentanglement? Landfills are swelling, the seas are filling with rubbish, and globally what we throw away is becoming an increasingly alarming and pressing social and environmental hazard. In the West, we have a knack for rapidly entangling with things such as smartphones, sneakers and Starbucks cups only to disentangle from them with reckless abandon when new things take their place. Furthermore, whereas past entanglements may have been replaced, the process of replacement often required a wholesale cutting away of old entanglements. In the dialogue, Hodder remarks, 'The "walking away" may not result in a disentangling, just a disentangling from one context and into another, as indeed in the case of the migrants who have little choice but to make dangerous sea crossings' (p. 133–34). Yet this remark only partly gets at the nature of the disentanglement, because as per Hodder's example, the 'choices' (if they can be called that) of migrants and refugees fleeing from war or sociopolitical turmoil are most often a difficult and painful series of cuts applied to many long-term entanglements formed throughout their lives in their homelands. This disentangling is precisely so difficult and painful to undertake because of the immediate negative consequences of cutting entanglements and the distressing uncertainty of new entanglements to come. These disentanglements are not, then, merely a disentanglement and entanglement into another context, but a wholesale severing of entanglements before a dive into completely new ones in a different context.

It should be considered that the ease with which entanglements may be disentangled gradually or abruptly, partially or completely, temporarily or in a lasting fashion, is also dependent on the *density* (quantity) and *joining* (quality) of the given entanglement. I consider that a quantitative measure of thickness and thinness of HH, HT and TT entanglements is the density of entanglements between the two entities. This is by no means something new, as density has already been discussed in entanglement theory as a concept borrowed from network theory (Hodder and Mol 2016). Network theory is therefore especially well poised to explore the densities of entanglements. However, density is only a largely quantitative aspect of entanglement, and most qualitative aspects must be explored via different means.

The qualities of entanglements may then be seen as the degree of care invested in an HH or HT relationship (notice this does not apply to TT relationships). When discussing the quality of entanglements, we are then referring to the *nature* of their attachments or joints. Whereas the joints of some entanglements may be merely articulations resulting in solely exterior interactions of betweenness among two entities, others are knots of sympathetic correspondence resulting in *in-betweenness* (Ingold 2015, 22–26, 155–56). Returning to an example from the dialogue, in HT entanglements there may be a particular attachment between a human and a hammer

that makes the hammer seem to the human something more than a solely functional hammering tool. For instance, if the hammer is an heirloom, it remains in the possession of the human as an important memento. The hammer is therefore a thing with which the human, through emotional attachment, creates a more sympathetically and tightly knotted entanglement. Such an entanglement is potentially more difficult to cut once the hammer's handle breaks and the thing becomes functionally less useful or is rendered altogether useless. It is thus easier for the human to cut an entanglement with another hammer to which the she/he is not emotionally attached, and we can imagine that she/he flings it away on a discard pile. In HH relations, examples of such qualities of entanglements are much more easily conjured. It is often the case that the relationships in which we are most invested and to which we give most care through time become the most sympathetically entwined and robust entanglements. Disentangling them, or having them disentangled, is therefore more difficult – as is the case, for example, with divorce or the death of a loved one. On the other hand, relationships in which we are less invested and which are rather merely articulations and not knots, for example a recent acquaintance, may be simpler to cut and forget.

Hodder (2016a) has recently subsumed some of the quantitative and qualitative aspects of entanglements I have discussed above under the term 'degrees of entanglement'. Further explanation of what these degrees entail by way of *density* and *joining* could prove fruitful for entanglement studies. Furthermore, the nature of the joining of entanglements is also intimately tied to the dialectic of dependence and dependency that is central to entanglements and their asymmetries. Relations of enabling dependence and entrapping dependency may be either articulated or knotted. However, it is possible that it is the more knotted entanglements that tend to produce more significant relations of dependence and dependency, and thus it is these entanglements that have the greatest entrapping effects and have the most immediate consequences on human lives when disentangled. In sum, by better understanding the density, and especially the joining, of entanglements we can then more accurately contextualize them and make better-informed statements on the politics of entanglements at different scales of density, space and time.

Taking the above into consideration, I challenge the authors' conclusion, 'The greater the entanglement, the greater the irreversibility' (p. 137), especially in contexts of humans with power who have asymmetrically delegated the care of humans and things to other humans below them on a hierarchical ladder. I would argue that the asymmetrical entanglements of powerful people – even though they may be denser – are often more articulated at their joints. They are less knotted in sympathetic relations with humans and things that originate from direct and increased human care and which often result in entrapping dependency. For elites, it may be initially easier to disentangle, as noted by Hodder. Yet, given their positioning in entanglements, it is rather the negative consequences of cutting cables and making a run for it that often limit disentanglement and reversibility.

