

□ Archaeology and the New Materialisms

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Abstract

This article revisits the object of archaeology in light of the New Materialisms. Orienting recent work around three propositions with respect to the reality and definition of things—that is, things are assemblages, things are participants, and things are things—it lays out the core features of the New Materialisms and goes on to address some compelling methodological issues. Ultimately, this article raises a challenge; that New Materialist perspectives reveal a self-definition for archaeology, not as the study of the human past through its material remains, but as the discipline of things, as an “ecology of practices” that approaches the world with care and in wonder.

Introduction

Sir Mortimer Wheeler, that illustrious voice of a reasoned archaeological imagination, never tired in asserting that archaeologists dig up people, not things (1954, v; also Hawkes 1982, 6). There was certainly a time when archaeologists, whether they fervently endorsed this credo or not, put forth a litany of aphorisms that pointed to a deeper, more fundamental reality: the “Indian behind the artifact” (Braidwood 1958) or the system behind both the Indian and the artifact (Flannery 1967). Such an attitude is pervasive still when turf embankments, glass bottles or plaster surfaces are treated as mere vehicles to something else, to those societies that supposedly left such vestiges behind. Without denying the significant contributions of these endeavors, something new is occurring when books, journals, blogs, conference proposals and session papers now proclaim stranded Skodas, nuclear testing grounds, forgotten cemeteries, steamboats,

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or polygonal walls to be no longer derivative of some monopolizing agency or ontologically privileged entity. This new work challenges those assumptions that a relic wall of mudbrick is important insofar as it provides access to the maker's hands that shaped it (Olsen *et al.* 2012; also Hodder 2012). This new work possesses no presuppositions that matter is less interesting, less nuanced than the person who presumably welded it, controlled it, disposed of it. Archaeology, as this work increasingly demonstrates, furnishes far more than "a sort of history of human activity" (Childe 1944, 2). In this work we find a sustained effort to grapple with the reality of soil-encrusted relics, detritus and ruins without recourse to a theoretical apparatus that passes over actual objects for the supposedly greener pastures of language, interpretation or meaning—a position that has enjoyed something of an orthodoxy for several decades now. For reasons that will soon become clear, let us generically label this work the New Materialisms.

The New Materialisms challenge archaeologists not to see cobbled surfaces as mundane backdrops to the real events of life; not to peer through multiple layers of plaster for a deeper reality of household renewal; not to look beyond the pot, the awl or a stone enclosure for explanations concerning the reasons for their existence. They challenge us not to probe the allegedly transcendent realms of culture, subjectivity or meaning for answers to why things are—all entities are participants within their own emergence (Witmore 2012a; after Whitehead 1978 [1929]). While attributes of the New Materialisms have deep roots (e.g. Leroi-Gourhan 1943; Schiffer 1976; Rathje 1979; Gould and Schiffer 1981; LaMotta 2012), they have gathered increasing steam over the last five years and more, emerging out of the various turns initiated in the late 90s: the ontological turn, agentive turn, species turn, the turn or re-turn to things and so forth (see Preda 1999; Domanska 2006; Trentmann 2009; Alberti *et al.* 2011; Olsen 2012a).

In this article I aim to identify what I regard to be the key features of this promising new trend within archaeology.¹ To this end, I structure the essay around three general propositions associated with the New Materialisms, each arguably more radical than the last: (1) things are assemblages; (2) things are participants; and (3) things are things. Subsequently, I move on to tackle some compelling methodological issues. All totaled, this work, I suggest, enables us to think of an archaeology without the Past; that is, without a separate realm where lives were lived over yonder, to which we gain access through its material remains and which guides these efforts. Thus I argue that work under the rubric of the New Materialisms further reveals how archaeology has shed its old definition as the study of the human past through its material remains in favor of a more befitting self-definition as the discipline of things, as an "ecology of practices" that approaches the world with care and in wonder.²

While the New Materialisms are gaining favor across a number of fields (Bennett 2010; Coole and Frost 2010; Dolphijn and van der Tuin 2012), I limit myself here to changes related to archaeology. I also part company with some other variants of the "New

1. I am not alone in this. Here, I draw deeply upon a decade-long collaborative effort called "symmetrical archaeology" (for recent work, see Olsen 2012b; Olsen *et al.* 2012; Webmoor 2012a).
2. Borrowing a notion developed by Isabelle Stengers (2005), "ecology of practices" refers to archaeology as a specific community and a distinctive habitat including a mesh of interconnected spaces, objects and practices (for a more detailed treatment, see Olsen *et al.* 2012; Witmore and Shanks 2013).

