CrossMark

discussion article

Archaeological Dialogues 25 (1) 1–21 © Cambridge University Press 2018
doi:10.1017/S1380203818000016

On the object of archaeology

*Assaf Nativ**

Abstract

The paper ponders the object of archaeology, called here 'the archaeological'. It argues that the existence of such an object is a necessary premise of the field and that ultimately it is on this object that the validity of all claims and arguments must rest. The paper suggests that the archaeological be conceived as a cultural phenomenon that consists in being disengaged from the social, an understanding that positions archaeology as a counterpart to the social sciences and the humanities, rather than a member in the same milieu. The first part of the paper focuses on the position of the archaeological with reference to the concepts of 'Nature' and 'Culture', which eventually leads us to a confrontation between archaeological statics and the dynamics of the world. Efforts to justify and understand archaeological statics consequently lead to the recognition of a constitutive distinction between buried and non-buried conditions, upon which the differentiation of the archaeological from the social is established.

Keywords

the archaeological; Nature/Culture; statics/dynamics; burial; social

Introduction

Archaeology's first and necessary premise is, undoubtedly, that there is a range of phenomena in the world that are archaeological, not simply because they are of interest to archaeologists, but because they possess a particular quality that is captured by this term. Indeed, it is the existence of such phenomena that justifies the field in the first place. Otherwise, it would be redundant, or worse, illusory and deceptive. But as is often the case with such presuppositions, it is not only a premise, it is also a claim. Specifically, it is a claim that, among other things, the world possesses a specifiable and distinguishable component that is principally the object of archaeology. Let us call this component of the world *the archaeological*.

Although tacit, this claim is implicated every time the qualification 'archaeological' is put to use. Whenever this occurs, a reference is invoked,

*Assaf Nativ, The Martin Buber Society of Fellows, The Hebrew University of Jerusalem, Jack, Josef and Morton Mandel School, Jerusalem, Israel. Email: assaf.nativ@gmail.com.

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

pointing towards a certain quality or condition that is related to the object in question, contributing in the process to the interminable classificatory effort that works to distinguish that which belongs to the discipline of archaeology and that which does not (see Bowker and Star 1999). Ultimately, this is probably the most foundational and consistent of archaeologists' efforts, repeatedly conjuring the archaeological through the humdrum procedures of classification.

The discipline's argument for the existence of the archaeological is nothing less than a statement about the constitution of the world. It is probably as significant and profound as our statements can get. The constitution of the archaeological is not only imperative for the justification of archaeology as a scholarly field, but it also says a great deal about its position and role within the academic landscape, as a science and a project.

However, notwithstanding important contributions that discuss foundational features like statics and dynamics, residuality, temporality and formation processes (Bailey 2007; Binford 1975; Lucas 2012; Schiffer 1987; Shanks 2001; Shanks, Platt and Rathje 2004), it is questionable whether archaeology is truly able to offer a definition of its object, and therefore to assert its reality and insist on its significance. At bottom, the archaeological is regularly perceived in instrumental terms, and most of the discussions mentioned above seek to improve our ability to mobilize the archaeological in order to gain better access to other matters (the past, society, human behaviour, etc.): the archaeological and its constitution are of interest insofar as they respond to these concerns.

Indeed, this disjuncture between the object of analysis – the archaeological – and the object of interest precludes any possibility that the former will be considered something worthy of attention in itself. It is surely for this reason that the archaeological, despite its foundational standing and its unparalleled significance, remains elusive. We capitalize on it, we claim authority over it, and we use it as a point of entry through which early cultures may be discerned and discussed. But we have only the slightest idea what it is. Paraphrasing Lyotard (1991, 78–80), that we *have* it does not mean that we *know* it.

One could possibly argue that understanding the archaeological is not the business of archaeology; that archaeology is about studying the past through the archaeological, not studying the archaeological itself. However, this would amount to denying the foundation on which all accounts must stand. Quite simply, it only makes sense that we be closely acquainted with the conditions and materials with which we work. Otherwise it is likely that the structures founded on them would be unstable. By the same token, if archaeologists proceed to reconstruct past events or social structures without fully appreciating the quality of access available to them, these reconstructions are likely to suffer from poor grounding and questionable validity.

Perhaps more importantly, archaeology should concern itself with the archaeological because it is its responsibility as a science. Indeed, it is something of a curiosity that a scientific field might constitute an aspect of the world as an object of research, and claim authority over it, but not persist in its efforts to produce an understanding of it and its implications. Insofar as science is about striving towards a better understanding of the

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

world, the archaeological is without doubt an aspect or feature worthy of attention. Archaeology, the field that defines and constitutes it, is the only one with the means to properly appreciate it. It is in archaeology's interest to put the archaeological on the table and to insist that it be taken seriously.

The present paper wishes, then, to encourage a concern with the archaeological proper; and it hopes to whet the reader's interest by engaging a seemingly simple question: what place does the archaeological occupy in the world? If the archaeological is real, its relationships with other parts of the world can be articulated; it can be contextualized. In doing so, we may expect to gain not only an improved and more lucid understanding of the archaeological, but also a clearer appreciation of its constitutive impact on the world. As the discussion below illustrates, engaging in this attempt demands of us not only to work towards a comprehensible understanding of our object, but also to reconsider how we understand the world as a totality. Accordingly, discussion works its way towards a formulation of the interrelationship between the object (the archaeological) and its context (the world), neither of which is fully given. Consequently, the matter at hand is about mutual adjustments: the world must be shown to accommodate the archaeological, and the archaeological must be shown to have its rightful place.

The concepts 'Nature' and 'Culture' will be drawn upon as preliminary means with which to capture the world and to contextualize the archaeological. The discussion's point of departure is the Nature/Culture divide and the ambiguity of the archaeological within this framework. It will then proceed to consider the criticism directed towards this binary logic, ultimately leading towards a shift from a representational outlook to a performative/dynamic one. This, it will be noted, is incommensurable with the principally static understanding of the archaeological. It will be argued that the archaeological is indeed dynamic and that it is constituted as static through fieldwork and other procedures. Yet it will also be argued that statics are justified and necessary, as an inevitable transposition of the condition of burial and disengagement into other media.

Based on these, it is suggested that statics testifies to the pivotal significance of burial for the constitution of the archaeological; that the archaeological emerges from this analysis as a cultural phenomenon, consisting in being disengaged from the social; and therefore that the archaeological is not so much an aspect of the social, as it is its counterpart, a mode of cultural being that belongs to the subsurface. Accordingly, archaeology crystallizes as a counterpart to the social sciences and the humanities. The archaeological is a component of the world that has gone largely unnoticed and archaeology becomes, within this framework, a pivotal field of study capable of contributing directly to matters far beyond its disciplinary boundaries.

The final part of the paper attempts to situate this discussion within the context of developments in academia in general over the past several decades, developments that appear to pose a significant threat to the integrity of scientific thought. It is suggested that the present paper could be read

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

as a much-needed reappraisal of the scientific attitude in general and of archaeology in particular.

Nature/Culture

The question at hand is this: how are we to understand the position of the archaeological in the world? The answer we provide to this question depends not only on our ability to differentiate the archaeological from all other phenomena, but also on our capacity to grasp the world. This is not to say that we must comprehend the totality, which is impossible, but only that we need to have at our disposal a means with which to orient ourselves and find our way, a sort of 'grid' that can be superimposed on the world. Unfortunately (or perhaps fortunately), the range of possibilities is fairly limited. I can think of only one that is truly suitable for the matter at hand: Nature/Culture.

This is not to ignore the problems that accompany the Nature/Culture dualism; much of the following discussion will ponder their implications. Rather it is to acknowledge that despite all efforts to break away from problematic oppositions of this sort, they still retain a grasp on our thinking (cf. Rheinberger 1997, 15–19). Thus, although crude and quaint, even fallacious, I choose to provisionally begin with the Nature/Culture divide, reflecting on the position of the archaeological according to this vision of the world. I do so under the premise that it will provide the starting point needed, for which revisions can then be considered.

Insofar as the Nature/Culture divide is taken at face value, it quickly becomes evident that the archaeological does not fit on either side. When approached from the side of Nature, epitomized by disciplines like physics, chemistry and biology, all things traditionally designated cultural – deriving from or tied with human practice and intentionality – remain unaccounted for. Relying on the principle of uniformitarianism (Gould 1965) and presupposing the applicability of natural laws, most features commonly engaged by archaeologists remain beyond the natural purview. Significantly, however, many features of the archaeological remain unaccounted for also when approached from the cultural side, primarily various matters of deposition and post-deposition attributed to mechanical, chemical and zoological agencies. But from the point of view of Culture, epitomized by fields like sociology, anthropology and history, there is also a great deal that the archaeological is found to be lacking: humans, movement, institutions, discursive voices, action, etc.

Thus the archaeological constitutes a particular kind of convergence of Nature and Culture. It is a natural phenomenon in which products of human action have been incorporated. The 'price' of this fusion rests, however, primarily on the cultural side. From the point of view of Nature the archaeological appears to incorporate new properties; from the cultural perspective, however, it seems to have lost its most definitive features. One could even say that it is a reduced cultural phenomenon (lacking people and movement) and an expanded natural one (including elements that are not its own). Under these conditions, the archaeological can only be said to reside somewhere between the two terms, in the distance or gap that constitutes them

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

as a binary opposition. It can be approached from either side, but neither can truly capture it.

This has significant implications that resonate across archaeological discourse and practice. Schiffer's (1972) distinction between systemic and archaeological contexts is a case in point. More pertinent, however, is archaeology's strong inclination towards multidisciplinary conduct. Against the backdrop of the still prevailing three academic cultures of the natural sciences, social sciences and humanities (cf. Kagan 2009), archaeology constitutes a genuinely ambiguous field. For its object – the archaeological – cannot be fully captured by any one of them. Confronted by such an elusive phenomenon, archaeologists are forced to shift their perspectives, at one time approaching it from the side of Nature, at another time from the side of Culture (for some relevant discussions see Hodder 2011; Jones 2004; Kristiansen 2014). This was the condition from the field's very beginning, having one foot firmly planted in the natural sciences – particularly geology and palaeontology – and the other in the humanities and social sciences, particularly history and anthropology (cf. Gosden 1999; Trigger 1990). Ultimately, archaeological interdisciplinarity was never a matter of choice, but a demand set by the ambiguity of its object, an ambiguity produced by the binary vision of the world.

Nature/Culture undone

Although the ambiguity of the archaeological (as well as many other phenomena) is a problem, a condition at odds with the scientific aspiration for clarity and lucidity, and although it testifies to the limitations of the conceptual framework that contextualizes it, the stability of the Nature/Culture divide was not truly challenged until recently. Much of the divide's resilience could be attributed to the exceptional rhetoric and conceptual power of binary oppositions. Such oppositions consist of two mutually exclusive terms that together denote a totality, a complete system (cf. Leach 1970; Lévi-Strauss 1963; O'Sullivan *et al.* 1994, 30–33). It is this structural simplicity and economy that provide them with so much logical force. Each term is defined according to what the other is not, while in conjunction they constitute a logically self-contained whole. Thus Nature and Culture are taken to be mutually exclusive and the totality they denote is the world.

Binary oppositions, however, like many other rigid conceptual divisions, invite and produce ambiguities, phenomena that do not fit all that well into the established categories. Logically speaking, this is a problem that must be managed and controlled, for they threaten the integrity of the conceptual order. In anthropological settings, this was often tied together with matters of ritual, pollution and repression, understood as societies' response to ambiguities of this sort that threaten the integrity of their ideological structures (Douglas 1966; Turner 1969; Van Gennep 1960).

It is hardly surprising, therefore, that much of the criticism directed towards binary logic, in general, and towards the Nature/Culture divide, in particular, focuses on the demand for mutual exclusiveness of the terms involved (e.g. Franklin 2003; Haila 2000; Goodman, Heath and Lindee 2003). After all, it is a weakness that this line of reasoning exposed of its own accord. In a powerful

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

critique, Latour argued that the Nature/Culture distinction is a modern trope, established and maintained through the (retrospectively) immense project of purification that sought to distil from a confused reality that which belongs to humanity from that which belongs to Nature. Thus, in a fairly typical passage, he states (Latour 1993, 50),

> Perhaps the modern framework could have held up a little while longer if its very development had not established a short circuit between Nature on the one hand and human masses on the other. So long as Nature was remote and under control, it still vaguely resembled the constitutional pole of [the modern] tradition, and science could still be seen as a mere intermediary to uncover it ... But where are we to classify the ozone hole story, or global warming or deforestation? Where are we to put these hybrids? Are they human? Human because they are our work. Are they natural? Natural because they are not our doing. Are they local or global? Both. As for the human masses that have been made to multiply as a result of the virtues and vices of medicine and economics, they are no easier to situate. In what world are these multitudes to be housed? Are we in the realm of biology, sociology, natural history, ethics, sociobiology? This is our own doing, yet the laws of demography and economics are infinitely beyond us. Is the demographic time bomb local or global? Both. Thus, the two constitutional guarantees of the moderns – the universal laws of things, and the inalienable rights of subjects – can no longer be recognized either on the side of Nature or on the side of the Social. The destiny of the starving multitudes and the fate of our poor planet are connected by the same Gordian knot that no Alexander will ever again manage to sever.

Under these circumstances, purification could only fail; and the ambiguity of the archaeological is but one case among a multitude of others. The world consists of too many hybrids, in which the human and non-human, the cultural and the natural, are inseparably intertwined, for the distinction to continue holding. This is certainly the case for the human that never existed independently of nature, and is becoming increasingly so for Nature that resembles more and more an artefact, as human impact on the environment can no longer be ignored; so much so that a new geological epoch had to be introduced – the Anthropocene (cf. Edgeworth 2014a; Latour 2014; Solli 2011).

One could say that the Nature/Culture dualism was crushed under the weight of the ambiguities it produced, reaching a point where they could no longer be managed or repressed (see Braun 2004). Yet, as Kuhn (1970, 77) observes, the sense of crisis and the acknowledgement of a theory's failures do not necessarily lead to its rejection: 'once it has achieved the status of paradigm, a scientific theory is declared invalid only if an alternate candidate is available to take its place'. And such alternatives have only quite recently come to the fore, resolving to a greater or lesser extent many of the ambiguities produced by binary logic.

This receives a concrete expression in the explosion of scholarly efforts that refuse to operate within conceptual binary constructs and seek to redefine their fields in terms of practice, movement and interplay of all

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

observable components (e.g. Brown 2001; Latour 2005; Rheinberger 1997; Thrift 2008; Henare, Holbraad and Wastell 2007b). This movement, broadly characterized by its concern with ontology, has acquired numerous labels. Among them, one finds 'New Realism', 'posthumanism', 'New Materialism', 'speculative realism', 'object-oriented ontology' and others (e.g. Ferraris 2014; Bryant, Srnicek and Harman 2011; Witmore 2014; Wolfe 2010). Among its more widespread tenets, this movement rejects mechanical explanations and endorses a view that life and mind evolve out of non-life; matter is not inert and passive, but invested with energy and vitality that have an impact and make a difference; and emphasis is made on the dynamic and temporal character of things (for a brief review see Connolly 2013).

Taken to the extreme, the criticism of the Nature/Culture dualism causes both terms to disappear, displaced by a flat ontology that views everything as assemblages and networks that shift and fluctuate. Consequently, the binary structure is overturned entirely, as the gap, or divide, that kept the two realms apart is filled up to the brim with mixed and hybrid entities. We now face a continuous and poorly differentiated, but vibrant and shifting, space. Does this guarantee that we now have at our disposal a conceptual structure of the world, in which the archaeological can be adequately contextualized?