I consider that a greater entanglement does not necessarily concord with greater irreversibility, but instead with greater potential consequences of

reversal or disentanglement. The consequences of disentangling asymmetric entanglements where humans and things are caught up in double binds must be deliberated. If humans were to completely disentangle from their relations to bulldogs and chihuahuas, in time these breeds would largely die out. This looming miasma of negative consequences, however, does not prevent disentanglements as these have occurred at all scales throughout human history. As a result, both humans and things have faced the consequences of such changes to entanglements. As an example, civil war within a country may often abruptly cut HH and HT entanglements as a wide array of labour-oriented entanglements shift to a limited set of combat-oriented ones, bringing about fewer entanglements of humans with material things as well as new and often violent HH dependencies. In the wake of the 1492 encounter with Europeans, the highly entangled indigenous state-level societies of the Americas collapsed and a multitude of ancestral entanglements were severed, the dramatic consequences of which rippled through the continent for centuries. Disentanglement not directly caused by humans, such as that produced by natural disasters, may also have serious long-term consequences on the existence and stability of HH, HT and TT entanglements as has been the case with New Orleans during and after the devastation of Hurricane Katrina (Dawdy 2016).

As a last point, human memory and emotion, which I have alluded to above, are further aspects of entanglement and disentanglement that should be more thoroughly explored. Returning to the example of migrants, we must ask ourselves, what about the entanglements from which migrants were cut off, which were then lost, perhaps for generations or forever? Can a no-longer connected entanglement still ‘haunt’ humans in the form of a spectral entanglement? Certainly, human memory, emotion and affect (Hamilakis 2017; Tarlow 2012) play importantly into the density and joining of entanglements and their capacity to be easily severed or gradually disentangled and then forgotten. When inserting human memory, emotion and affect into the authors’ dialogue on entanglement asymmetry, politics and power – still largely devoid of such considerations – we reach much more personal and messy human terrain. It is here that we can begin to approximate the qualities of entanglements and obtain deeper insights into the nature of their joining. We should address, where possible, how humans of the past perceived their own HH and HT entanglements and those of other humans and things, and not only determine the density of such entanglements.

To conclude, I raise the importance of a more lifelike and human ‘H’ in entanglements, especially if we are to understand better the contexts and politics of entanglements at different scales. This is more easily said than done, and often the resolution of available archaeological data does not provide for detailed glimpses into such micro-historical, intimate and subjective human aspects – if it offers insights at all. This, however, is not an entirely unattainable goal. Historical archaeology, for example, is especially well equipped to approach such aspects of entanglement when independent evidentiary sources such as documents and oral histories are available. Perhaps, long-term and large-scale archaeological studies of entanglement may not need to consider the micro scale of human memory, emotion and

affect, yet I maintain that having more archaeological investigations approach such deeply human terrain can only sophisticate and enrich future multi-scalar studies of entanglement within the discipline.

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Response to commentaries *Ian Hodder and Gavin Lucas*

We would like to begin by thanking all the commentators for taking the time to read and reflect on our dialogue and offer their own reactions; it can be particularly challenging to insert oneself as a third interlocutor within a dialogue between two people, but as Rizvi remarks at the end of her commentary, the important thing is to keep the conversation going and so what started as a dialogue between two people is now a dialogue between six. As a collection, though, the commentators provide a very diverse set of views and perspectives, which means that picking up common threads is not an easy option. Instead, we will try and respond to each of the commentators in turn, addressing what we see as their key points.

Barrett is our hardest respondent, simply because he does not seem to think the topic of our dialogue is even an issue; for him, asymmetry is a given which is underwritten by the second law of thermodynamics. What makes a response even harder is that he appears to be engaging as much with Olsen and Witmore as with Lucas and Hodder, if not more so. Nevertheless, in order not to flatly contradict our own preliminary remarks in this response and to keep Rizvi's spirit of conversation alive, we would ask Barrett to consider whether he regards asymmetry to be as simple as he seems to think. Does it just have one dimension, one meaning? We feel that our dialogue was precisely an attempt to draw out its complex dimensions.

At the end of his comment, Barrett judges that we failed in helping to clarify and evaluate the material conditions that make archaeological investigation possible in the contemporary world. We believe that precisely the opposite is the case. Barrett points to the importance of the second law of thermodynamics, according to which there is a gradual entropic dissipation of energy. The dissolution of the physical world is what archaeologists are trained to deal with, the collapse of buildings, their erosion and covering with soil, the decay of bodies and organic materials. In the contemporary industrial world sensitivities have emerged towards this erosion and loss of things. Archaeology and heritage provide the mechanisms that arrest the process, that respond to the asymmetry between our dependence on things (as heritage, identity, history) and their physical decay. Archaeology is the shoring up against the loss of things. We do not need to conserve the past. We do so because we have become entangled with the loss of things.