Materialism” by beginning with actual things (cf. Coole and Frost 2010; Dolphijn and van der Tuin 2012). The New Materialisms are here enrolled as somewhat more than a convenient shorthand. While it is difficult to strike upon what is precisely common to the various practices and orientations among things that numerous practitioners are currently attempting to define, all endorse a series of propositions that are far-reaching enough to be recognized as a full turn from the days when things were mere intermediaries to something else (Domanska 2006; Trentmann 2009; Olsen 2012a; Pétursdóttir 2012).

What are the New Materialisms and how are they relevant to archaeology? Materialisms are here understood to encompass the recognition that archaeologists begin with material things and that they follow this stuff wherever it may lead (Edgeworth 2012; Olsen *et al.* 2012). The “New” signals a radical difference in orientation and perspective with respect to what this is that archaeologists do, and this cannot be painted as an unadorned reversal of the vastly oversimplified duality of people and things. While we might say that the New Materialisms are centered on things, these are not Wheeler’s things; they are not even Heidegger’s things. The precise meaning of both “materialism” and “things” will be developed throughout this article. However, some words are necessary here by way of introduction.

Materialism places empirical considerations of rapports between discrete, tangible entities front and center. And, as Levi Bryant suggests, it does so in a way “that realism—that admits the existence of incorporeal entities free of the constraints of material finitude—does not” (Bryant 2012; also see Bryant *et al.* 2011). A common definition of materialism conflates this word with an ontology that reduces the world to specific, material properties: a glass cup is understood in terms of the tangible properties of silica, its viscosity, density or surface tension (Harman 2011a). Wall plaster is of less consequence than lime, lard, dung or egg yokes—its material constituents—or those material properties that allow it to adhere to wood and mudbrick (cf. Keane 2006; Ingold 2007a). By contrast, the New Materialisms are *irreductionist*. To state that *poleis*, democratic institutions, donkeys or allotment machines are material need not imply that they are reducible to their components. Hence, the weight on *materialisms* in the plural serves to distinguish the New Materialisms from a reductive emphasis on material properties (also see Bogost 2010), much less, one that leads to that generality of humans behind everything. This denial of reductivism is not to say that explanation is not possible; rather, it is to recognize just how risky and tentative it is. New Materialisms, in going forward into the world, regard things as both bewildering and inexhaustible. Thus from the beginning they embrace a position of awe, wonder and even naiveté (Olsen *et al.* 2012; also Bennett 2010; Harman 2011a, 7).

If there is a materialist motto, then Isabelle Stengers has penned it for us: “we never get a relevant answer if our practices have not enabled us to produce a relevant question” (2011, 373). We may connect this with a trust, as is well stated by Matt Edgeworth, in “the power of emerging evidence to re-shape our actions and thoughts” (2012, 77; also see Malafouris 2010 on material engagement theory). So New Materialisms urge us to follow the things! This does not mean we return to a notion of concrete empirical practice severed from the airy realm of theory. Practical actions can tend to misrepresent and oversimplify things as much as theoretical considerations (Harman 2011a; Webmoor 2012a).

So what counts as things? Air and soil, rain and sea, wooden doors and stone orthostats, nitrogen-fixing bacteria and clovers, psycho-political commitments to Rome and Hadrian's Wall, Corinthian perfume jars and dead Etruscans, mycorrhizae and maple trees, hoplites and the Athenian assembly, minke whales and lemmings, the Hudson River and steamboats, the god Apollo and the Pythia; all are things, and the only thing that *should* be absent from this roster is an utter prejudice that would lead to the banishment of “bad” things (see discussion in Olsen *et al.* 2012, 17–35). Importantly, nothing should be excluded because of an arbitrary divide between made and unmade objects, artifacts and ecofacts or externs, kinetic and inert, humans and non-humans. These are not things as “objective matter in opposition to subjective language, symbols, values, or feelings” (Latour 2005, 76). The relationship between a goatherd and his droves should be no more and no less privileged than that between the goats and the tasty greens that direct iterative patterns of transhumance (Aldred 2012). Of course, not all the work associated with the New Materialisms assumes this default ontological position, rather it comes together in a renewed concern with things; one that aims to place them at center.

Two additional provisos should also be made here. First, there is a growing sense that understandings centered on a privileged relationship between human and world cannot adequately account for the litany of crises and situations we now face globally (Doman-ska 2010; Bryant *et al.* 2011). While of incredible importance, these post-humanistic rationales, amplified by a state of perpetual alarm, can at times overshadow solid empirical reasons for embracing New Materialist perspectives, as I hope to demonstrate in what follows. Second, every example I evoke in this article deserves careful reading and consideration—a sentence or paragraph cannot adequately stand in for an article, much less a book. Our colleagues and communities of practice deserve the same sense of wonder and humility as that which we bring to the other things of the world. Readers are invited to explore these works for themselves, and more—whenever possible I include expanded citation as an indication of this research. Overall, these points hint at the relevance of the New Materialisms for archaeology and *vice versa*, which is admittedly a broader issue that will be addressed in what follows.