The archaeological undone

Following the disintegration of the Nature/Culture divide and the emergence in its place of performative theories of entanglements and networks, the world is no longer as it was. Nor is the archaeological, the ambiguity of which has been naturalized; all cultural phenomena, it turns out, are just like the archaeological has always been. It is no different to the innumerable phenomena studied by historians, anthropologists, geographers and economists. The natural and non-human are prevalent everywhere and the archaeological is not an exception, but another example of the rule. Consequently, many feel that 'the current situation actually constitutes a rare *archaeological moment*; for the first time since the late 19th century the intellectual currents are in favour of us' (Olsen 2012, 20, emphasis in original).

This newly found kinship between archaeological and other phenomena (and consequently also fields) encourages archaeologists to explore new areas of interest and application, much in concert with developments elsewhere (Thomas 2015). Some of the more striking efforts include Hodder's (2012; 2014) formulation of human–thing relations in terms of entanglement and entrapment; symmetrical archaeology's call to return to things, positioning them on a par with humans (Olsen 2010; Olsen *et al.* 2012; Webmoor and Witmore 2008; Witmore 2007); and Olivier's (2011; 2013) proposition that the field's concern should be with the formation and nature of material memory. While differing on various accounts, they share an emphasis on ontology; they view all things as active and effective, and subscribe to an evolving and dynamic understanding of their objects of enquiry, whether past events, present processes or the formation of memory. Many archaeologists also feel that the discipline enjoys a unique position to contribute to and engage directly in the philosophical and theoretical discourses that have

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

hitherto been beyond its reach (Edgeworth 2016; Fowler and Harris 2015; Olsen *et al*. 2012).

However, an important implication of this turn to ontology is the erosion of distinctions. Whatever sets the archaeological apart from other cultural phenomena is now perceived as a matter of degree. Thus, for example, the absence of active human agents is but a variation in the composition of networks and entanglements. Consequently, the very existence of the archaeological as a specifiable feature of the world – archaeology's principal premise – is put into question. Lines of division between phenomena are no longer absolute and given; the exclusivity of the archaeological is no longer apparent. Does this mean that the archaeological collapses into the poorly differentiated and unbound range of networks and entanglements? That it cannot be distinguished from others? Could the ontological turn be denying archaeology its object?

In many respects, the all-encompassing term 'thing' that gained traction in archaeological discourse, as well as elsewhere, epitomizes this (e.g. Olsen 2010; Pétursdóttir 2013; Witmore 2015). It denotes 'very basic aspects of entities – that they exist as contained and definable. Words, thoughts, institutions, events and materials have in common that … they exist as contained entities defined in a certain way' (Hodder 2012, 7). It follows that the object of archaeology does not differ from the objects of other fields. At most, there is a difference in point of departure, which is itself due to historical and epistemological conventions. While I suspect this is not the intention of the scholars promoting the ontological turn in archaeology, the logical conclusion, nevertheless, seems to be that the field of archaeology should be dissipated along with its object. After all, it is the existence of this object that justifies the discipline in the first place.

If, however, we insist on the validity and importance of archaeology, we must also be able to demonstrate the reality of the archaeological; that it is not one thing among others or a relational composite of things, but that it is a domain of reality that is distinguishable and articulable. Doing so is somewhat at variance with the ontological impulse. For it begins with a concept (the archaeological), the ontological validity of which is then explored. Rather than seek the archaeological in relations among specifiable entities, as a phenomenon that emerges from the seemingly undifferentiated reality, I will take a somewhat different route. I will try to explore archaeological statics, a seeming peculiarity of archaeology that is at variance with the relational–performative ontological approaches that allowed us to overcome the limitations of the Nature/Culture divide and other binary constructs. By taking this line of reasoning, I hope to demonstrate how archaeology may resist current dissipative forces and defend its integrity.

Static phenomena in a dynamic world

Unlike Latour's networks (2005), Hodder's entanglements (2012; 2016) or Pickering's mangle (1995) that consist of innumerable entities (human and non-human, animate and inanimate), constantly engaged with each other, the archaeological is regularly treated as fixed and stationary, as something that simply is. Much of what archaeologists do, especially in the field, but also

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

in laboratories and excavation reports, asserts this. Field notes, photographs, plans, section drawings, grids, triangulations and numerous other means are mobilized to (re)constitute the site in various media while deconstituting it in the field (Lucas 2012, 231–44; Webmoor 2007, 572). They seek to preserve things as they were, to maintain their stability and fixity. Being static, in this respect, is not about a capacity in reserve to act. It is a particular mode of being, in which relations are neither causal, nor historical, nor teleological. Rather they are associative, in the sense that entities belong together. This is, after all, what archaeological *records* have to say about the finds and features they document.

This understanding of the archaeological is clearly incommensurable with the understanding of the world that is all about motion and effect. Insofar as it is constantly on the move, always assembling and disassembling, interacting, becoming and transforming it has no room for stationary phenomena; they simply do not (or cannot) exist. For the reality of a thing is argued through the demonstration of its effects, that there is no difference that does not *make* a difference (Bryant 2011, 263). On the one hand, this impasse may be more apparent than real, for there is no difficulty in perceiving fixity as a mode of dynamics, and disengagement as a mode of engagement; the terms need not be mutually exclusive. But, on the other hand, archaeological statics are principally about logical structures and part–whole relations, much less than they are about causality and affect. It is in this respect that incommensurability is most apparent.

Yet this incommensurability also resonates in archaeological reasoning proper (cf. Lucas 2012, 98–104). For archaeologists fully acknowledge that the archaeological is, in fact, dynamic and changing. The numerous discussions of site formation explicitly appreciate and recognize the complexity of processes and agencies that produce and transform archaeological phenomena (Schiffer 1987). Indeed, even when archaeological statics are invoked, they do not deny dynamics. Thus Binford (1975, 251, emphasis added) stated that the archaeological record is 'what remains in static form of dynamics which occurred in the past *as well as dynamics occurring up until present observations are made*'. Thus the archaeological becomes static only once the archaeologist comes onto the scene, securing it in various media of documentation and order. Archaeological statics are an emergent property of the work of archaeology and its engagement with the archaeological (cf. Olsen *et al.* 2012; Witmore 2007).

If so, from where do archaeological statics originate? What are they predicated on? How are they justified? As noted, archaeological fieldwork is principally about deconstructing a site in the field while inscribing it in various media. Accordingly, the constitution of the archaeological as a static phenomenon is rooted in that which is taken apart – packages of sediment encasing artefacts and features of various kinds. A principal feature of these packages is the condition of burial, and taphonomy teaches us that burial is an agent of stabilization (Lyman 1994, 404–16). Once buried, rates of transformation slow down considerably, as many agents of degradation no longer have access to the substances located underground, and objects encapsulated in sediment tend to remain in place for very long periods of time.

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

Thus, although not fixed and stationary in any absolute sense, the subsurface certainly does proximate it when viewed from above. The differences are so great on all accounts – the entities involved, movement in space and timescales – that compared to what transpires on the surface, much of what is below seems static. It is this *approximation of fixity* that archaeological statics capture; it is the condition of burial inscribed into other media while being undone by fieldwork.

But statics have another, no less important, function. They are a means with which the autonomy of the archaeological is maintained. The archaeological exists regardless of whether it is excavated. But excavation is the only way to access it, entangling it with trowels, spades, grids, field notes, cameras, archaeologists and many other things that otherwise it would have nothing to do with. The multiple modes of documentation and inscription, towards which these engagements are regularly channelled, are not only means of recording evidence, but also – primarily, even – means of reasserting the autonomy of the archaeological. The immutability of the documents and the order produced reinsert the wedge between subject and object that has been removed during (and for the sake of) fieldwork. The autonomy of the archaeological that was hitherto guaranteed by burial is now guaranteed by the records' immutability and crystallization as a logical structure.[1]

By no means is this unique for archaeology. In fact, Pickering (2011, 4–5) observed that a principal aim of all scientific practice is 'to make the world dual', disentangling the human and non-human and allowing the object of scientific practice to stand on its own. This is precisely what archaeological statics achieve. They insist on the autonomy of the archaeological; that it exists regardless of the intervention that inscribed it. Importantly, archaeological statics assert the autonomy of the object that it possessed prior to the intervention. Thus, contrary to arguments that ascribe primacy to the interactive effect of aesthetic experience, I find it imperative to insist on the object's autonomy. If we are to do justice to our object, it is not sufficient to engage with it directly and openly. Ultimately, we must also allow it to be free (of us) (Pétursdóttir 2012).

Rearticulating the world and placing the archaeological

Thus, although the world is undeniably dynamic, the insistence on archaeological statics is not only justified, but also indispensable. It is how the circumstance of burial and at least some of its implications are registered in archaeological records, a transposition of one condition (burial) for another (statics) across the interruption of excavation and the inevitable shift of media. Accordingly, the seeming contradiction of statics and dynamics, discussed above, is a transposition of the distinction between buried and non-buried conditions, which in turn feeds back into our understanding of the world. It corresponds to the environments produced by different phases of matter. On the surface the principal phase is that of gas, characterized by low density and easy flow. It is these properties that allow us to move quite freely, facilitating most forms of bodily experience and communication through sight and sound. Below the surface, on the other hand, the principal phase is solid. It is comparatively dense and retains its form. It hinders motion and

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

minimizes the possibilities of interplay. It is this quality that facilitates the stabilizing effect of burial, noted above.

Thus, although established binaries like Nature and Culture or human and non-human can no longer be retained, other lines of articulation come to the fore. And the case of the archaeological stresses the distinction between the non-buried environment of gases and the buried environment of solids.[2] The surface of the earth thus comes to the fore as a significant line of division, distinguishing between two modes of being. Significantly, it is a concrete borderline, the crossing of which has considerable implications. Excavation is a disciplined mode of driving the surface back – or, more precisely, down – and moving items from one realm to the other (Edgeworth 2012).[3] They are extracted from the stable domain of the subsurface and incorporated into the much more hectic and fickle settings above. Conversely, an object that becomes incorporated in the subsurface is removed from the shifting relations on the surface, being incorporated in the much more stable and consistent relations below. Either way, being on one side implies being disengaged from the other. Indeed, it is this disengagement from the aerated realm above the surface that is first and foremost conveyed by archaeological statics. The production of the archaeological record – the reconstitution of the site in various media – is a reassertion of the condition of disengagement through engagement. Or, to re-emphasize a point already made, prior to excavation the archaeological is disengaged by means of burial; after excavation it is disengaged by means of statics (for a similar conclusion see Edgeworth 2016, 102–4).

Yet, one finds motion and change on both sides of the surface, and both sides consist of effective entities. Moreover, just as the human and non-human are inseparably intermingled above the surface, the archaeological is always entwined with the geological, palaeontological and paedological. All culture is mixed with nature, and all culture is dynamic, but buried culture is other than non-buried culture (and buried nature is other than non-buried nature). Thus, however the terms are perceived, the Nature/Culture scheme of the world is doubled: once for the aerated realm above and once for the buried realm below. They are equivalent, but disengaged, and therefore constitute counterparts.

Somewhat ironically, after ridding ourselves of one opposition (Nature/Culture), we now find ourselves constituting another: what is below and what is above the surface are mutually exclusive, while together they constitute a totality. Thus, if the archaeological is buried culture, what should we call its counterpart? It is society, or the social, the numerous phenomena regularly studied by the social sciences, from which Nature can no longer be separated (Latour 2005; Law 2009).

The archaeological, therefore, is not merely a consequence of the social (ontologically, in any case), but its counterpart. It is a cultural mode of being that is constituted by its disengagement from society through burial. We are now, finally, beginning to do justice to the archaeological. It is no longer perceived as an ambiguity that results from the conflation of distinct terms, as in the case of the Nature/Culture divide, nor as just another example of the rule that Culture is always inextricably intermingled with Nature. It is now

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

clear that the archaeological is an object in its own right, not just a function of other things that precede it. Further, having found the concreteness of the archaeological, we may begin to consider more closely its qualities and position, especially with regard to its relationship with the social.

(Re)production

As noted, the archaeological and the social are distinct modes of cultural being, separated by the thin but effective line of the earth's surface. Of course, the border is permeable. Things may move in either direction. Parts of the social may (and do) end up buried, and buried things may (and do) crop up to the surface. Thus the social may become archaeological and vice versa. In either case, however, something is sacrificed. Although ambiguous phenomena are not difficult to find (optic cables, sewer systems, partially buried features, etc.), it is for the most part a zero-sum condition; one is either on this side or on the other. Excavation undoes the archaeological; burial undoes the social.

Moreover, both the social and the archaeological are constantly being (re)produced. For the social, this goes practically without saying (Bourdieu 1990; Giddens 1984). For the archaeological, this may seem a triviality, but nevertheless one that receives little attention. While much has been said about formation processes that culminate in archaeological phenomena (Schiffer 1987), little has been noted about just how pervasive the formation of these phenomena is (but see Edgeworth 2016). For burial is by no means an exceptional process. Perhaps, ironically, archaeological excavations offer a particularly pertinent illustration of how the social and the archaeological are (re)produced in tandem. It was noted above that archaeological excavations are social networks that engage in the deconstruction of the archaeological in the field while reconstituting it in other media; they are a process by which the archaeological is made social. What is absent from this account, however, is that the excavation also produces a new archaeological phenomenon that is qualitatively different both from the archaeological that was the object of the excavation and from the image produced in other media. This newly produced archaeological phenomenon is the excavation's dump. Although qualitatively different, it is no less archaeological than the stratigraphic units from which it derives. Thus the fieldwork in question is a social setting that undoes one archaeological phenomenon while producing another.

Moreover, the purposeful production of the archaeological is not limited to excavations. The inhumation of the dead in cemeteries is a case in point, as is the systematic deposition of waste in landfills. In all these cases, entities are being relegated to the subsurface, disengaging them from the motions of society. This purposeful disposal of social entities by consigning them to the archaeological reinforces the significance of these realms' mutual disengagement. Crucially, the social is always in motion; everything circulates. And it is important for circuits to remain open. An excess of entities will eventually become an impediment, accumulating along the routes of passage, obstructing circulation that may eventually even bring things to a halt. One need only consider the implications of a strike in a sanitation department, refusing to collect domestic waste, allowing it to accumulate, first on the

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

pavements, eventually spilling onto the road, first obstructing pedestrians, and later motor vehicles. The disposal of excess matter is, therefore, a social necessity; and burial – production of the archaeological – is one way to go about it.[4]

It is for this reason that mutual disengagement is constitutive of the social no less than it is of the archaeological. One need only imagine what it would mean for society to remain engaged with the countless entities consigned to the archaeological, from the hand axes of the Lower Palaeolithic to nylon bags and paper cups of the present. The social would suffocate under the weight of its own making; it would lose its capacity of motion, and consequently also growth and change. In short, if the social is to persist, its motion must be maintained, implicating that disengagement from amassing entities is imperative. The archaeological, in this regard, is a heavy load that the social was spared by its being relegated to the subsurface. It is by ridding itself of these things that it can maintain motion and continue evolving (cf. Edgeworth 2016, 109–10).