Mrozowski offers some very insightful comments, two of which we want to pick up. The first concerns his remark about our discussion on the Syrian refugees in terms of entanglement; there he raises an interesting tension

between the binding power of wealth and the binding power of human attachment. The rich have more to lose by leaving if they cannot liquidize their assets, but they presumably also have more potential to liquidize than the poor; on the other hand, rich and poor alike may have other ties that bind which bear no relation to wealth – family, place, memories. Entanglements are certainly more complex than we portrayed them in this example and with this we very much agree – a point also made by Antczak in his commentary, especially regarding the density and articulation of entanglements. More contentious, though, is Mrozowski's general criticism of the way our dialogue perpetuated the dangerous game of binaries; it is arguably the case that the notation of HH, HT, etc. does sustain a certain form of dichotomous thinking. The problem, though, is not so much using binary thinking as letting it run away or be amplified to the extent that it starts to act like a gravitational force, pulling other concepts into its orbit so that one ends up with precisely the problematic divisions like past/present that Mrozowski is so rightly concerned about. This is something we tried to articulate in our conclusion to the dialogue. However, his concern seems to run deeper insofar as any binary works to drive a wedge in the world, creating two parties. But is this so? Binaries, to paraphrase Mary Douglas (Douglas and Isherwood 1996), can be mobilized to act as bridges or fences; where Mrozowski sees only fences, we see the potential for bridges too.

Rizvi raises a very different concern in her commentary, which largely centred upon the issue of care. She questions whether care is intrinsic to being as opposed to something which is nurtured – or not; she also questions whether care cannot be ascribed to things like hammers – and whether this is not just a bias of Western ontology. These are important points. Certainly care is not equally distributed. We care for some people more than others, just as we care for some other living beings and non-living things more than others. The term 'tanglescape' is helpful, pointing as it does to the spatial and temporal geography of different forms of entanglement, and thus adding to the overly conceptual construction of 'tanglegrams'. The term also points to a mapping of the terrains of care, including the places and times where care is made disposable. We can ask in what spatio-temporal contexts entanglements lead to the abrogation of care. Thus the distribution of care is certainly something we learn and is caught up in political ideologies of life, welfare and so on, as Rizvi argues and as was raised in our dialogue, though perhaps not forcefully enough. But this does not necessarily undermine the notion that the propensity to care is somehow still basic to being – any being in fact, whose own being is a matter of concern.

More contentious is the question whether we extend this sense of care to inert matter. One supposes here that it is simply a matter of drawing a line – and we each have to do this for ourselves, albeit guided by our own cultural background; if we don't draw a line, is action at all possible? If we acknowledge the capacity for care in everything we perceive and encounter, what expansion of moral dilemmas would we be faced with, even in the most mundane of acts? None of this is to argue that the line cannot be moved; it is one thing to question where we draw it, another to question its inherent necessity.

Antczak's commentary is the longest and perhaps in many ways the one we might find the least disagreement with. His discussion of disentanglement as a complex, multifaceted process is certainly nothing to contest, and although he points out that we equate this process with irreversibility, nowhere do we argue that irreversibility is a simple return to the way things were, as he suggests. Here, we perhaps just needed to be more cautious about our terminology. His discussion of the different quantitative and qualitative aspects of entanglement, in terms of density and types of join, complements rather than contradicts anything in our dialogue. He is also right to point to quality, memory and affect in dependency relations between humans and things. How we respond historically to entanglements is at least partly the result of past experiences and backward-looking memories. For example, the histories of post-Soviet states are inflected by memories of the experience of the Soviet Union, and ruling groups in Turkey today are reassessing the Ottoman past and re-entangling with it in new ways.

The only real issue of contention that Antczak raises (p. 146) concerns our generalization that the greater the entanglement, the greater the irreversibility. There are two dimensions to this question. The first concerns historically localized entanglements; thus Antczak gives the example of accelerated disposability in our own times as our landfills overflow with discarded consumer goods. But as his own example unwittingly shows, the accumulating mass of discarded things creates new problems for us, which end up increasing our entanglement; even though we throw away last year's mobile phone, we still end up having to care for it, only now as garbage, not as a functioning phone. Any localized disentanglement can and usually does result in the emergence of a new entanglement to take its place.

The second dimension concerns the broader issue of whether humans as a species – our species history – follow the same path: is the record of human history a record of increasing entanglement and increasing irreversibility? While we ourselves may be in disagreement on this matter, we recognize that the debate can be informed by empirical archaeological enquiry. At a theoretical level one can argue that increased entanglements result in increases in the mobilization of power and resources so that 'more can be done', including the production of change, reversal and disentanglement. But from another angle, greater entanglement means that more is caught up, so that changing pathways becomes more difficult. This is the notion of path dependency. So much gets invested and caught up in a particular direction that change becomes difficult. Sorting out which of these hypotheses is correct is to some degree an empirical matter. Although, annoyingly, it may also be the case that both are true at the same time. Therein lies the inherent asymmetry of human–thing entanglement.

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