Things are assemblages

Approaches that begin with things often place stress upon the etymology of the term rooted in the Old German word *ding*, which denotes *gathering* or *assemblage*. Indeed, the laptop I am typing on is just such an *assemblage* of heterogeneous elements—from the wiring, speakers, myriad algorithms and design of the processor to the labor of thousands of engineers, dozens of laboratories, the Intel Corporation, the cleanrooms necessary for its manufacture, the mining of rare earth elements in China and the cascade of mathematical calculations leading from Archimedes of Syracuse to Newton and Leibniz to Geoffrey Dummer (the British engineer credited for the conceptual design of the microchip).³ Unpacking how things gather or assemble is important precisely because, among other reasons, this endeavor helps to demonstrate how taking things to be inanimate objects

3. Graham Harman takes up the example of a MacBook in his discussion of black boxes in *Prince of Networks* (2009, 33).

(forcibly) settled into a separate district from intentional human subjects is a modernist charade (Latour 1993; Webmoor and Witmore 2008; Harman 2009, 57–68). Of course, historians of technology or media archaeologists have all sorts of other rationales for tracing such networks. In the capable hands of Charles and Ray Eames, for example, the computer results from the convergence of calculating and statistical machines and logical automata (Fleck 1973), thus adding nineteenth-century designs such as the Babbage difference engine to the composition of my 2011 laptop. If the faraway is demonstrated to be simultaneously present then one has no recourse to myths of privileged access such as *homo faber* (man the maker) or expedient syntheses centered upon the grandiose accomplishments of great men, precisely because many more interlocutors contribute to a given situation. Moreover, such assemblages run against the assumption that, as Gilbert Simondon put it, “technical objects contain no human reality” (1980 [1958], 1) or that human beings contain no object reality (Olsen *et al.* 2012).

While we may note the different valence from normative definitions of “assemblage” as artifacts juxtaposed in site-specific configurations within archaeology (Lucas 2012, 193–198; also Harrison 2011), the notion of thing-as-assemblage is perhaps best encapsulated by Manuel DeLanda’s (2006) reworking of this Deleuzian notion (also see Bennett 2010; within archaeology see Normark 2010a, 2010b; Harrison 2011, 2013a, 2013b; Lucas 2012; Olsen *et al.* 2012). For Delanda, every entity, no matter how big, no matter how small, is an assemblage; that is, they are always assembled from other entities and so on. While an assemblage is not a seamless whole, it is also not an aggregate that lacks “properties that are more than the sum of its parts” (2006, 5). Throughout this article there will be many points of contact with Delanda’s ontology. For now, it is worth underlining how the emphasis on things as aggregates or heterogeneous ensembles often falls short of understanding how a thing’s properties exceed its components; or how, as Ian Hodder observes, material affordances create potentials and constraints at different historical moments (2012). He suggests that we are better served by zeroing in on “the dialectical tension” of historically contingent “dependence and dependency” that characterizes the rapports between humans and things (Hodder 2012, 94).

In the course of cultivating his theory of entanglement Hodder repeatedly returns to the example of clays from houses at the Neolithic site of Çatalhöyük in Turkey. Residents, he argues, were entrapped by the material properties of the smectite-rich clays used for building house walls. These clays expand with water and contract when moisture is lacking. For clay walls to persist requires people to re-cover the surface with plaster (as many as 450 times in one case), to shore up walls with wooden supports, or even enroll “ancestors” by placing skulls at the bottom of support posts (Hodder 2012, 66). For Hodder, humans rely on things, things rely on other things, things rely upon humans, and humans upon other humans (see also Hodder 2011). These mutual dependences entrap humans within entanglements from which it is difficult to find an exit. Hodder defines things as “flows of matter, energy and information,” and these flows “produce hard matter that endures” (2012, 218). Of course, this emphasis on mutuality is centered upon that overdramatized distinction between humans and the world. The emphasis, however, upon things as flow resonates somewhat with Timothy Ingold’s recent critique of the hylomorphic model, reiterating earlier work by Gilbert Simondon (Ingold 2012a).