Against these observations it is appropriate to recall the familiar argument that archaeological finds are in many respects a form of rubbish or waste (Schiffer 1987, 47; Shanks, Platt and Rathje 2004, 65; Staski and Sutro 1991, 1). The foregoing discussion does much to reinforce this understanding that contributed a great deal to the research into discard patterns and emphasized the relevance of garbology for archaeology (Rathje 2001; Rathje and Murphy 2001). However, the designation of the archaeological as rubbish also confuses it with the social, bolstering the latter and eroding the former. Waste, rubbish, dirt, refuse and the like are all social terms; they refer to the condition of matter within the social network. To apply them to the archaeological is to forget that it is precisely their withdrawal from social kinetics that renders them archaeological in the first place.

Archaeology and the archaeological

To briefly reiterate the argument above, the archaeological is an asocial cultural phenomenon. Its existence and quality hinge on its autonomy and its disengagement from the social, principally by burial. This excludes numerous finds and phenomena with which archaeologists are engaged, from great monuments like Stonehenge and the pyramids to modest surface scatters of flint and ceramics. The crux of the matter here is that archaeology – the field of practice – and the archaeological – the object of the field – must not be mutually constitutive, at least not perfectly so. If archaeology is defined as the study of the archaeological and the archaeological is defined as the object of archaeology, we end up chasing our own tail in a never-ending circular motion, rendering both terms vacuous. Arguing that the archaeological is buried culture avoids this circularity by insisting that the object of enquiry is ontologically grounded and precedes the field of enquiry; that it exists regardless of the archaeological scholarship that studies it.

Thus, while aqueducts, ruins and scatters of finds may be designated antiquities on account of their age, they are not archaeological. Whether an object is archaeological or not has nothing to do with time, but with the condition of its being. An Acheulean hand axe in a museum collection is not

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

archaeological even though it may be a million years old and derived from excavation. On the other hand, a button that broke off my shirt the other day and ended up buried in a landfill is archaeological, although it may be only a couple of years old. The former may have been archaeological, but is now social; the latter was social, but is now archaeological.

Recently, Edgeworth (2016, 108–9) offered a telling anecdote. In 1964 a truck got jammed in the Newport Gate in Lincoln, UK. The gate has been standing in place since the 3rd century A.D. But the surface has since then risen some 2.5 metres. The collision cannot be attributed to the driver alone, Edgeworth observes, but account must also be made for the rise of the surface through repeated events of repair and deposition:

> The accident took place in a split second, but there is a longer time scale involved. It was a collision of processes taking place on different temporal scales – a crash between the temporality of everyday human life (the lorry and driver travelling at speed in a horizontal direction) and much slower archaeological time (the upper surface of the archaeosphere pushing slowly skywards) (ibid., 109).

There is no controversy, I think, that the accumulated deposits between the gate's original floor level and the present one are archaeological. But can one say the same for the gate proper? Can one argue that the gate jutting above street level and the accumulated debris below the surface are in fact the same? Do they share the same condition? Surely they do not, as the incident described above demonstrates. Crucially, the damage the gate suffered is a function of its participation in the field of the social, alongside the surface, the truck and the driver. It is because of its position upon the surface that it could suffer the injury that it did. Had it been buried, it would have almost nothing to do with all of these. The line of the surface not only shifts and moves, but also marks a very real and significant threshold, and it is the differences in the conditions of being above and below this line that differentiate the archaeological from the social. Thus the Roman arch is not archaeological, while the deposits below the street, although mostly younger in age, are.[5]

Consequently, insofar as archaeology's principal preoccupation is with the past, society and cultural evolution, it neglects the archaeological that remains outside its purview. This is so regardless of how one complicates the concepts of 'time' and 'past' (Bailey 2007; Lucas 2005; Olivier 2011; Witmore 2013) or whether one begins with a care for things rather than people (Olsen 2010; Pétursdóttir 2013; Webmoor and Witmore 2008). For neither approach acknowledges the autonomy of the archaeological. When one speaks about the past, or evolutionary processes, or memory – not to mention society, power, religion, etc. – one necessarily prioritizes features that are characteristic of the social, but secondary (at best) to the archaeological mode of being. Thinking along these lines can only undo the archaeological. For it asks of it to respond in social terms. On the other hand, an interest, or care for things, which does not differentiate the social and the archaeological has the implication of obscuring the difference between the two modes of being. They become the same, collapsed into each other, in principle at least.[6] In practice, the turn to things often takes the form of a stress on unmitigated,

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

immediate experience and engagement. Insofar as the engagement in question entails dynamics and the involvement of humans and (other) things, it is surely a social phenomenon, and the archaeological once more disappears. If we are to understand the archaeological, we must refrain from conflating it with the social.

This does not mean, however, that archaeology should not be concerned with surface finds and ruins. But it does mean that interest in these entities is best understood as derivative and secondary. Evidently, this position is opposed to Harrison's (2011, 143) proposal that archaeology should move away 'from the trope of archaeology-as-excavation and towards an alternative metaphor of archaeology-as-surface-survey'. To my understanding, 'archaeology-as-surface-survey' is a contradiction in terms, for surface survey is necessarily an engagement with the social, not the archaeological. But this does not mean that I disagree with Harrison's (and others') critique of the conceptual linkages of excavation, stratigraphy and the past. Archaeology should retain the centrality of excavation, not because depth is equivalent to time and past, but because excavation means engagement with the archaeological, however momentary and precarious (Edgeworth 2012).

To be clear, insistence on the centrality of the archaeological does not reject archaeologies of the present and recent past. For, at bottom, it marginalizes issues of temporality and age. Indeed, because the archaeological is constantly being produced (even while being undone), there is no shortage of possibilities for engagements with recent and contemporary archaeological phenomena. Harrison's proposition, however, while provocative and interesting, seems preoccupied with the social sphere. As such, it excludes the archaeological from its purview and constitutes an extension of other (non-archaeological) fields of study. It is surely a legitimate and potentially productive angle, but it is not one in keeping with archaeology's foundational premise and claim.

It is thus becoming apparent that there is a part of the world that was always within our reach, always at our disposal, always at our mercy, in fact, but which nevertheless we failed to acknowledge as such. As the outlines of the archaeological crystallize, we are confronted with an object we know next to nothing about. This is not something to lament; it is an opportunity. There is an aspect of the world begging to be explored and understood, and its breadth and significance are probably greater than presently realized, implicating everything else. Archaeology, should it seize the moment, may find itself in the centre of a reordering of our understanding of the cultural landscape and of the world in general. This is the demand brought forth by an explicit acknowledgement of the archaeological, and archaeology is the discipline to insist on it.

But to do so archaeology itself must be willing to reconsider its priorities. As noted above, traditional matters of interest like the past, society, human behaviour and cultural evolution do not pertain to the archaeological, for these interests fail to appreciate what it is: a cultural phenomenon, constituted in its disengagement from the social through burial. The instrumental approach to the archaeological obscured it, and now that our vision begins to clear, the realization follows that we are faced with a new land, one

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

we must make ourselves familiar with. Notions like things, materiality or material culture are unlikely to be of much help. For, as noted above, they are more likely to obscure the archaeological than to reveal it. In short, the primary means of conduct is description. I have discussed this in some detail elsewhere (Nativ 2017). Here, however, I would like to emphasize how the way we travel this landscape will have to change.

Much of archaeologists' empirical work is directed by a concern with the past, society and attendant matters. Preservation, stratigraphy, disturbance, clean/contaminated loci, fill, floor, *in situ* and many other such terms, regularly employed both on- and off-excavation, are commonly mobilized to flesh out a past condition. While these terms are of much relevance for understanding archaeological phenomena, their attendant value judgements are not. They prioritize and discriminate primary and secondary, reliable and unreliable, significant and insignificant, worthy and unworthy. For the archaeological proper there is no such thing as a disturbance, or a mixed locus or poor preservation. At most, these are different manifestations of the archaeological, a form of diversity inherent to the phenomenon in question. Practices of purification that seek to remove from a given deposit things that supposedly belong to an earlier or later period can only fail to acknowledge this deposit (cf. Lucas 2015a). Similarly, attributing greater significance to contexts with complete vessels on a surface than to a deposit containing assorted fragments is to forget the archaeological. I do not want to argue that there is no place for such value judgements; it is important, however, to realize that they are secondary to the archaeological. Ultimately, if we are to understand an archaeological phenomenon, we must take it all in; the primary question being, what does it consist of? How do these things belong together?

Moreover, the observations offered above suggest that sites that archaeologists find of interest are but a fraction of the phenomena designated archaeological. If the archaeological is constantly being produced, then the range of relevant occurrences is greatly enlarged. As many have argued before, time is of little relevance. But so is the kind of occurrence. For if, as already noted, an excavation dump is no less archaeological than the deposits from which it derives, it is an equally valid object of study. If it is the archaeological that archaeology needs to understand, it must broaden its view and concerns. For the criterion for a choice of site would no longer be the quality of access it provides into a given past, but its contribution to our understanding of the range of ways in which the archaeological is manifested.

In short, the archaeological is beyond the purview of archaeology, at least as it is commonly practised. The discipline's bias towards its object – the archaeological – is noted on all levels: in the field, publication reports, analyses and goals. The archaeological is a medium and a device, but one that we have not taken the time to know and understand. If this condition is to change, a great many presuppositions and habits will have to be revised.

To claim that the archaeological exists, and that it consists in being buried below the surface, is also to claim that there is a component of the world that is cultural and yet beyond the reach of the humanities and social sciences. For the social sciences and the humanities are concerned with the social, with

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

whatever happens (or happened) on the surface. Thus the archaeological is not a mere derivative of the social, a residue or vestige; rather it is the counterpart of the social, a mode of cultural being accounted for by archaeology alone. Far from being a handmaiden of history, or an extended arm of anthropology, archaeology presides over a cultural domain that counterbalances all phenomena treated by the social and human sciences. In short, archaeology has the potential to become a pivotal field, demonstrating the need to reformulate our understanding of the world and calling attention to an overlooked but momentous phenomenon.

Recently, Lucas (2013, 374, original emphasis) asked, 'What *new* entities can archaeology propose? We *already* know humans exist; we *already* know pots and arrowheads exist. What does archaeology show us that we did *not* know already?' This paper suggests that it is principally the archaeological, an entity that is cultural, yet decisively asocial. The proposition for an archaeology explicitly concerned with the archaeological admittedly entails narrowing our scope in some regards, but it also entails an expansion in others, both empirically and conceptually. Much of this has to do with an acknowledgement of the limitations posed by the archaeological, but also with its affordances: two facets of archaeology's object, upon which the field's scholarly merit and contribution rely. Ultimately, pursuing the archaeological may alter archaeology's position within the academic landscape. For it will no longer be a member of the social sciences and the humanities, but their counterpart.

Epilogue

The present paper argued for the importance of the archaeological as a necessary premise for archaeology and as an underappreciated object of study. Much of the foregoing discussion was dedicated to exploring its implications and potentials for the discipline. But nothing is formulated within a vacuum. While the argument above seeks to establish its claims on foundations of solid reasoning, it is also a reaction to slow, but persistent, processes that appear to undermine the foundations of academic science. In the space that remains, I would like to situate the arguments presented here in this context, where the call for concern with the archaeological can be read as an attempt to reaffirm archaeology's potentials and responsibilities as a science.

After several decades of deconstruction and critical theory, it is becoming increasingly evident that crushing the rigid barriers and walls of modernity, that targeting its distinctions and denying their legitimacy, did not lead to greater freedom, more connectivity or openness. Rather, 'Deobjectification [i.e. the rejection of objectivity, reality and truth], while formulated with emancipative intentions, turns into the delegitimation of human knowledge and into the reference to a transcendent foundation' (Ferraris 2014, 14). Indeed, the humanist pursuit of knowledge has suffered greatly over the past decades. Disarmed of its classical ideals and justifications (e.g. Merton 1942; Weber 2004), science has been gradually, but consistently, emulating standards of purpose and evaluation that originate in the marketplace and in corporate culture. Consequently, the cherished autonomy of academic scholarship is undermined as universities encourage their faculty to produce

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

knowledge that is marketable, patentable, purposeful, usable, relevant (Kellogg 2006; Rider, Hasselberg and Waluszewski 2013; Ziman 2000).

While the most striking and disconcerting implications of this process are manifest among the natural sciences (Evans and Packham 2003; Monbiot 2003; Rider 2009; Sterckx 2011), the social sciences and humanities suffer the same basic ills. In fact, it is these fields that lose the most once truth becomes a matter of opinion; and as scholarly claims can no longer be grounded on classic standards of validity, recourse to other standards – corporate, managerial, social, public – becomes inevitable. On the one hand, this development is accompanied by a variety of benefits: popular interest, demonstrable public relevance (ideological, managerial, policy-related, etc.), financial support, among others. On the other hand, however, it sacrifices the scientific orientation towards the long-term and the unforeseeable.

Thus the reconfiguration of science along the lines of other social institutions/agencies carries with it various benefits, but also threatens its very existence. In the climate of the 'knowledge economy' and the rise of numerous non-academic sites of knowledge production (Gibbons *et al.* 1994; Hessels and Van Lente 2008), the emulation of corporate, financial or public culture tends to dissolve any distinction and justification for academia, rendering it redundant and superfluous. Academic scholarship therefore is at a crossroads:

> Whether or not we like it, we must make a choice. It is a very problematic choice. Either universities, or rather the faculty of universities, start to defend their right to refrain from market adaption by political means, thus abandoning their claims to being apolitical and in practice enacting the ideal of a *democratic* university, or we accept present developments and let history take its course, hoping that the community of individuals exercising scientific judgement in the university, however central its position in society, will be enough to make a difference (Hasselberg, Rider and Waluszewski 2013, 213, emphasis in original).

Indeed, it is a mistake to presume that the power of science is anchored in its procedures and methods. Rather, its relevance and vigour are founded on ethical grounds: that the world is worthy of learning, not for the sake of anticipated future benefits or accomplishments, nor for solving recognized problems (however worthy), but as a pursuit valuable in itself. It is precisely because of this seeming disinterestedness in existing political, economic, social, environmental concerns that a scientific insight can demand attention. Consequently, while enjoying short-term benefits in the form of demonstrable relevance, along with funding and public esteem, forgoing its ethical stand, academic scholarship risks losing in the long term both its legitimacy and its relevance.

This is not to argue for a return to the naivety and vanity of modern science. It promised more than it could deliver and it claimed for itself stature greater than it deserved. The critiques of modern science clearly demonstrated the limits of its claims. Science cannot answer all questions, it cannot apply itself to anything, and it cannot always provide valid and well-grounded explanations. But where science can or does apply (responsibly), its observations, insights and explanations are of greater solidity than those

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

of any other field of knowledge. Thus the scientific ethos is indispensable for academic science. Importantly, it should not be perceived as a realizable goal, but as an ideal:

> An ideal is something which guides behavior by not being fully realizable in practice. In point of fact, to replace classical academic ideals with measurable outcomes and results (such as examination frequency or number of citations) is to lower our ambitions in the name of 'excellence' (Rider 2009, 86).

Science thus entails an ethical commitment, on account of which it demands freedoms that other vocations do not enjoy, but it does so in order to impose on itself restrictions and imperatives that others do not need to bear. The persistent trends outlined above that gnaw continuously at academic science undermine these freedoms and compromise the scholarly imperatives that allow academia to function. This should concern us all. It is not merely a matter for policy makers or budget management; it pertains to the very motivations, justifications and practices we follow. It is such a sense of crisis that prompted Merton to formulate his understanding of the scientific ethos, for, as he put it, 'An institution under attack must reexamine its foundations, restate its objectives, seek out its rationale. Crisis invites self-appraisal' (Merton 1942, 115).