Hylomorphism is the dualism of matter (*hyle*) and form (*morphe*), where form is an intelligible design, seemingly imposed from the outside on what is assumed to be inert and flaccid matter in trajectories of making. In contrast, Ingold “assigns primacy to the processes of formation as against their final products, and to the flows and transformations of materials as against states of matter” (2011, 210). Ingold regards this “matter-flow” as vital materials (with no overt connection to the work of Jane Bennett). While Ingold also denies the presence of any supreme agency behind their making, “buildings, plants, pies and paintings” are seen nonetheless as derivative of the generative currents that led to them (2011, 215). In being swept up in these trajectories of movement, concrete things are, more or less, swept away—this is an important point of distinction with other work under the rubric of the New Materialisms (cf. Coole and Frost 2010; Dolphijn and van der Tuin 2012). Furthermore, change is ripped from the grips of actual entities and situated in the dynamic flows and fluxes; a move also witnessed in the work of both Henri Bergson and Gilles Deleuze (see Harman 2011b, 295).

While there is much common and fertile ground between Ingold’s ecology of materials and archaeology (see Ingold 2012a), Ingold’s answer to the problem of *hylomorphism* is nonetheless fundamentally *unarchaeological* in two senses. First, the actual things, with which archaeologists always begin, are sidelined as protagonists in favor of a pre-individual vitality—a move made earlier by Simondon (see Harman 2011a). Recall how this stance clashes with the aforementioned proposition that things are participants in their own emergence, which is Alfred North Whitehead’s ontological principle: “nothing floats into the world from nowhere” because “[e]verything in the actual world is referable to some actual entity” (1978 [1929], 244). In other words, individual entities are primary. Second, the lineaments behind the making of things do not determine them; their past does not subsume them. Defunct herring factories, Ottoman bridges, Venetian bastions, oxcarts or steam shovels forget much of what comprised their lines. While I will return to the issue of the realities and emergence of the past in the next section, there is more to be said regarding where we start and this is a good place to bring in Actor-Network Theory (henceforth ANT).

Do we begin with some primal, underlying current of forces and flows, as Ingold and Simondon maintain, or with actual entities? For ANT, it is the things-themselves that are to be followed, rather than their material components, melodramatic processes or *a priori* assumptions concerning the nature of the real. James Dolwick (2012) provides a good example of this in his work with steamboats.

Taking issue with those who would look beyond ships and boats to networks of seafaring and maritime connectivity, Dolwick turns to actual steam ships and boilers (well, what remains of them), promoters and marking plans, newspapers such as the *Evening Post* and passenger testimonies, rivers and navigation rights (2012, 127–221). In tracing the associations between these things we learn how processes behind the eventual triumph of steamships and the further reduction of distance—connected with changes in speed, navigation (with steamships there is a different relation to the weather and seasons) and power (from wind or muscle to fossil fuels)—owed as much to advertisements and tireless promotion by boosters, patent laws and rivalries between competitors as it did to the actual implementation of “better” technology. Understanding the technological

changes brought on through steam travel involves the meticulous detailing of the actual entities, rather than some amorphous pre-individual vitality. Importantly, a steamship is an ensemble comprised of heterogeneous elements, but to isolate any one component is to miss the collective action of all the mediators in understanding the eventual triumph of steam power (Latour 2005). Still, an issue with ANT, as Olsen (2010) and others (Harman 2009; Bogost 2012) have argued, is that a stranded Skoda, a decaying farm house or Sámi reindeer camp are emphasized less than their linkages, networks or alliances.

With this observation we arrive at the very pivot round which turn numerous, current debates, philosophical or otherwise (Alberti *et al.* 2011; Harman 2011a; Bryant 2012). Are relations internal or external to things? In other words, do relations determine, for example, what an Archaic Greek ceramic krater is to the point that it is inseparable from its relations, or can this vessel break with its relations and still retain its core being? Such philosophical questions might seem a distant concern for archaeology, but they are of vital importance with respect to the realities of the past. For this krater to exist separate from its relations—separate from its provenance (i.e. found in an Etruscan tomb near Chiusi in 1844), mythology (it has 200 figures depicting scenes such as the funeral games of Achilles' friend Patroclus), the names of Kleitias and Ergotimos, the “painter” and “maker” of the vessel, or its current milieu in the Museo Archeologico, Florence—would be akin to it existing in a realm evacuated of any other entities or associations; Whitehead refers to this as a “vacuous actuality” (1978 [1929], 29). As Steven Shaviro suggests “[n]othing comes into being once and for all; and nothing just sustains itself in being, as if by inertia or its own inner force” (2009, 20). For Whitehead, the krater bundles these relations and if we somehow manage to take away its provenance or remove the name Ergotimos, for example, it perishes as the actual entity that it currently is—it would no longer be the same thing (Witmore 2012a). Archaeologists know only too well the difference between a looted statuette and a richly documented assemblage of burial goods, but perhaps even more fundamental is the issue as to whether or not the krater behind the glass case is a unified object or multiple things.

In addition to our current crisis of interpretation (Olivier 2011, 33), this question is of relevance to numerous controversies around matters of “heritage,” whether we speak of the Parthenon marbles displayed in the British Museum, the Valley of the Nobles in Egypt or land at the center of a conflict between Picuris Pueblo and Oglebay Norton Specialty Minerals in New Mexico (regarding the latter see Smith 2010). In any of these cases, who or what assumes a more privileged position in claiming what the real world is really like? Can we say that works of art on pedestals are by-products of an original situation as part of a pedimental sculptural ensemble? Can we be so sure that we begin with a separate past of Eighteenth Dynasty tombs? Or can we describe the world left to Pueblo people as one to be felt, smelt and seen but never fully comprehended except via the natural sciences? How can one know in advance what the solid, indisputable, unquestionable reality *really is*?

As Bruno Latour has so effectively argued, the modernist bifurcation of nature allowed the natural sciences to “conflate unity, reality and indisputability” (2005, 116) far too quickly. Cavalier in how they dispensed with plurality, the social sciences placed emphasis upon multiple cultures, beliefs, interpretations and so forth but left the undergirding of

a unitary world intact. Latour's point (as is Michel Serres's) is to ask whether we can distribute unity and multiplicity in a different way (Latour 2007; also see Law and Mol 2002). Here lie the powers of Latour's notion of "matters of concern"—those shared worries, obligations and things around which groups gather—in circumventing that opposition between those who believe and those who know (2005). Treating marbles in the British Museum, rock-cut voids on the West Bank of the Nile, or land as many different things is akin to understanding these things as ongoing events or *performances* caught up in a perpetual process of emergence. As Karen Barad contends, they are "never finished" (2007, ix; also Marshall and Alberti 2014). We might even say that they are not matters of the "Past" or "Nature" that remain silent, for they too have politics. Certainly, things as political matters are born out of such controversies. Those who are serious about recognizing relations to be part of the composition of such things go on to logically argue that we are speaking of very different modes of existence and hence *realities in the plural*.

While this stance, akin to a kind of diplomatic or agile metaphysics, holds huge potential (Alberti *et al.* 2011; Witmore 2013; Marshall and Alberti 2014), something, nonetheless, is missing from this argument (Olsen *et al.* 2012). Because, in all of this, we learn nothing about battered torsos carved in Pentelic marble. We miss out on the work that rock-cut rooms do in providing sealed floor space for a sarcophagus or a house basement. We fail to understand how a mountain offers itself to be comprehended in different ways by extraction equipment, bulldozers, dump trucks and particle conveyors, in contrast to generations of Pueblo people obtaining micaceous clay for ceramic production. None of these things are completely exhausted by their relations, so how can we claim that the marbles in the Duveen Gallery are, for British Museum Trustees, different entities from those marbles that draw crowds of impassioned Greek students to the columned entrance off Great Russell Street in London? Do such arguments completely undermine the independence and autonomy of these things?

Carved marbles, former tombs and native lands are irreducible to their networks—a point of which Latour is quite aware (Latour *et al.* 2011). Again, none of these things are merely aggregates of their smaller pieces—an assumption Graham Harman refers to as "undermining" (2011a, 8–10). Nor are they bundles of their qualities or properties—what Harman refers to as "overmining" (2011a, 10–13). We might say that they are both more and less than the sum of their parts. We might contend that relations are both external and somehow hardened internally, if these observations can even mesh with the recognition that bricks, triremes or trenches in the Spanish Civil War do not "gain their reality from elsewhere" (Harman 2011a, 10). The point is that segments of the Roman road of Dere Street, fishing nets and beer bottles are entities in and of themselves (for complementary arguments see Olsen 2010; Lucas 2012). And these unified things not only *have*, but also *do*.

Things are participants

Among many of us today, the former self-claimed monopoly of human actors with the lion's share of mastery and control over agency is an unhappy feature of the past. There is no shortage of texts that underline the agency of things. With Roosevelt-like

conviction, we learn repeatedly of an oak's power to act and work, wet clay's capacity to interrupt, to provoke, to disrupt, to detour a course of action, or how sheep may affect the whole of the British Lake District. With respect to archaeology, such things are now card-carrying members among those creative entities involved in the co-production of the past. Intermediaries become mediators (Latour 2005). Still, to deny a carved rock surface the position of vehicle to social relations among Scandinavian hunters is not to deny the possibility of understanding the memory that the rock surface holds; rather, it is to accord them a position as *participants* in anything that may be revealed about *their* past. This also raises the question of how the past is realized. However, to recognize things as participants is not to bid *adieu* to a situation where there is an inequitable distribution of the capacity for action once and for all. It has been well said that this hydra grows its many heads anew when the break-up of a monopoly comes by distributing its old shares wholesale to the previously repressed (Pétursdóttir 2012). Humanity, yet again, reaffirms its own narcissism by remaking the world in its image. Let us take up each of these issues in this section.