While argumentative, the present paper can be read as such an attempt at a vocational self-appraisal. What is archaeology about? What are its irreducible foundations? What are its responsibilities? How are these to be distributed? Where do its commitments lie? What are its limits? My concern here with the object of archaeology – the archaeological – is a concern with that part of the world that the discipline takes upon itself to explore. I find this to be an imperative of the scientific attitude, for it needs an object, something to focus its efforts on and upon which to establish its insights. Whatever archaeology can say responsibly must follow from what its object affords. The flip side of this is, of course, that the object also poses restrictions: many questions cannot be answered without compromising the scientific attitude, the object, or both.

Indeed, some of the field's most nagging problems can be traced back to compromises of this sort; and the recurrent concern that archaeological accounts are ultimately projections of the present into the past is probably the most troubling of all. It has long been acknowledged that the field's practice is closely tied up with economic and political power (Brück and Stutz 2016), nationalist, colonialist, imperialist (Trigger 1984), and that 'all archaeological stories – be they classical, biblical, nationalist, or evolutionary – can be read as narratives of the inevitability of certain lands to be conquered and the right of certain people to rule' (Silberman 1995, 256). Much of this, I suspect, results from the obscurity of the archaeological object, from the discipline's failure to constitute it as the principal question and the principal resource upon which proposed answers must build. Questions are regularly oriented elsewhere (the past, society, subsistence, cult, etc.) and the archaeological is quickly conflated with other things: history, ethnography, economy, literature, etc.

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

If archaeologists were to insist that the archaeological is their principal object of concern, most of these questions would be deferred and many of the conflations would be delayed. In Israel, where I live and work, this comes to the fore in striking relief. It is common for finds and excavations to be heralded against the backdrop of the biblical narrative, legitimizing (or delegitimizing) nationalist claims on the grounds of historical precedence, supposedly proved by material remains and/or sophisticated analyses. It is also not uncommon for politicians to make use of such claims to promote their agendas. Yet, one must ask, what is it about the archaeological that affords such accounts? In what way do pottery sherds, wall segments, faunal remains and sedimentological units express themselves in terms of historical figures, wars, ethnic groups, or even names like 'Jerusalem'? The answer is that they do not. In order for this to be possible they must be conflated with the biblical story, with ethnographic observations, social theory, contemporary perceptions of place and so on.

Whatever resistance the archaeological could have presented is aborted in advance, because at no point was it properly constituted. It was always already mixed up with antiquities that circulate in the market, with narratives of lands, empires and migrations, with place names and political geographies. As a result, many accounts and observations presented on archaeological grounds cannot be traced back to the archaeological, but only to a fusion of the archaeological with something else. This is not to say that these associations are necessarily wrong; it is to say that their scientific validity is questionable.

By no means are these issues limited to biblical archaeology or to Israel. Israeli archaeologists are not cynics, nor are they worse than others. They are influenced by the same trends, fashions, desires and ills of academic opportunism as archaeologists elsewhere (Härke 2014). It is simply that the case of biblical archaeology is a convenient example; it illustrates the rule. Namely that the obscurity of the archaeological is conducive to its premature conflation with others, which in turn impairs the scientific attitude and produces claims that cannot be properly substantiated. In short, in the absence of a clear object, archaeological insights are at risk of becoming vacuous and insubstantial.

Thus, if archaeology cherishes academic science and regards itself as a member of a scholarly community that values the pursuit of knowledge, it needs to draw its object out of obscurity and claim it as clearly and explicitly as possible. The prices to pay for this are considerable, but so are the benefits. As I have tried to demonstrate, insisting on the archaeological as the necessary focus and anchor for archaeology not only is expected to result in better scientific validity, but also is likely to open before us an underappreciated and largely ignored field of research that may amount to a redefinition of the field's position within the social sciences and the humanities: no longer a participant, but a counterpart.

Acknowledgements

I would like to thank Ron Shimelmitz and Ron Dudai for reading versions of this manuscript and offering valuable comments on its reasoning and goals.

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

I am also deeply indebted to two anonymous reviewers who provided many important points of critique that have greatly benefited this paper.

Notes

[1] It is true that in many respects excavation actually results in the archaeological becoming more fluid rather than fixed (Edgeworth 2012; Hodder 1997; Lucas 2012, 231–44). The crucial point for the present discussion is, however, that the practices of documentation, ordering and archiving (with multiple cross-referencing) strive for, and to various extents achieve, fixity.

[2] And one may appropriately include here also the submerged environment of liquids.

[3] This is not to say that there are no ambiguities. In fact, fuzzy boundaries and liminal conditions are possible only when mutually exclusive terms are present. The question is whether the distinction can be maintained and justified, precisely what can no longer be sustained for the Nature/Culture opposition.

[4] This is not to deny that there are other ways to manage waste: incineration, recycling, etc.

[5] This distinction does not dissolve once one looks beyond living human settlements to ruins and surface scatters. So long as they are on the surface, exposed, the difference is one of degree, not of kind. They still exist on the same plain as living people, integral parts of the landscape and, therefore, never divorced from the social. Indeed, the very notions of ruination, abandonment, desertion are social concepts; they describe a relationship of withdrawal and distance, in which the work necessary for their maintenance is no longer implemented. It is the flip side of the entanglement–entrapment coin elaborated by Hodder (2012; 2016). But once buried, they shed any kind of social existence and become something else; neither the positive nor the negative terms (life/death, active/passive, dynamic/static, engage/abandon, etc.) that are applicable above the surface can be used to denote the condition below.

[6] The same holds also for the counterpart to 'things', the primacy of relations (Fowler 2013a). For it too collapses the distinction between the archaeological and the non-archaeological.

Archaeological Dialogues 25 (1) 21–25 © Cambridge University Press 2018
doi:10.1017/S1380203818000053

The unburied. On archaeological objects and objectives

*Gavin Lucas**

Assaf Nativ has written a bold and challenging paper and one which prompts a great deal of reflection. Although highly theoretical, it is also a paper that engages quite directly with the concerns of our discipline and is a good example of what one might dub philosophical (or meta-)archaeology rather than philosophy applied to archaeology. Moreover, Nativ has a very clear style of exposition that gives the reader a great deal to sink his or her teeth into. Which is precisely what I want to do now. And if what follows seems excessively critical or negative, I hope it will also be taken as a sign of my

*Gavin Lucas, Department of Archaeology, University of Iceland, Rejkjavik, Iceland. Email: gavin@hi.is.

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

respect for his taking on a topic fraught with difficulties and a conviction that my commentary should try and match up to his own carefully argued text.

Nativ presents a deceptively simple proposition: to do archaeology, we surely ought to define what the archaeological is, it being the object (or subject) of our study. After all, how can we claim to study something if we don't define what it is we want to study? Now you might think that this 'something' is obvious or has been done countless times, but Nativ suggests otherwise. Like others (notably those within or allied to symmetrical archaeology), he argues that the object of archaeology is in fact divided between a proximate and an ultimate object: the former being the archaeological remains, the latter being the past, or past society, past behaviour and so on. More importantly, the former is simply a proxy or means to get to the latter – hence Nativ's attribution of the archaeological as being primarily instrumental rather than ontological and his phrasing of this division in terms of a disjuncture between the object of analysis and the object of interest. In other words, here is the classic 'Indian behind the artefact' syndrome.

I should say before I go any further that I too have made use of this argument so I fully appreciate its merit and sympathize with its claim. However, it is the conclusions Nativ draws from this division that trouble me, and from this point on I found myself disagreeing with most of the key steps in his argument. And here is why. Nativ seems to accept this division as more or less reasonable and wants to fully separate the proximate and ultimate objects into two realms: the empyrean or terrestrial realm of the social and the subterranean world of the archaeological. He admits to communication between the realms, such as discard from society entering the underworld through landfills and objects from the underworld re-entering society through practices like archaeology, but on the whole the two worlds are ontologically distinct. And they require two different practices. The implication is that archaeology should not try to mimic sciences which study the social (e.g. ethnography, sociology) because to do so is to see the archaeological as simply a mirror world of the social, a distorted reflection which after some methodological conversion (through formation theory and its like) can be translated into the social. This is not to take the archaeological seriously as something different in its own right. Again, I should point out that I have used arguments like this myself and I too believe it is dangerous to treat archaeology as a kind of palaeo-ethnography – not least because it will always come up short.

However, I simply do not see what purpose is served by making the distinction between the archaeological and social so stark. Indeed, to me it leads to all kinds of complications such as denying that Stonehenge counts as an archaeological object. It also leads him to privilege excavation over survey as methods for investigating the archaeological and developing convoluted suggestions for why survey and surface sites can still nonetheless fall within the scope of archaeology even if they are not, strictly speaking, archaeological objects. In fact, following his own logic, I also cannot see how he can still include archaeologies of the contemporary past as archaeological, when the

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

vast majority of its objects clearly reside in the social realm. Ultimately, his argument verges on enacting a tyrannical purge on the discipline which would disenfranchise many of its current practitioners, despite the mitigations he offers towards his own logic.

But then again, his logic is not unassailable. Two issues stand out. First, there is his characterization of the archaeological as the buried, via the notion of statics. Nativ argues that the archaeological is given its definition through the act or event of burial, which separates it from the social, but then is further defined as something static through the archaeological operation, in distinction to the dynamics of the social. In fact he even suggests that this disengagement of the archaeological from the social is 'first and foremost conveyed by archaeological statics' (p. 11). But there is a real tension here that Nativ does not seem to acknowledge between the idea of burial defining the archaeological and that of statics doing so. Statics, as a product of the archaeological operation through inscription, as Nativ describes it, occurs during and after the archaeological has been unearthed, and therefore brought (back) into the realm of the social. A site, re-exposed to the surface, a pottery vessel unearthed – these are concrete examples of what the archaeological is; but in the very process of becoming archaeological, they are unearthed, not buried. In fact, as long as they remain buried, we can hardly be said to know them at all, except for that fact they lie beneath the surface. Nativ portrays statics as if it were a doubling or deepening of the disengagement of the archaeological from the social, but to my mind it actually cancels or reverses this disengagement. Excavation *un*-buries that which was buried, so how, then, can the archaeological be defined by being buried? This also touches on another issue to which I will return later – namely the relation between the archaeological object and archaeological practice.

The other problem concerns a similar blind spot in logic. On his journey to the great divide between the social and the archaeological, Nativ addresses another – that between Nature and Culture. He notes that the archaeological has always sat astride this division so it has no real purchase if we want to try and define what the archaeological is. Moreover, given the dissolution of this divide in recent years through studies such as actor-network theory (ANT), its claim as a framework for theorizing the archaeological is even less plausible. Not only that, this development threatens to dissolve all disciplinary and ontological boundaries altogether, the archaeological included – hence the need to rescue the archaeological through an alternative framework. And yet, despite this recognition, Nativ continues to rely on this divide in his analysis. How does he define the archaeological? Not simply as the buried – but as the *cultural* buried. He uses this phrase several times without comment or irony, it seems. Indeed, he has to because he knows full well the buried also includes earthworms, rocks, lava and water as well as potsherds, flint arrowheads and building foundations. In striving to separate the archaeological from the social through the concept of burial, Nativ seems to forget to address the separation of the archaeological from the geological, etc. And what about the submarine, for that matter? How do we separate the study of shipwrecks from molluscs or ocean currents? Of course ANT teaches us that all these things are entangled, but still – if there is an archaeological object, is it the

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

same as an oceanographic one or a geological one? Nativ's silent insertion of the word 'cultural' before the word 'burial' suggests that it is not and that the distinction between them is based on that old divide he thought he had left behind.

In short, what Nativ's analysis has achieved, it seems to me, is not replacing one divide with another, but rather superimposing one upon the other, a point which he actually acknowledges in his text although he somehow seems unbothered by its implications. Instead of reducing our problems, he has multiplied them. I do think there was a simpler solution here. Put simply, rather than see the distinction of the proximate and ultimate objects of archaeology as a sign to drive them further apart and purge one of the other, it would have been better instead to think about how the two can be collapsed and brought closer together – but in such a way that does not reduce one as an instrument to access the other. At least, that has been how I have attempted to deal with this, drawing on assemblage theory (Lucas 2012; 2013; 2015b). That is also what I was implying in my question that Nativ quotes – what new entities archaeology can propose. However, I am not here to discuss my work but Nativ's. And so let me end by reflecting rather on why I think Nativ has taken the wrong tack.

His paper ends with some thoughts on the political implications of his analysis; specifically, he suggests that it is precisely because of the reduction of the archaeological to the social that archaeology as a practice has suffered so much abuse, as in the example he gives of biblical archaeology. However, he seems not to acknowledge the redemptive role of archaeology, also done in the name of the social, especially in historical archaeology and archaeologies of the contemporary past which engage with issues of racism, inequality, capitalism and so on. But more crucially, I am unsure about what Nativ is suggesting here – that archaeology can somehow become depoliticized through this reconceptualization of the archaeological? That he seems to aspire to this is evident in his espousal of academia as a disinterested space. It is possible, if not probable, that Nativ works in an academic environment where the political pressure on academia is much greater than in my home institution, and one should never underestimate such differences. Yet the political critique at the end of his paper still seems both one-sided and yet dangerously reactionary in its call for a depoliticised archaeology – a quest for knowledge for its own sake. And this ultimately brings me to what I think is the deeper problem with Nativ's approach. He is trying to define the archaeological, independent of or prior to the practice of archaeology. Indeed he states so, quite explicitly.

The fact that he claims that the practice of archaeology should not be defined by its object, as that would make it circular, seems to me very misguided. It is like arguing that 'a chairmaker is someone who makes chairs' is circular; well, yes it is, but so what? Shouldn't it be? At the root of Nativ's approach is an assumption that one can define the archaeological object independent of the practices surrounding it, even though he occasionally acknowleges that its definition is partly performative. Yet this flies in the face of everything science studies has illuminated over the past quarter of a century or more: a discipline and its object are co-constituted. It also contradicts

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

Nativ's own definition of the archaeological as an articulation between burial (the archaeological-in-itself) and statics (the archaeological as constituted through excavation). It is not that archaeology invents its object (as in social constructivism or postmodernism), but neither does its object precede it, as in naive empiricism – or Nativ's analysis. Rather, each constitutes the other. That is why Stonehenge is an archaeological object, *pace* Nativ, and why that Ford Transit van (Bailey et al. 2009) is also an archaeological object – even if (indeed precisely because) fifty years ago it would not have been considered as such. I think it is frankly dangerous to try and define the object of archaeology without simultaneously defining the practice of archaeology. Which means also thinking about why we do archaeology at all.

Nativ is right when he asks how we can study something if we have not defined what that 'something' is, but his whole argument presupposes what he is trying to claim – that this 'something' is distinct from what we usually think it is, whether that is society, human behaviour, etc. or simply the archaeological record as the residues of past society, human behaviour, etc. But what he also forgot to ask was why we want to study that something in the first place, except as 'a pursuit valuable in itself', which almost seems to imply that what that something is does not matter after all since it can apply to any object you choose. Why the *archaeological* as opposed to anything else? In the end, to talk about the archaeological object without also talking about archaeological objectives is precisely to revert back to the idea of a Nature, purged of Culture as if the two were ontologically distinct. For me, the archaeological is relevant *because* it is social; in purging the social from the archaeological, one also purges the relevance and point of archaeology itself. The problem perhaps lies not so much in our definition of the archaeological, but rather in our definition of the social and what scope archaeology has for redefining that. In this sense, Nativ's brief remarks on the interchange between the social and the archaeological would surely have been a more fruitful line of enquiry.

I find it regrettable that I am so at odds with Nativ's paper as I have the feeling that we are coming from the same place in addressing such an issue, but what we see from that position are two very different visions of archaeology – and the archaeological. Nonetheless, the opportunity to engage in a form of dialogue like this can only be a positive thing and I would like to end by thanking Nativ again for a very stimulating and provocative paper.

Archaeological Dialogues 25 (1) 25–28 © Cambridge University Press 2018
doi:10.1017/S1380203818000041

Further notes on the archaeological object

*Matt Edgeworth**

Assaf Nativ argues that it is time to deepen and broaden our understanding of the archaeological object, and to make it more explicit. I find the

*Matt Edgeworth, School of Archaeology and Ancient History, University of Leicester, UK. Email: me87@leicester.ac.uk.

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

general argument of the paper compelling. Following on from the insights contained therein, it seems to me that there are three principal aspects of the archaeological object that urgently need to be reappraised: (1) temporal range, (2) spatial scale and (3) ecological effectivity.

Temporal range

The archaeological object is often held to be the material remains of past human activity up to a certain cut-off point in time – whether taken as the end of the medieval period, the start of the 'post-medieval' or 'modern', the turn of one century, or the mid-point of another – thereby excluding later evidence from investigation. But Nativ's characterization of the archaeological object as that which is removed from the social through burial, regardless of time, fits much better with the nature of the evidence in the ground. For archaeological strata did not stop forming at some arbitrarily chosen point in the past. On the contrary, the stratigraphic sequences of layers, dumps, cuts and fills kept on forming, are still being formed today, and will continue to form in the foreseeable future. Indeed, never has the stratigraphy of the upper part of the Earth's crust been so radically modified by the actions of humans (and their entourage of domesticated species and machines) as in the last half-century or so. Never have so many artefacts been deposited in the ground, in landfill and other contexts, as now. This material, being buried in stratigraphic formations, is archaeological as surely as more ancient deposits are. William Rathje's innovative studies of rubbish dumped in modern landfills in the USA (Rathje 1992) are just as much about the archaeological object as Gordon Childe's excavation of Neolithic houses at Skara Brae or Heinrich Schliemann's excavation of the ancient citadel of Troy.

As Nativ affirms, the archaeological object comprises recently formed and still-forming as well as ancient material phenomena. Moreover the upper limit of its temporal range is always being extended forward in time, as archaeological strata continue to be produced in the unfolding present.

Spatial scale

This leads on to reconsideration of spatial scale. Nativ puts it like this: 'If the archaeological is constantly being produced, then the range of relevant occurrences is greatly enlarged' (p. 16). The fact that the archaeological object is growing rapidly in size might be regarded as one of its fundamental characteristics. There have been massive increases in production of archaeological strata globally in the last five decades, corresponding to a doubling of world human population and associated rises in the numbers of domesticated animals and plants. There has also been increasingly widespread use of petrol-fuelled earth-moving machines, excavating large amounts of material from depth and spreading it around on the surface, filling in basins of deposition and creating new or 'reclaimed' land. Archaeological deposits now cover large parts of ice-free terrestrial surfaces of the Earth, spreading inexorably into marine environments too. The millions of tonnes of soil and rock excavated from the ground by Crossrail in the making of the new Elizabeth Underground line in London – transported by barge down the Thames and dumped in the sea to form the mudflats of Wallasea Island –

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

provide a handy illustrative example from close to where I live and work. Those metro tunnels under London and the spoil that was redeposited on the coast are recent extensions of the archaeological object as it continues to expand – in upwards, downwards and lateral directions. Readers from other countries will be able to provide their own close-to-home examples, for such large-scale removals and redepositions of material are going on all over the world. Wherever you are located, you do not have to travel far to observe the archaeological object of the future being created now.

It is not just the archaeological object itself that is expanding and shape-shifting. The perceptual apparatus for apprehending those changes is radically transforming at the same time, enabling it to be studied on multiple scales from the mega to the nano. Space and digital technologies afford archaeologists the capability to view the archaeological evidence from viewpoints in space, by means, for example, of satellite photography and GPS. In this regard, at least, I tend to disagree with Nativ's statement that surface survey does not engage with the archaeological object as such. While excavation is the core method of archaeology, it is important to recognize that study of the surface can reveal much about what lies buried and hidden below. Indeed it is only through the medium of networks of orbiting spacecraft and their surveillance of the planet's surface from above that it has it become possible to get the merest glimpse of the extent of the archaeological object – the sum total of stratigraphic traces of the human presence on Earth – on something like a global scale. This is the *archaeosphere* (Capelotti 2010; Edgeworth 2014b; Edgeworth *et al.* 2015), that thin yet extensive layer of humanly modified ground – accumulated over thousands of years but growing and coalescing at unprecedented rates today – now intermeshed with the hydrosphere, biosphere, atmosphere, technosphere and geosphere.

Ecological effectivity

As Nativ intimates, our theoretical conception of the archaeological object is struggling to keep up with recent changes, and needs to be updated. It tends to be framed in terms of models formulated before many of the relevant transformations occurred. For example, the characterization of the object of archaeology as a 'material record' configures it as passive rather than active. In terms of the record metaphor, the archaeological object-as-record is understood to be made up of the traces or effects of the actions of numerous entities, yet crucially not itself acting or having effects on other things. It is thus essentially constituted as a non-ecological entity, withdrawn from interaction with other parts of dynamic Earth systems.

This is understandable when archaeological evidence is considered on the relatively small scale of individual features, trenches, sites or landscapes. An archaeological stratum generally only has effects on strata immediately above or below or otherwise contiguous with it. But the accumulation of all those strata and all their local effects, when apprehended on a large enough scale, adds up to an ecological force (or set of forces) of considerable magnitude. Like a giant carpet being rolled out, this substantial body of material – in expanding and coalescing and spreading out over the Earth's terrain – has the power to bury rivers, to smother entire habitats, or indeed to create new ones.

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

The ecological impacts of the accumulating mass – on wider environments, on humans, on climates, on geological processes, on other species – are yet to be even properly considered, let alone fully grasped.

Here I would go further than Nativ, though I am taking the liberty of extending his argument rather than contradicting it. For as well as acknowledging the independent existence of the archaeological object, it is also important to recognize that this object can effectively act independently too, at least in the sense in which it has become an ecological force exerting its own pressures on Earth systems.

Archaeologists are well placed to study large-scale stratigraphic formations of the archaeosphere. No other discipline has acquired such in-depth knowledge and experience of humanly modified ground, or developed the methods to deal with its complexities. Some of the core methods of the discipline are multi-scalar in application and can usefully be scaled up from investigation of pits and postholes to larger features such as landfill quarries and areas of reclaimed land. As Edward Harris (2014) recently argued, the Harris matrix provides a paradigm for understanding the stratigraphy of the Anthropocene.

To maintain that archaeologists have a significant role to play in investigating the archaeological object and its ecological effects on a global scale, in collaboration with other disciplines that are tackling environmental issues of pressing concern, does not in any way challenge the more detailed work that archaeologists carry out on local and regional scales, focusing on the evidence of more ancient deposits. That valuable work should, of course, continue. But traditional renditions of the object of archaeology are now proving too restrictive. These effectively exclude contemporary archaeological deposits from the frame and discourage archaeologists from taking a truly global perspective on the material phenomena they study. Nativ's excellent paper takes important strides in updating and broadening out our understanding of the archaeological object, laying the necessary groundwork for new kinds of research to be undertaken.

Archaeological Dialogues 25 (1) 28–34 © Cambridge University Press 2018
doi:10.1017/S1380203818000065

For the objects, archaeology and the archaeological

*Christopher Witmore**

Archaeology turns round its objects as much as it turns them out. This is partially an artefact of its reflection, which is not always linear; it is sometimes cyclic. The cyclic is not a perfect circle. Our objects open themselves in new ways to archaeological engagement, but this new relevance surfaces through creative inspiration triangulated off previous orientations. In revolving around our objects, inevitably we return to a familiar place, even though it is where we have never been (González-Ruibal 2014). The linear

*Christopher Witmore, Texas Tech University, USA. Email: Christopher.witmore@ttu.edu.

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

orientation, by contrast, is progressive. It fashions its every step anew. Thus its movement is supersessive – it pushes forward by violently casting overboard what is considered to be of less value (often on misconstrued grounds) and assuming its position. Whereas the former oscillates with various degrees of awareness, the latter strikes out with inevitable levels of amnesia. To attain a genuinely novel position one must struggle against forgetting former orientations, for to eliminate is to run the risk of repetition – blind to whether or not one ever truly invents – and even redundancy – with multiple copies the impact of our work is diminished. Still, if true improvement constitutes progress, then archaeology, when properly executed, moves in spirals, and our objects move with us.

Assaf Nativ's article moves in circles and reasons with lines. It advocates a different understanding of the archaeological record while generating momentum off other positions treated as merely derivative. It gives exclusive consideration to archaeology as a science, ignoring the necessary contribution of the arts and humanities, and the significant strength that comes with straddling both sides of this divide. Whatever one makes of its style and rhetoric, which open it to misreading, this article is not without its merits. My aim in openly pondering Nativ's pondering of the object of archaeology is to arrive at an understanding of its similarities and differences for the objects, archaeology and the archaeological.

'What is the object of archaeology?' According to Nativ, it is the 'archaeological'. Though elusive and ambiguous, this term 'is not so much an aspect of the social, as it is its counterpart, a mode of cultural being that belongs to the subsurface' (p. 3). The archaeological, according to Nativ, constitutes a disengagement from the 'social', whatever one makes of this term, for its interactions occur under buried conditions without recourse to hyper-terrestrial humans and their relations. Thus it is among 'buried culture', with its subsurface dynamics, that one finds the true object of archaeology. From trash to Lower Palaeolithic hand axes, the article strives to build a case that the production of the archaeological through burial is, nonetheless, necessary for what it holds to be the constitution of the social. For without the moulting skin of the Earth's surface the present would choke on an accumulated wreckage of refuse and ruins, become motionless, and lose its ability to evolve.

Because the archaeological is necessarily asocial, it cannot be captured by terms like rubbish, garbage, waste, etc. (one might question whether Nativ's repeated use of the term 'phenomenon', a thing whose being is about being observed and offering itself to observation, fails to capture this object). The use of anthropically oriented terms fails to account for the autonomy of the underworld whose marvellous miscellany withdraws from all species of 'social' contact. Because archaeology possesses a matchless capacity to engage the chthonic realm (Nativ holds to the opinion that the only way to access it is through excavation), it becomes a counterpart and complement to the humanities and social sciences, one on par with these fields.

Pressing is the need to clearly delineate this object, for without it, according to Nativ, 'archaeological insights are at risk of becoming vacuous and insubstantial' (p. 20). Vacuous, because apparently, for all our attempts to

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

come to terms with archaeology's object, we have failed to fully grapple with the buried realities of the archaeological and its asocial, subterranean modes of existence; insubstantial, because supposedly academic opportunism has led archaeologists astray in such a way that the archaeological was never 'properly constituted'. The merits of this article are numerous: its emphasis on the autonomy of that which exists in the subsurface; its appreciation of non-human dynamics without obligatory recourse to the social; its appeal to better understand the contribution of what lies below in the emergence of what remains. This, to be sure, is not the first article to champion these emphases; it is not the first to assert our self-inflicted ignorance with respect to archaeology's true objects; it is not the first to claim that subsurface dynamics have been neglected. Despite the repeated exaggeration of novelty, within this article one finds numerous and striking similarities to work in the vein of processual archaeology and the turn to things. In what follows, I contend that Nativ's exposition of the archaeological further obscures differences that are maintained by recognizing things as the grounds for all archaeology and that his insistence on an exclusively chthonic object-in-itself betrays the ancient meaning of the term 'the archaeological'.

The archaeological is dynamic and ever-changing. Organic remains and soluble minerals leach in podzols; bacteria consume wood tablets; deposits stabilize walls composed of rubble and mud mortar. Nativ grounds his understanding of the archaeological in vibrant processes, while treating actual entities as merely derivative. However, to treat things as processes misses the fact that wood tablets, in borrowing an expression from Graham Harman (2016, 7), change because they exist rather than exist because they change. Organic remains, bacteria and rubble walls are things rather than processes (Witmore 2014), and processes change depending on the introduction of different things – if a thick layer of clay was deposited over a rubbish-filled ditch, sealing it below the water table, then bacteria would no longer find a hospitable milieu in which to enjoy their wood fodder. An anaerobic bubble, which is also a thing, results from the presence of different entities, as is the case at Vindolanda.

In accounting for the transformation of an assemblage through excavation, Nativ returns to the long-standing contrast between dynamics and statics, which he regards as 'a transposition of the distinction between buried and non-buried conditions' (p. 10). As if caught by the gaze of Medusa, dynamics are rendered static in the course of excavation and mobilization, for statics amount to an 'approximation of fixity' (p. 10). What this emphasis on dynamics and statics misses is that change is more sporadic than continuous, and stability is a norm with buried conditions. The accumulation of surfaces around a Roman arch was not simply a gradual process; it was the result of resurfacing, the addition of fill, and accumulations that occurred sporadically, punctuated by periods free from oscillation. Any excavation constitutes moments of momentous metamorphosis, whereby what is immersed in a chthonic pool of entities acquires its revealed form within other assemblages, something of which is manifest through media. The notion of statics ignores the fact that objects are staged for articulation in the midst of extensive manipulation, whereby soils are displaced; fills and deposits are reformulated

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

in spades and buckets; and other objects are shuffled through interactions with archaeologists holding trowels, writing descriptions and checking off context sheets.

Nativ can scarcely imagine a more definitive horizon than that which separates above and below, spreading out in all directions (after Edgeworth 2016). This article takes this distinction and elevates it as a fundamental divide, granting that which exists on either side legitimacy as two purified domains of reality, the buried and the social; one part consigned to the hard sciences, the other to the humanities and the soft sciences. It is strange for this article to underline how the Nature/Culture dichotomy is inadequate only to embrace (that is, reproduce) yet another bifurcation of the world, with two provinces fortified in mutual isolation. To regard the surface world as 'social' (i.e. 'on the same plain as living people', p. 21 n. 5) evokes that false image of humans holding a 50 per cent share in the reality of the atmospheric world. To maintain this oversimplified scheme, one has to ignore the trillions of 'asocial' circumstances above the surface, and 'social' rapports below.

The lifeworlds of trees, the boring bits of oil derricks, locomotive earthworms, agrarian ploughshares, excavator buckets of dredging machines, and communities of pocket gophers in the foothills of southern California (Erlandson 1984) are among the countless thingly hordes that permeate the chthonic realm. Even if we continue to list off the millions of examples of how the buried world is hardly disengaged *in toto*, Nativ could counter that all of these 'ambiguous phenomena' (p. 12) involve phase shifts in moving from solid domains to gaseous ones. But this retort fails to appreciate how the legions of objects above and below are neither exhausted by their environment nor reducible to it. A black-figure kylix exceeds its time in the sun to enter the ground, and it persists throughout its sojourn in isolated chthonic darkness to return through the extractive endeavours of our colleagues. While a buried ceramic vessel is influenced by its solid subsoil context, it is able to move into other contexts, offering up other qualities. For Nativ, it is this emphasis on things that denies archaeology its object. Things, we are told, are both too encompassing and too specific to constitute the objects of archaeology. Moreover, by completely disregarding the past and memory, what he considers to be vague alternatives to archaeology's true object, he holds this perspective as an all-or-nothing concern. The ontological turn, according to Nativ, brought about the erosion of distinctions, and constitutes yet another example of compensating for what archaeology is lacking (Nativ 2017, 664).