Within archaeology there are, to be sure, many examples of work where agency appears to have been stripped from the grips of a freestanding human subject and redistributed among other entities in the world (Schiffer with Miller 1999; Jones 2007; also see Knappett 2012). While there are many species of this move (see Olsen 2010, 135–139), a key starting point is to sever the Gordian Knot that links agency to “consciousness and intentionality,” write Carl Knappett and Lambros Malafouris, otherwise “we have very little scope for extending [agency's] reach beyond the human” (2008, ix). A fast wheel makes a difference in the production of a pot; a crucible steel blade makes a difference on the field of battle. If something can be shown to “modify a state of affairs by making a difference” it is an actor (Latour 2005, 71). Is this ability to make a difference, asks Olsen (2012a), a matter of the inherent qualities of a thing or a feature of relations between different entities? Clearly, different approaches vary on their answer. Symmetrical archaeology, a decade-old exemplar in this trend, argues how “things are capable of making an effect, acting on other entities,” not only because of their relations but also because of their concrete being (Olsen 2012b, 213). To recognize things as full-fledged participants, all entities must be placed on the same ontological footing.

A chunk of rubber from a boat fender is no more and no less important than the chips of rubber flaked from it. Equally the rapport between chips of rubber and a patched boot is no more and no less important than that between the foot of a POW and the snow-covered ground. Ian Bogost has pinned the maxim for such a “flat” or “democratic” ontology well when he states: “*all things equally exist, yet they do not exist equally*” (2012, 11; also see Bryant 2011a).⁴ For them not to exist equally is a recognition that there are of course winners and losers—the point is that one doesn't assume the nature of an entity from the start, but insofar as possible, strives to allow entities to define themselves. This implies a level of agnosticism, in terms of the memories left behind and the construction of the past, to which I return below.

4. The term “flat ontology” is derived from Delanda's *Intensive Science and Virtual Philosophy* (2002).

Even then, not every position that argues for the difference things make can be characterized as a wholehearted endorsement of “thing-power”—the agency of nonhumans becomes a concern for archaeologists who remain aloof from such an ascription. “Recognizing that objects can and do possess purposeful agency for many peoples,” according to William Walker and Linda Brown, “can move us closer to developing social models that reflect the primacy others placed on interactions with these important community members” (2008, 297). Here, amid this emphasis upon recalcitrant “objects that possess agency” we encounter animate things as a half-measure to account for a “causal consequence [...] on the course of human activity” (298). This leaves humans firmly in command, as those entities that ultimately bring “questions and interpretations [...] to our research” (297). To go down the path of the New Materialisms is to put to one side any Gell-like agency (Gell 1998) that situates one secondary set of labors as derivative of another, primary, set.

This question of the power of things begs the question of where they fit in our understandings of the past. In this, I am not so much concerned here with the place of thing-power for the Athenian assembly or Roman auxiliary soldiers, but for us now: the New Materialisms challenge us to revisit the empirical grounds of our practices, which remain unsettled (Webmoor 2012b; Witmore 2012a). Hand in hand with things as participants comes a reconsideration of memory.

In recent years, a growing number of works have revisited conventional notions of memory—a willful and conscious act of recollection—supplied by historians and sociologists, in light of a broader and more diverse field of material memory (Jones 2007; Mills and Walker 2008; Lucas 2012). While many connect the question of memory with thing-power, Olsen best articulates the point: things “are effectively engaged in assembling and hybridizing periods and epochs” (2010, 108). With example after example, and against all species of reductionism—including the notion that things are traces or residues of something else—Olsen demonstrates how things make the past simultaneous and co-extensive within the present (also see Witmore 2007). In their way, things resist a historicism that renders the past as successive, as something that passes away. Here, Olsen proposes a lesser-known etymological connection for “thing” to a possible root “*tenku*,” which suggests “duration” or “extended, stretched time” (2010, 109), and he argues that different degrees of duration impact our orientation as to whether an object is old or historical: “While some objects must be replaced many times during a work task, a season, or a human life cycle, others can slumber as contemporary ready-to-hand items for several human generations without ever drawing attention to themselves as present-at-hand historical objects” (Olsen 2010, 115). We may connect Olsen’s insights with another remarkable contribution to archaeological understandings of things and memory, by Laurent Olivier (2011).