It is not enough to make compulsory disclaimers; one has to demonstrate how one conception can account for the objects of archaeology and the archaeological better than another. Whereas appealing to expedient holisms erodes distinctions, insisting on the utter specificity of actual entities maintains them. The example of the truck slamming into the Newport Gate in 1964, originally discussed by Matt Edgeworth (2016), is illuminating in this regard. Nativ argues that while the accumulated surfaces that encase 2.5 meters of the arch below the road surface are archaeological, the arch above the ground is not. By stating that the truck cannot initiate contact with the buried portion of the arch, there is an implicit claim that this subterranean portion exists

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

as something else. Because the arch is caught between two modes of being, the gaseous environment above, and the solid one below, Nativ's scheme must split what is undividable, thereby depriving the arch of its unity as a thing. To be sure, there is a compound object formed by the surfaces, fills, accumulated deposits and the arch, for this is what participates in the 1964 incident described by Edgeworth. However, the Roman arch persists as a whole and is capable of offering a 7.5-metre passage should city officials decide to lower the road surface in an effort to forestall future clashes with lorries.

There is undoubtedly something different about dress pens held firm within an encapsulating matrix of limestone soil and conserved bronze fibulae sitting within a display case, but these differences cannot be boiled down to a binary taxonomy grounded in their contexts or any atmospheric shifts between the surface and subsurface. Nativ is right to regard subsurface rapports as autonomous, but he is wrong to deny the same autonomy to all things, whether we speak of ceramic kylikes displaced from within the ground, archways permitting movement since the 3rd century A.D., or the soil matrices. The conundrum of archaeology's object will not be solved by dogmatically reverting to a pervasive holistic perspective or by championing a prejudicial reasoning that embraces science for the underworld while consigning the humanities and the arts to the surface.

Ultimately, Nativ's view of the archaeological cannot accommodate the laths exposed under peeling plaster, the timber framing revealed by a crumbling brick veneer, or the dust-covered piano sitting in the corner of an abandoned room. It cannot accommodate a dusty box of lantern slides, graffiti or rock art latently persisting for centuries only to be disclosed by a child. It cannot accommodate the Jackpile Uranium Mine, which, though largely buried through remediation, still unleashes particle assaults on every horse tethered in pastures below Paguate Pueblo and every driver who passes through the Arroyo Moquino along New Mexico State Road 279. Nativ's object cannot be a matter of common concern for all archaeologists, for it does not accommodate those who undertake surface survey; those who study landscapes or ruins; or those who write on the phenomenology of menhirs, or articulate abandoned council houses or drift matter accumulated on Icelandic beaches. Nativ seems to have forgotten that archaeology has an obligation to its objects, its practices and its communities (Rathje, Shanks and Witmore 2013).

Though Nativ states that the archaeological cannot account for archaeology, his notion of the archaeological cannot account for its objects either. Framing the archaeological as a mode of cultural being that belongs to the subsurface actually confuses the difference that Nativ wants to draw out. For unlike anthropology, biology or zoology, archaeology is derived from an adjective, *archaios*, rather than a proper noun, such as *anthropos*, *bios* or *zoon* (and Nativ apparently holds to the confusion of adjectives – the *archaeological* – with proper nouns – the 'object of analysis'). Etymologically speaking, it is to a quality, an attribute, of being *olden*, *antiquated*, *erstwhile* or *ancient*, rather than an actual object, that we are committed. Elsewhere, we have elided this difference by using the neuter substantive, *ta archaia*,

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

'old things' (Olsen *et al.*, 2012, 3). However, by ignoring the difference between the *archaios* and *ta archaia*, one misses an important distinction between things and the quality of being ancient or old, what we might gloss as that attribute of holding memory. A few final points should be made here.

When Nativ contends that speaking of 'the past, or evolutionary processes, or memory' is 'secondary (at best) to the archaeological mode of being' (p. 14), he obscures the fundamental character of the archaeological. For with this wonderful exaggeration, useful for polemical one-upmanship, Nativ tears free of the ancient and long-standing connotations of the term. If there has always been an emphasis on the past, change or memory, then it is because that is what the archaeological refers to. But while the etymological commitment of archaeology to study things old or ancient poses a constraint, in the sense that it orients our practices, this constraint need not (as it has always been supposed) belong to the *arche*, the starting point; it can belong to the *telos*, the solution (Witmore 2012; 2017). In other words, our objects are not the same as the outcomes. Nativ holds that 'it is the existence of this object that justifies the discipline in the first place' (p. 8). I hold that it is our objects, our communities and our ends. By dogmatically circumscribing our objects in advance, we foreclose on the bewildering range of possibilities that comes from following things no matter where they may lead us. On these grounds, the question of how to proceed belongs to a wider field of possibilities, to the creative adventure that is archaeology, which draws upon the sciences, humanities and arts.

In all of this, we cannot deny the remarkable holding power of the soil. There is an enormous below-ground difference, and Nativ is right to direct practitioners to this with new relevance. Profound though this difference is, it does not warrant the creation of yet another false divide between the two purified domains. Being old or ancient is not synonymous with being below the surface, for the wreckage of the past is above *and* below. (Indeed, the terrific turmoil of disturbances that occur above ground ensures that not all old things enter the subsurface.) The difference made by the soil belongs to it and its rapports with other things, not to the *archaeological*, for what is held within the earth, as Nativ correctly surmises, exists apart from humans and is open to all manner of rapports. For a proper study of what Nativ proposes one would have to coin a completely new term. Why not *chthonology*, the study of that which is in or beneath the soil?

It is true that archaeology overlooks the question of what formerly buried things are within the antecedent *lethe*, when not framed in the open air as 'of the past', when not treated exclusively as objects 'of human endeavour', as props or stages for human events (thus, highlighting that expressive fallacy of always seeking explanation in human terms; Olivier 2011, 15–37; Olsen *et al.* 2012, 7; Witmore 2014). The article's strengths relate to its insistence on the importance of that which occurs in the ground, even if we archaeologists can only allude to the chthonic existence of things indirectly. But we should be careful of overdramatizing the underworld, for if chthonic things lack nothing, why should we bother them? Because problems unfurl through the spirals of archaeology, and our objects, under the influence of these problems

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

and among other things within contrived settings, come to suggest something more of themselves: is this not the definition of research, to iteratively seek out, articulate and refine articulations of our objects and their rapports by turning around them?

Archaeological Dialogues 25 (1) 34–38 © Cambridge University Press 2018
doi:10.1017/S1380203818000028

Archaeology is process

*Oliver Harris**

Assaf Nativ has written an interesting and, I think, important paper. It raises critical issues around the ontological status of 'the archaeological' and indeed about the purpose and aims of archaeology as a discipline. These are clearly topics that require consideration and critical analysis. His arguments are provocative, in the best sense, in that they will lead us to reflect on some of the basic foundations of what we believe archaeology to be. Such consideration is certainly necessary to disciplinary health. That said, and after some hefty reflection of my own, I have concluded that I disagree with much of the paper's argument. In the space afforded to me I aim to set out why.

On the nature of the archaeological

Despite distinguishing himself from the broader 'ontological turn' (cf. Harris and Cipolla 2017), it is clear that Nativ is committed to a specific ontological reordering of what we understand by 'the archaeological'. Specifically, he argues, this needs to be understood solely as buried materials (and thus not matter on the surface regardless of its antiquity), and that this should be seen as cultural and not social in any way. Nativ is clearly worried that the move away from the modernist bifurcations such as Nature and Culture threatens archaeology's disciplinary definition, that it is no longer 'exclusive'. His fear is that in taking a broadly relational approach, whether in the terms of entanglement or New Materialism, we risk dissipating archaeology. In contrast, he insists that we have to 'demonstrate the reality of the archaeological' (p. 8) and only then can 'its relationships with other parts of the world … be articulated' (p. 3). In effect, his appeal here is that archaeology needs to have essential, ahistorical and undeniable qualities, which allow its clear definition as a subject. In effect archaeology needs to define its essence. Here there are striking similarities with the work of the philosopher Graham Harman (e.g. 2011), and his object-oriented ontology, who argues that we need to recognize that all objects have a withdrawn essence (which we can never access). For Harman, an object can never be defined by its relations, as the sum total of relations can never exhaust an object's possibilities. Therefore an object always partially withdraws from the world, and this withdrawn essence is what defines it as an object. The similarities with Nativ's concept of the archaeological should be clear here,

*Oliver Harris, School of Archaeology and Ancient History, University of Leicester, UK. Email: Ojth1@le.ac.uk.

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

in that he explicitly wants to define the archaeological as material that is produced in conjunction with humans (and is therefore cultural) and that withdraws from relations (through burial) and is therefore no longer social. As a result of these similarities with Harman's project, his work also bears comparison to the otherwise quite different work of symmetrical archaeologists such as Bjørnar Olsen (e.g. 2012) and Chris Witmore (e.g. 2014). Both approaches seek to move archaeology away from a narrative engagement with the past towards a more specific set of interactions.

Philosophically I come from rather a different school of thought, preferring to emphasize the relational and processual nature of existence (for examples drawing on different versions of this thinking see Crellin 2017; Conneller 2011; Fowler 2013b; Gosden and Malafouris 2015; O.J.T. Harris 2014; Jones 2012). Rather than focusing on the essential qualities of things, these approaches reject the very idea of essence to focus on the way the world emerges from, rather than prefiguring, relations. When it comes to explaining historical continuity and change, such relational explanations have more to offer us, as Chris Fowler and I argue elsewhere (Fowler and Harris 2015). Rather, then, than defining 'the archaeological' as a singular thing with an essence, demarcated entirely in terms of the presence or absence of human beings, I would suggest that we are much better off thinking of archaeology as a process (Fowler 2013b; Gosden and Malafouris 2015). This process takes place through excavation, but also in laboratories, in libraries, in offices, at conferences and in numerous other locales. It involves countless humans and non-humans, and is ongoing. The temporalities of this process are varied, and deny the rather unhelpful distinction between statics and dynamics that Nativ emphasizes. Nativ argues that 'ontological' approaches such as New Materialism have no room within them for stationary phenomena. I'm not sure I would agree. To take one example, the philosopher Gilles Deleuze, a principal source for New Materialism, asks us to attend to both 'motion and rest' (Deleuze 1988, 123), and also to the processes that bring things together, and can bind them into highly formalized strata (Deleuze and Guattari 2004, 45). Nativ acknowledges that attempts to fix archaeological phenomena are, of course, misleading; they are never fixed either in the ground or in the archive. Yet nonetheless he maintains that the fixity of the material after excavation is critical. In contrast to this I would argue quite the reverse. Before excavation, material is transformed through practices both human and non-human as we alter the drainage patterns in fields that have preserved wood, or as badgers tunnel through barrows, or as pesticides seep into the ground changing soil chemistry. During excavation, interpretation of the material is constantly shifting and altering, with differing ideas coming to the fore or departing, and these can be attended to and captured in a variety of ways (Edgeworth 2012; Cobb *et al.* 2012; Yarrow 2003). After excavation, archaeological material is returned to, reanalysed and reworked, allowing new ideas to be mapped and explored, new relations to be created and revealed and new understandings to emerge. The material is altered through conservation and sampling, through handling and wear. Whether it is radical redating with Bayesian statistics that transforms our understanding of a site (e.g. Bayliss *et al.* 2017) or the closer investigation of a single object (e.g.

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

Fowler 2013a), the beauty of archaeology is that stasis is always temporary; new understandings are always emergent.

Beyond these points, there are also a set of more practical questions I would raise. How, for example, are we to differentiate between the parts of a prehistoric monument that are above ground and those that are below? Are the parts of the trilithons at Stonehenge that lie below the surface archaeological, and those above not? If a Neolithic chambered tomb can be entered (but lies below ground) is this archaeological, or not? I would suspect that Nativ would argue that the parts of standing stones that lie above ground are not archaeological because they are social, and that the same is true for a chambered tomb. The archaeological, as a condition, thus becomes that with which we cannot interact, because it is buried. Even this definition can be queried, though. What happens if I use geophysics to detect an enclosure in a field I might want to excavate? Is that enclosure archaeological? Or does the fact it can take part in social relations (I can show it to funding bodies to persuade them to give me money, or to students to persuade them to attend my excavation) mean that it no longer meets Nativ's standards? There is no 'concrete boundary' here that I can see. Indeed this reveals one crucial difference between Nativ's argument and that of either Harman or symmetrical archaeologists: Nativ's view is anthropocentric. It is the presence and absence of human beings' awareness that defines what counts as archaeological or not. It is not merely that human beings form one part of a broader set of relationships, or that the archaeological can be defined whether or not humans know about it.

The purpose of archaeology

If we disagree about the nature of the archaeological, I am afraid that I am also somewhat in dispute with Nativ about the purpose of archaeology. Nativ argues explicitly that 'the past, society, human behaviour and cultural evolution do not pertain to the archaeological' (p. 15). His position, fundamentally, is that these are social concerns, and should be something that historians or anthropologists deal with. Archaeologists' task is to describe the 'the archaeological' and to choose sites that allow us to see how this might manifest differently. There appear to be three reasons why Nativ makes this argument. The first is that he deems this more ontologically accurate, as discussed above. The second is that this would allow archaeology to become more objective and more scientifically rigorous. At its heart, in other words, Nativ suggests that archaeology cannot engage with the kinds of questions about the past that it has traditionally – whether in culture-historical, processual or postprocessual guise – sought to answer. Furthermore, he argues, such a return to scientific 'objectivity' and a turn away from the deconstruction of Continental philosophy will allow archaeology – and indeed academia in general – to resist the marketization of universities. The third reason is that this move, he suggests, would free us from engaging in modern political and social debates, allowing archaeology to escape from being deployed to support certain claims over others. Nativ cites the complex situation in his home country of Israel as a case in point, but of course we will all be familiar with comparable (if less contentious) examples.

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

I have already indicated that I find the first of Nativ's three reasons for abandoning the traditional purpose of archaeology as to understand the past unsatisfactory for philosophical reasons, and I am equally uneasy about his other two. To begin with, claims to scientific objectivity are inherently political and far from unbiased neutrality (Shanks and Tilley 1987). Indeed, such claims silence certain voices at the expense of others (Henare, Holbraad and Wastell 2007a). The reverse of this is not, as Nativ suggests, that truth becomes a matter of opinion or that reality need be rejected. As John Barrett (2001) argued some time ago, the critical realization is that the material worlds we excavate create room for certain forms of humanity and not others; they do not permit an 'anything-goes' attitude where the truth is reducible simply to opinion. As Deleuze (2006, 23) points out, one can accept the truth of relations without having to embrace the relativity of truth. There are plenty of positions between the limited positivism that Nativ argues for and the relativism he suggests is the only possible opposition. I also, in passing, find the implicit suggestion that it is a surfeit of post-structuralism that has allowed capitalism to work its way into universities to be a pretty dubious argument. If anything it is the absence of critical analysis amongst both politicians and university leaders that has led us to our current situation, not the other way around.

I also dispute that archaeology would be better off if we could wash our hands of the politics of the present. Whilst I quite agree that archaeology should not be a purely instrumentalized subject – something that only happens in order to engage with political and social problems of the present – it seems inevitable that the human past will be put to use in politics. Indeed more than this, it seems to me inevitable that the human past is political. Whether in current issues around migration, or the inevitability of capitalism, or even how people respond to changes in climate, the human past – much of which is only available to archaeologists – has an enormous amount to contribute (e.g. Hamilakis 2016). Indeed, the past will be used in politics; the question is, do we want to be the ones telling that story or not? Do we want the past to be deployed around us whilst we proclaim that we are limited solely to the positivist study of material buried in the ground and its formation processes? As John Robb and Tim Pauketat (2013, 33) have argued in relation to large-scale histories, these stories are going to be told, and it would be better if we did it well rather than other people did it badly.

Conclusion

As I am sure is clear from the above, I take a different position on many issues from those outlined by Assaf Nativ. That said, I applaud the author for his focus on these critical themes. The article deserves to be widely read and considered because we should be asking these kinds of big questions. What is it that we study? Why are we studying it? What kinds of things can we do with that material and what consequences does that have? These are questions that are not asked often enough, and that are not reflected upon from as broad a range of positions as they should be. Whilst my desire to write narratives about the past from a New Materialist perspective, one that revels in the processual becoming of the world, might be very different from

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

the kinds of archaeology the author here wishes to see, what really matters is that these kinds of questions are being asked at all.

Acknowledgement
Thanks to Rachel Crellin for her helpful comments on a draft of this text.

Archaeological Dialogues 25 (1) 38–47 © Cambridge University Press 2018
doi:10.1017/S1380203818000107

Parts, wholes, objects and processes. A response *Assaf Nativ*

Unfortunately, I am unable in the limited available space to do justice to the perceptive and thoughtful critiques offered by the four commentators. There is too much ground to cover and there are too many venues to negotiate. While I wish to defend my position, I also wish to use this opportunity to keep this discussion going. It would be unfortunate if the exchange of views presented here led each position towards entrenchment and mutual exclusion. Thus, instead of providing a counterreaction to the objections raised, I will try to use these objections as leverage to pry deeper into the matters at stake. I do so with the hope that this will contribute to further discussion on matters that we all hold dear.

Because Edgeworth and I are in broad agreement on most of the key issues, I will set his commentary aside and focus on those offered by Lucas, Witmore and Harris, which pose significant challenges to my line of thinking. With the hope that I am not doing them too great an injustice, I will attempt to focus on what I take to be their principal objection to my arguments and then proceed to ponder briefly the nature of the difference between our views. After doing so, I will articulate the three basic arguments in support of my proposition.

I will begin with Witmore. For despite appearances, I think we are not as far apart as our rhetoric suggests. Witmore's response is largely a defence of individual things, self-contained entities and their specificity in the face of my promotion of a large-scale environmental object – the archaeological. He feels that I deny smaller objects their autonomy, render them derivative and reduce them to the settings in which they are incorporated. I do not think, however, that this is so. The individual entities Witmore is concerned with precede the social/archaeological distinction, and far from being reduced by this distinction, they are expanded. The matter at hand is one of part–whole relations and the capacity of multiple elements to assemble into a larger comprehensive entity, which is not reducible to its parts (Polanyi 1966; DeLanda 2006). To argue that the archaeological/social distinction reduces the objects involved is like arguing that life functions studied by biologists reduce chemical reactions and physical forces. We are speaking here of different levels of reality. Life functions can be studied by exploring the chemical and physical processes they contain, but chemistry and physics can never grasp life. Similarly, we can study the archaeological and the social

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

by exploring the individual self-contained objects incorporated in them, but neither the social nor the archaeological will emerge from these analyses when all we see are individual entities.

It seems, therefore, that Witmore and I differ primarily in the scale of our principal object of enquiry. While Witmore prefers to focus on specifiable entities, appreciating their self-contained being, autonomy, impact and relations, I prefer to focus on the large-scale comprehensive entities that they form collectively. The archaeological and social are two basic kinds of way in which such entities converge. I do not think, therefore, that the archaeological/social distinction undermines in any way Witmore's and others' attempt to appreciate things; if anything, it adds to it.

These comments, I think, also go some way to appease Harris, who felt that my preoccupation with the archaeological denies relationality and process. It seems inevitable to me that one will move between objects and relations. For to study an object is to explore its relations; to study relations is to explore the objects that participate in them (Fowler and Harris 2015). And indeed, a close look at the object of concern – the archaeological – will show that its constitution is relational: once through its opposition to the social and once through the numerous elements that compose it.

However, relationality need not be processual, and Harris is correct that my approach is largely atemporal and, therefore, object-oriented. Does this mean that I deny that objects are historical or that the world is contingent and plastic (McDonald 2012)? No. Despite appearances, I am not concerned with allocating ontological priority to objects over processes. Whether we begin with one or the other depends on what it is we are after; and indeed, an object-oriented approach is already implied in the question posed at the beginning of the paper: what is the archaeological object? Moreover, as Edgeworth's response illustrates, the archaeological can be studied processually: how it forms, expands, transforms and exerts an influence on other parts of the world, etc. But for this we must already have an idea of the archaeological. We can explore in great detail how various objects assemble and disassemble, but if we are to appreciate this process we also need to be able to say what they assemble into and what they disassemble from.

Thus, insofar as I read Witmore's and Harris's principal concerns correctly, I do not think our differences are irreconcilable. Lucas's objection, however, is a different matter. For Lucas it makes no sense to divorce the archaeological from the social, because the archaeological *is* social, which is, of course, the exact opposite of what I claim. As he put it elsewhere, 'we clearly cannot even talk about the archaeological record without presupposing some kind of privileging of the human; the presence of humans is what defines the archaeological and separates it from, say, the geological or palaeontological record' (Lucas 2012, 260). I agree, and this is why I continued using the concept of culture, pointing to a necessary human element. Could we be talking about the same thing? I think the answer is yes and no. Yes, because Lucas uses the notion of 'social' in a very broad sense, which I believe is similar to what I have in mind when I speak of 'culture', namely all human-related objects, patterns and phenomena. No, because I endorse a distinction that Lucas denies.

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

At bottom, as Lucas also observed, we are responding to a similar concern, but we do so in opposed ways. It can be formulated as follows. Archaeology engages empirically with objects, entities and settings that are on many accounts concrete consequences of human action, but are nevertheless non-human and often completely divorced from active social settings. For Lucas, I think, to understand this means to keep an eye on the remaining irreducible, even if indirect, human presence, to emphasize the link; for me, on the other hand, it means to keep them apart. We are responding to different aspects of the same thing.

I will try to illustrate this with reference to waste disposal and landfills. Some time ago Lucas suggested that rubbish, especially those items consigned to bins and landfills, are deconstituted material culture; whatever individuality and social identity specific objects had, they are lost once turned into rubbish, collected in a designated facility and removed from the social system (Lucas 2002). For me, however, the designation 'rubbish' is itself a particular social constitution that harbours a demand for removal or disposal; it is still part of the functioning social system. These objects and materials become socially deconstituted when also the concept of rubbish no longer applies, when the imperative of exclusion/removal that is encapsulated in this designation has been satisfied. A landfill, therefore, is a consequence of materials being designated 'waste' or 'rubbish'. But once removed and buried, they are something else, something for which none of our social designations apply. It is this alterity that is captured by the archaeological. Thus, while Lucas retains the link with the social via negation (deconstitution), I prefer to emphasize detachment via affirmation (the archaeological).

It seems to me that while this difference is irreconcilable, it is also complementary. We simply give priority to different aspects of the same condition. This is a wonderful example of what Goodman (1978) calls worldmaking, demonstrating contrasting aspects of reality. As humanists we may revel in the plurality that emerges from this discussion; we should celebrate the manner in which the archaeological gaze multiplies the world like optical illusion paintings that produce incommensurable images on a single canvas. But this is the luxury of suspended reflection. If we are to *do* archaeology, we will have to make a choice. Like a spectator of an optical illusion painting, we can only shift our attention from one image to another; we will not perceive all at the same time. We will have to choose the one image we feel most strongly about and explore it in greater detail, while relinquishing others (or allowing them to recede into the background). Thus, if I am to realize my goal of understanding the archaeological, other realities will have to be set aside: processes, social meanings, single entities, etc. The question at hand, therefore, is not in the realm of right or wrong, truth or falseness. Rather it is in the realm of purposes, ends and goals: what is it that we hope to accomplish? Or, to put it more blatantly, which of these is likely to offer us the greatest (scholarly) returns and gains?

There are a number of points that support my argument. First, it is the road not taken. Notwithstanding its transformations and development, archaeology always conceived its object socially, in the broad sense of the term. The possibility that the numerous processes and objects involved

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

constitute something different and distinct is severely underexplored. In fact, it points to a considerable epistemological void. For even if we agreed that the archaeological is real and distinct, which we clearly do not, we still have very few terms and concepts to describe what it is and to indicate its principal qualities. Is not recognizing such conceptual lacunae and working to fill them among our professional obligations?

Second, it is likely to contribute to archaeology on scientific and disciplinary grounds. Contrary to Witmore's reading, I am not promoting science as opposed to or divorced from the humanities, nor as something hard as opposed to soft. Rather, science is an attitude and an enterprise that is founded on the humanities, the only field of scholarship capable of formulating the relevant goals and standards. Indeed, science presupposes metaphysics, and metaphysics is the business of the humanities. Also unlike Harris's impression, I do not view science as equivalent to positivism or empiricism in any strict sense. Science is evoked as a standard and an ideal, as a principle to direct and guide our practice. By science I mean the aspiration to achieve solid, valid and certified knowledge; science that observes, engages and manipulates the world in order to understand it better. Good science, to my mind, is also one that knows its limits, that can tell where it can and cannot go, acknowledging the point when it moves from solid and responsible conjectures to educated guesswork. Unlike the past or a broad concept of society that cannot react directly to what we say about them, the archaeological is sufficiently present and concrete to resist our claims and formulations; this, I think, is key. On the disciplinary side, I think that capitalizing on the archaeological in the way I propose also carries the capacity to better define and claim our standing among other fields. Being distinct is not the same as being insular; it only means that our capital and authority are well delineated, and this does much to define the contribution we offer. A scholarly field is also constituted and appreciated by the place it carves out for itself.

Last is the issue of the service we provide the wider public. It is important to recognize that in many respects the academic and public spheres are incommensurable; they have different loyalties, principles and objectives. The public sphere entails matters of citizenship, human rights, equality and social regulations; the academic sphere is dedicated to the production of certified knowledge, comprehension and clear thought. While it is a tenuous relationship, academia serves the public – clarifying complex matters, complicating oversimplified ones, offering new concepts and ideas – and the public supports academia, financially but also morally. Thus for this relationship to work properly academia must remain autonomous and distinct, withholding its own unique professional standards: freedom of enquiry, universalism, organized scepticism, etc. (Merton 1942; Ziman 2000). As scholarly practice becomes informed by public discourse, however good the intentions may be, the mutual benefits are compromised in the long run. Universalism gives way to particularism, clarity gives way to interested thought, curiosity gives way to utilitarianism. Consequently, the public recieves poorer service, which eventually results in lack of faith and reluctance to support academia. This is a slippery slope and I suspect we may be farther down it than we think.

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

The rise of the concept of 'post-truth' is a glaring warning sign. It denotes the recession of careful and balanced reasoning (that is supposed to be) exemplified by academia in favour of more emotionally charged, confused and short-sighted thinking. It is a sign of mistrust in academic institutions and scholarly thought, a mistrust I suspect we rightfully earned. If this condition is to be rectified, the scientific community must demonstrate that it can generate valuable ideas and concepts without throwing in the mix ideological positions, however justified, that belong in the public sphere. 'Post-truth' is a challenge thrown at academia and one to which I think it is crucial we respond. My argument is, therefore, not for the depoliticization of science, but for engagement in a particular form of political action that takes the scientific ethos seriously and insists on the productive role of scholarship in a liberal democratic society. I am less concerned here about how politicians and interested groups may use the past and other archaeological claims; I am principally worried about our capacity and justification to resist them, to pull away the mask of scientific validity that they adorn themselves with.

I will stop here. There is a great deal that is left unanswered and much more to be said. But I hope the somewhat provisional remarks offered here will help keep this discussion going. I am grateful for the excellent and provocative comments offered; they certainly got me thinking in many interesting ways. I hope the readers of this discussion will benefit from it as well.

References

Bailey, G., 2007: Time perspectives, palimpsests and the archaeology of time, *Journal of anthropological archaeology* 26(2), 198–223.

Bailey, G., C. Newland, A. Nilsson and J. Schofield, 2009: Transit, transition. Excavating J641 VUJ. *Cambridge archaeological journal* 19(1), 1–27.

Barrett, J.C., 2001: Agency, the duality of structure, and the problem of the archaeological record, in I. Hodder (ed.), *Archaeological theory today*, Cambridge, 141–64.

Bayliss, A., C. Cartwright, G. Cook, S. Griffiths, R. Madgwock, P. Marsall and P. Reimer, 2017: Rings of fire and Grooved Ware settlement at West Kennet, Wiltshire, in P. Bickle, V. Cummings, D. Hofmann and J. Pollard (eds), *Neolithic Europe. Papers in honour of Alasdair Whittle*, Oxford, 249–77.

Binford, L.R., 1975: Sampling, judgement and the archaeological record, in J.W. Mueller (ed.), *Sampling in archaeology*, Tucson, 251–57.

Bourdieu, P., 1990: *The logic of practice*, Stanford, CA.

Bowker, G.C., and S.L. Star, 1999: *Sorting things out. Classification and its consequences*. Cambridge, MA.

Braun, B., 2004: Nature and culture. On the career of a false problem, in J.S. Duncan, N.C. Johnson and R.H. Schein (eds), *A companion to cultural geography*, Malden, MA, 151–79.

Brown, B., 2001: Thing theory, *Critical inquiry* 28(1), 1–22.

Brück, J., and L. Nilsson Stutz, 2016: Is archaeology still the project of nation states? An editorial comment, *Archaeological dialogues* 23(1), 1–3.

Bryant, L., 2011: The ontic principle. Outline of an object-oriented ontology, in L. Bryant, N. Srnicek and G. Harman (eds), *The speculative turn. Continental materialism and realism*, Melbourne, 261–78.