In a sustained assault on the prerequisite of historical intelligibility for what remains of the past, Olivier seeks to renew archaeology as the “science of the past” that contributes not to the material illustration of history *per se*, but to its alternative (also see Witmore 2007; Pétursdóttir 2012). Archaeology deals in detritus, rags, rubbish, what history passes over, what history cannot convey due to its incoherence, banality, erratic partiality. And matters of archaeological concern hinge upon the memories that these things hold

as to their genesis and erstwhile involvements. It is worth recalling how ontologically, archaeology does not deal with what was; it deals with what becomes of what was, and what was, ostensibly, is always ongoing in its formation (Olsen *et al.* 2012; Shanks 2012). In other words, we always encounter remnants as what they *are*, not what they *were*, and what a line of stone reveals concerns *its* erstwhile lives. Whether or not it casts light on another entity's existence is up to the remnant wall. Thus, the wall holds a "special kind of involuntary memory" (Olsen 2010, 170; also Andreassen *et al.* 2010; Pétursdóttir 2013), rather than one that fulfills the expectations of history. Drawing on the work of Walter Benjamin, among others, with Olsen and Olivier we encounter a refreshing mnemonic realism, which marks a radical distinction between archaeology and every other form of historical science. With both, while the genetic history of a thing is retained, it cannot completely account for things. With both, memory passes from a willful, recollective faculty exercised by humans among themselves to a general ontological feature of the world (also see Lucas 2012 on the autoarchive). In this, things are witnesses, not to the past or a past *per se*, but to their own stubborn ability to retain the marks of erstwhile interactions.

The specter of that seemingly primal rapport of humans and the world has hampered archaeological attempts to come to terms with its empirical grounds—call this the "archaeological record" (Lucas 2012); call this material memory. Assumptions that materials constitute direct memory of past human interactions are beyond pervasive. Michael Schiffer, in his ground-breaking and still surprisingly fresh book *Formation Processes in the Archaeological Record*, connected this tendency of inference with "a set of principles known as correlates, which relate behavioral phenomena to material and spatial phenomena" (1987, 5). First it is always presumed, as with Wheeler, that the pot, the layer, the "cut" is related to human experience in some way. Schiffer gave a name to this in his work on formation processes: c-transforms (1976). In reality it is rarely, if ever, the case that a context provides as clear a memory of human interaction as we like to believe. This observation should not be confused with Schiffer's other name, used for nonhuman interactions: n-transforms. For our purposes here we may note three key distinctions in how the New Materialisms approach the archaeological record: (1) we begin with actual entities rather than processes; (2) the past-as-it-was is not a starting point, but an outcome of such work, and processes are the outcomes of interactions between actual entities; (3) formation processes as articulated under the rubric of behavioral archaeology, and understandings of the archaeological record in general, succumb to the assumption that humans are necessary ingredients in every situation, in the sense that they stand behind what has become of what was, hence its position is correlationist—the world of things cannot be conceived without humans (Meillassoux 2008; Lucas 2012).

Points one and two are closely associated, so let's take these together. As Gavin Lucas has indicated, formation theory views the archaeological record as, in a sense, an endpoint (2012, 74–123). With the New Materialisms this view is flipped on its head and the past is situated as an emerging product of work done with things. On the slope of Ntourtiza an archaeologist does not on first encounter engage remnants of *opus-incertum* arches encrusted in calcium carbonate as the Hadrianic aqueduct, because the



FIGURE 1. Remnants of aqueduct on the slope of Ntourmiza, Greece, June 2010 (Photograph by author).

Hadrianic aqueduct (Figure 1) is an emergent entity whose qualities, and the processes behind them (the slow encrustation of calcium carbonate), are themselves defined in the course of archaeological or antiquarian engagement (Lolos 1997; Olsen *et al.* 2012). Clearly, the past is no longer a foreign realm separated off by a kind of DMZ (González-Ruibal 2006, 2008; Harrison 2013a). “The past does not lie behind us, like some older state of things. It lies ahead of us, with us” (Olivier 2011, 9). What then are we to make of the emergent past?

The notion of construction has left a sour taste in the mouths of many, but that is because these authors continue to oppose realism to constructivism (Latour 2003; also see discussion in Solli *et al.* 2011). Thus we often fail to recognize how the practical labor of archaeology is simultaneously real and artificial. For Lucas, in his outstanding book *Understanding the Archaeological Record*, the archaeological intervention is a continuation of processes of materialization; it “is a form of rematerialization, constructing new assemblages and objects by combining old parts (e.g. potsherds, stone tools, soils) and new products (e.g. photographs, drawings, texts)” (2012, 258). By subsuming archaeology to a larger archival process—that is, the formation of the archaeological record and speaking of both archaeological and formational processes in the same terms—Lucas avoids a vulgar ontological exceptionalism, which would see archaeologists stand apart from that which we engage. In this constructive process, the “what” of archaeology cannot be separated from the “how.” Equally, construction takes place between floodwaters and levees, mortar and stone, lost Egyptian tombs and gold-inlaid ebony footstools.