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

Bryant, L., N. Srnicek and G. Harman (eds), 2011: *The speculative turn. Continental materialism and realism*, Melbourne.
Capelotti, P.J., 2010: *The human archaeology of space. Lunar, planetary and interstellar relics of exploration*, Jefferson, NC.
Cobb, H., O.J.T. Harris, C. Jones and P. Richardson, 2012: Reconsidering fieldwork, an introduction. Confronting tensions in fieldwork and theory, in H. Cobb, O.J.T. Harris, C. Jones and P. Richardson (eds), *Reconsidering archaeological fieldwork. Exploring on-site relationships between theory and practice*, New York, 1–14.
Conneller, C., 2011: *An archaeology of materials. Substantial transformations in early prehistoric Europe*, London.
Connolly, W.E., 2013: The 'new materialism' and the fragility of things, *Millennium. Journal of international studies* 41(3), 399–412.
Crellin, R.J., 2017: Changing assemblages. Vibrant matter in burial assemblages, *Cambridge archaeological journal* 27, 111–25.
DeLanda, M., 2006: *A new philosophy of society. Assemblage theory and social complexity*, London.
Deleuze, G., 1988: *Spinoza. Practical philosophy*, San Francisco.
Deleuze, G., 2006: *The fold. Leibniz and the baroque*, London.
Deleuze, G., and F. Guattari, 2004: *A thousand plateaus. Capitalism and schizophrenia*, London.
Douglas, M., 1966: *Purity and danger. An analysis of the concepts of pollution and taboo*, London.
Edgeworth, M., 2012: Follow the cut, follow the rhythm, follow the material. *Norwegian archaeological review* 45, 76–92.
Edgeworth, M., 2014a: Archaeology of the Anthropocene. Introduction, *Journal of contemporary archaeology* 1, 73–77.
Edgeworth, M., 2014b: The relationship between archaeological stratigraphy and artificial ground and its significance in the Anthropocene, in C.N. Waters, J.A. Zalasiewicz, M. Williams, M. Ellis and A. Snelling (eds), *A stratigraphical basis for the Anthropocene*, London (Geological Society Special Publication 395), 91–108.
Edgeworth, M., 2016: Grounded objects. Archaeology and speculative realism, *Archaeological dialogues* 23(1), 93–113.
Edgeworth, M., D. de B. Richter, C. Waters, P. Haff, C. Neal and S.J. Price, 2015: Diachronous beginnings of the Anthropocene. The lower bounding surface of anthropogenic deposits, *Anthropocene review* 2(1), 33–58.
Erlandson, J.M., 1984: A case study in faunalturbation. Delineating the effects of the burrowing pocket gopher on the distribution of archaeological materials. *American antiquity* 49(4), 785–90.
Evans, G.R., and D.E. Packham, 2003: Ethical issues at the university–industry interface. A way forward?, *Science and engineering ethics* 9(1), 3–16.
Ferraris, M., 2014: *Manifesto of new realism*, Albany, NY.
Fowler, C., 2013a: Dynamic assemblages, or the past is what endures, in B. Alberti, A.M. Jones and J. Pollard (eds), *Archaeology after interpretation. Returning materials to archaeological theory*, Walnut Creek, 235–56.
Fowler, C., 2013b: *The emergent past. A relational realist archaeology of Early Bronze Age mortuary practices*, Oxford.
Fowler, C., and O.J. Harris, 2015: Enduring relations. Exploring a paradox of new materialism, *Journal of material culture* 20(2), 127–48.

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

Franklin, S., 2003: Re-thinking nature–culture, *Anthropological theory* 3(1), 65–85.
Gibbons, M., C. Limoges, H. Nowotny, S. Schwartzman, P. Scott and M. Trow, 1994: *The new production of knowledge. The dynamics of science and research in contemporary societies*, London.
Giddens, A., 1984: *The constitution of society. Outline of the theory of structuration*, Berkeley, CA.
González-Ruibal, A., 2014: Returning to where we have never been. Excavating the ruins of modernity, in B. Olsen and Þ. Pétursdóttir (eds), *Ruin memories. Materiality, aesthetics and the archaeology of the recent past*, London, 367–89.
Goodman, A.H., D. Heath and M.S. Lindee (eds), 2003: *Genetic nature/culture. Anthropology and science beyond the two-culture divide*, Berkeley, CA.
Goodman, N., 1978: *Ways of worldmaking*, Indianapolis.
Gosden, C., 1999: *Anthropology and archaeology. A changing relationship*, London.
Gosden, C., and L. Malafouris, 2015: Process archaeology (p-arch), *World archaeology* 47, 701–17.
Gould, S.J., 1965: Is uniformitarianism necessary?, *American journal of science* 263, 223–28.
Haila, Y., 2000: Beyond the nature–culture dualism, *Biology and philosophy* 15(2), 155–175.
Hamilakis, Y., 2016: Archaeologies of forced and undocumented migration, *Journal of contemporary archaeology* 3, 121–39.
Härke, H., 2014: Archaeology and Nazism. A warning from prehistory, in V. Mordvintseva, H. Härke and T. Shevchenko (eds), *Archaeological and linguistic research. Materials of the Humboldt-Conference (Simferopol–Yalta, 20–23 September, 2012)*, Kiev, 32–43.
Harman, G., 2011: *The quadruple object*, Winchester.
Harman, G., 2016. *Immaterialism. Objects and social theory*, Cambridge.
Harris, E.C., 2014: Archaeological stratigraphy. A paradigm for the Anthropocene, *Journal of contemporary archaeology* 1(1), 105–9.
Harris, O.J.T. 2014. (Re)assembling communities, *Journal of archaeological method and theory* 21, 76–97.
Harris, O.J.T., and C.N. Cipolla, 2017: *Archaeological theory in the new millennium. Introducing current perspectives*, London.
Harrison, R., 2011: Surface assemblages. Towards an archaeology in and of the present, *Archaeological dialogues* 18(2), 141–61.
Hasselberg, Y., S. Rider and A. Waluszewski, 2013: Conclusion. On the verge of breakdown, in S. Rider, Y. Hasselberg and A. Waluszewski (eds), *Transformations in research, higher education and the academic market. The breakdown of scientific thought*, London, 201–14.
Henare, A., M. Holbraad and S. Wastell, 2007a: Introduction. Thinking through things, in A. Henare, M. Holbraad and S. Wastell (eds), *Thinking through things. Theorising artefacts ethnographically*, London, 1–31.
Henare, A., M. Holbraad and S. Wastell (eds), 2007b: *Thinking through things. Theorising artefacts ethnographically*, London.
Hessels, L.K., and H. van Lente, 2008: Re-thinking new knowledge production. A literature review and a research agenda, *Research policy* 37(4), 740–60.
Hodder, I., 1997: 'Always momentary, fluid and flexible'. Towards a reflexive excavation methodology, *Antiquity* 71(10), 691–700.

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

Hodder, I., 2011: Human–thing entanglement. Towards an integrated archaeological perspective, *Journal of the Royal Anthropological Institute* 17(1), 154–77.
Hodder, I., 2012: *Entangled. An archaeology of the relationships between humans and things*, Malden, MA.
Hodder, I., 2014: The entanglements of humans and things. A long-term view, *New literary history* 45(1), 19–36.
Hodder, I., 2016: *Studies in human–thing entanglement*, at www.ian-hodder.com/books/studies-human-thing-entanglement.
Jones, A., 2004: Archaeometry and materiality. Materials-based analysis in theory and practice, *Archaeometry* 3, 327–38.
Jones, A.M., 2012: *Prehistoric materialities. Becoming material in prehistoric Britain and Ireland*, Oxford.
Kagan, J., 2009: *The three cultures. Natural sciences, social sciences and the humanities in the 21st century*, Cambridge.
Kellogg, D., 2006: Toward a post-academic science policy. Scientific communication and the collapse of the Mertonian norms, *International journal of communications law & policy* (Fall), at SSRN: https://ssrn.com/abstract=900042.
Kristiansen, K., 2014: Toward a new paradigm? The third scientific revolution and its possible consequences in archaeology, *Current Swedish archaeology* 22, 11–34.
Kuhn, T.S., 1970: *The structure of scientific revolutions*, Chicago.
Latour, B., 1993: *We have never been modern*, Cambridge, MA.
Latour, B., 2005: *Reassembling the social. An introduction to actor-network theory*, Oxford.
Latour, B., 2014: Agency at the time of the Anthropocene, *New literary history* 45(1), 1–18.
Law, J., 2009: Actor-network theory and material semiotics, in B.S. Turner (ed.), *The new Blackwell companion to social theory*, Oxford, 141–58.
Leach, E., 1970: *Claude Lévi-Strauss*, New York.
Lévi-Strauss, C., 1963: *Structural anthropology*, New York.
Lucas, G., 2002: Disposability and dispossession in the twentieth century, *Journal of material culture* 7(1), 5–22.
Lucas, G., 2005: *The archaeology of time*, London (Themes in Archaeology).
Lucas, G., 2012: *Understanding the archaeological record*, Cambridge.
Lucas, G., 2013: Afterword. Archaeology and the science of new objects, in B. Alberti, A.M. Jones and J. Pollard (eds), *Archaeology after interpretation*, London, 369–80.
Lucas, G., 2015a: Archaeology and contemporaneity, *Archaeological dialogues* 22(1), 1–15.
Lucas, G., 2015b: Evidence of what? On the possibilities of archaeological interpretation, in R. Chapman and A. Wylie (eds), *Material evidence*, London, 311–23.
Lyman, R.L., 1994: *Vertebrate taphonomy*, Cambridge.
Lyotard, J.-F., 1991: *Phenomenology*, Albany, NY.
McDonald, H.P., 2012: *Speculative evaluations. Essays on a pluralistic universe*, Amsterdam.
Merton, R.K., 1942: A note on science and democracy, *Journal of legal and political sociology* 1, 115–26.

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

Monbiot, G., 2003: Guard dogs of perception. The corporate takeover of science, *Science and engineering ethics* 9(1), 49–57.
Nativ, A., 2017: No compensation needed. On archaeology and the archaeological, *Journal of archaeological method and theory* 24, 659–75.
Olivier, L., 2011: *The dark abyss of time. Archaeology and memory*, Lanham, MD.
Olivier, L., 2013: The business of archaeology is the present, in A. González-Ruibal (ed.), *Reclaiming archaeology. Beyond the tropes of modernity*, Oxford, 117–29.
Olsen, B., 2010: *In defense of things. Archaeology and the ontology of objects*, Lanham, MD.
Olsen, B., 2012: After interpretation. Remembering archaeology, *Current Swedish archaeology* 20, 11–34.
Olsen, B., M. Shanks, T. Webmoor and C.L. Witmore, 2012: *Archaeology. The discipline of things*, Berkeley, CA.
O'Sullivan, T., J. Hartley, D. Saunders, M. Montgomery and J. Fiske, 1994: *Key concepts in communication and cultural studies*, 2nd edn, London.
Pétursdóttir, Þ., 2012: Small things forgotten now included, or what else do things deserve?, *International journal of historical archaeology* 16(3), 577–603.
Pétursdóttir, Þ., 2013: Concrete matters. Towards an archaeology of things, Tromsø (PhD dissertation).
Pickering, A., 1995: *The mangle of practice. Time, agency and science*, Chicago.
Pickering, A., 2011: Ontological politics. Realism and agency in science, technology and art, *Insights* 4(9), 2–11.
Polanyi, M., 1966: *The tacit dimension*, New York.
Rathje, B., M. Shanks and C. Witmore (eds), 2013: *Archaeology in the making. Conversations through a discipline*, London.
Rathje, W., 1992: *Rubbish! The archaeology of garbage*, New York.
Rathje, W., 2001: Integrated archaeology. A garbage paradigm, in V. Buchli and G. Lucas (eds), *Archaeologies of the contemporary past*, London, 63–76.
Rathje, W., and C. Murphy, 2001: *Rubbish! The archaeology of garbage*, Tucson.
Rheinberger, H.-J., 1997: *Toward a history of epistemic things. Synthesizing proteins in the test tube*, Stanford, CA.
Rider, S., 2009: The future of the European university. Liberal democracy or authoritarian capitalism?, *Culture unbound. Journal of current cultural research* 1, 83–104.
Rider, S., Y. Hasselberg and A. Waluszewski (eds), 2013: *Transformations in research, higher education and the academic market. The breakdown of scientific thought*. London.
Robb, J.E., and T.R. Pauketat, 2013: From moments to millennia. Theorizing scale and change in human history, in J.E. Robb and T.R. Pauketat (eds), *Big histories, human lives. Tackling the problem of scale in archaeology*, Sante Fe, 3–33.
Schiffer, M.B., 1972: Archaeological context and systemic context, *American antiquity* 37(2), 156–65.
Schiffer, M.B., 1987: *Formation processes of the archaeological record*, Salt Lake City.
Shanks, M., 2001: Culture/archaeology. The dispersion of a discipline and its objects, in I. Hodder (ed.), *Archaeological theory today*, Malden, MA, 284–305.

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016

Shanks, M., D. Platt and W.L. Rathje, 2004: The perfume of garbage. Modernity and the archaeological, *Modernism/modernity* 11(1), 61–83.
Shanks, M., and C. Tilley, 1987: *Re-constructing archaeology*, London.
Silberman, N.A., 1995: Promised lands and chosen people. The politics and poetics of archaeological narrative, in P.L. Kohl and C. Fawcett (eds), *Nationalism, politics, and the practice of archaeology*, Cambridge, 249–62.
Solli, B., 2011: Some reflections on heritage and archaeology in the Anthropocene, *Norwegian archaeological review* 44(1), 40–54.
Staski, E., and L.D. Sutro (eds), 1991: *The ethnoarchaeology of refuse disposal*, Tempe.
Sterckx, S., 2011: Patenting and licensing of university research. Promoting innovation or undermining academic values?, *Science and engineering ethics* 17(1), 45–64.
Thomas, J., 2015: The future of archaeological theory, *Antiquity* 89(348), 1287–96.
Thrift, N., 2008: *Non-representational theory. Space, politics, affect*, London.
Trigger, B.G., 1984: Alternative archaeologies. Nationalist, colonialist, imperialist, *Man* 19(3), 355–70.
Trigger, B.G., 1990: *A history of archaeological thought*, Cambridge.
Turner, V., 1969: *The ritual process. Structure and anti-structure*, Ithaca, NY.
Van Gennep, A., 1960: *The rites of passage*, Chicago.
Weber, M., 2004: Science as a vocation, in D. Owen and T.B. Strong (eds), *The vocation lectures*, Indianapolis, 1–31.
Webmoor, T., 2007: What about 'one more turn after the social' in archaeological reasoning? Taking things seriously, *World archaeology* 39(4), 563–78.
Webmoor, T., and C.L. Witmore, 2008: Things are us! A commentary on human/things relations under the banner of a 'social' archaeology, *Norwegian archaeological review* 41(1), 53–70.
Witmore, C., 2007: Symmetrical archaeology. Excerpts of a manifesto, *World archaeology* 39(4), 546–62.
Witmore, C., 2012: The realities of the past. Archaeology, object-orientations, pragmatology, in B.R. Fortenberry and L. McAtackney (eds), *Modern materials. Proceedings from the Contemporary and Historical Archaeology in Theory Conference 2009*, Oxford, 25–36.
Witmore, C., 2013: Which archaeology? A question of chronopolitics, in A. González-Ruibal (ed.), *Reclaiming archaeology. Beyond the tropes of modernity*, Oxford, 130–44.
Witmore, C., 2014: Archaeology and the new materialisms, *Journal of contemporary archaeology* 1(2), 203–46.
Witmore, C., 2015: No past but within things, in M. Mircan and V.W.J. van Gerven Oei (eds), *Allegory of the cave painting*, Antwerp, 375–94.
Witmore, C., 2017: Things are the grounds of all archaeology, in J.M. Blaising, J.P. Legendre and L. Olivier (eds), *Clashes of times. Archaeology in the age of presentism*, Louvain.
Wolfe, C., 2010: *What is posthumanism?*, Minneapolis.
Yarrow, T., 2003: Artefactual persons. The relational capacities of persons and things in the practice of excavation, *Norwegian archaeological review* 36, 65–73.
Ziman, J., 2000: *Real science. What it is, and what it means*. Cambridge.

Downloaded from https://www.cambridge.org/core. Instituto De Biociencias, on 26 Mar 2019 at 18:26:12, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/S1380203818000016