We might also speak of terms such as co-construction or co-production (Given 2013), so long as we recognize that these processes do not require the presence of a human being. Construction is a pervasive ontological attribute of the world and not a kind of crafting that is restricted to the “social” (see Bryant 2011b). This brings us to the third point of distinction within formation processes.

Centered on the primal rapport of humans and world, c-transforms and n-transforms are vast oversimplifications of a diversity of beings, and play up arbitrary distinctions as if they were more fundamental than others. We could well imagine other ways of dividing things up: interactions between air and surface, between water and materials, or between microbes and their fodder. In other words, things go on perturbing one another when humans cease to be part of the picture. A former house may be transformed through relations with bacteria, hedgehogs, water, compaction, etc. The vast majority of what archaeologists encounter results from such rapports and this material memory goes hand in hand with anonymity. Does the horizon of a linear ditch bear the memory of the act of cutting or the last exposure of a weathered slope impacted by rain and seasonal depositions of organic matter? The kind of memory that things hold often tells us little of whether materials strewn across an abandonment level resulted from the reuse of a structure as a sheepfold, a series of exceptional snow storms, the collapse of a roof made of olive wood after many years of exposure to the weather (rapports between microbes, fungi, water and wood), the cumulative labors of generations of badgers, children playing a game in a ruin, or the probing roots of oak trees. While Lucas would agree with this, he is quite wary of the potential dangers associated with de-emphasizing and deprivileging humans as our ultimate matters of concern. Ultimately, Lucas argues archaeology will always be first and foremost about people, not things (2012, 261).

Such an emphasis is far from unreasonable. It should be repeatedly stressed, the New Materialisms do not purposefully ignore or reject human beings. One, however, acknowledges up front that we humans are beings among other beings in the world. While this could be construed as a question of emphasis, it is here presented foremost as a question of empirics. Again, our ability to get at specific kinds of things is not so straightforward. By setting out our beacons in advance we run the risk of falling back into the trap of overdetermination. By beginning with what we actually deal with, we keep things more open-ended. Ontologically privileged entities tend to bask in the warm sun, while the memories of others—our fellow creatures, goats and cattle, pigs and horses, for example—remain in cold shadow. This move is necessary not because we avoid some vulgar ontological exceptionalism, though this is important, but because we ultimately better care for the memory of the past in all its richness, including the attribution of any connection to past peoples—risky, tentative, afforded by things, and always open to challenge. Perhaps even more succinctly, we are beginning to catch glimpses of how none of these things are simply things *for* humans.

Things are *things*

London in 2012 gathers something of London in the 1830's into its nooks and crannies, even if we think of the nineteenth century as long past; a pair of eyeglasses assembles something of achievements from fifteenth-century Venice and Egypt in the second

millennium BCE despite their apparent spatio-temporal distance; and yet throughout the foregoing narrative, I have repeatedly emphasized how things, whether we speak of today's London or my glasses, cannot be exhausted by their relations. In placing emphasis on the irreducibility of things, I have specified how for the New Materialisms no thing can completely account for something else. It therefore stands that all things hold something in reserve. A hammer is a full-fledged participant in making a sword, and yet the difference the hammer makes cannot be subsumed within the correlation of blacksmith and forge. The hammer exceeds all species of contact. This brings us to a key question for the New Materialisms, whose default realism implies—no, demands—a struggle with, as Harman states it, that “strangeness in reality that is not projected onto reality by us” (Brassier *et al.* 2007). What is it to let things be things?

Olsen, in what may be regarded as a signature work for the New Materialisms in archaeology (2010), goes to great lengths to explore the character and significance of things in and among themselves. Why is a boat, chair, axe or stove reliable? Giving wide berth to “meaning” as conventionally understood within a broader system of signification, Olsen testifies to their normal state of ready-to-hand being; their reliability in kinetic tasks—precisely the place where vocabulary routinely fails to grasp what meaning cannot convey (see Gumbrecht 2004). In its everyday, habitual, taken-for-granted mode of existence, a road, a bridge, a house is far more interesting than what has always been assumed. To state the case another way, these things are not symbolic consumables, but the sources of their own signification (also see Benso 2000). Olsen underscores those properties that slumber and are released in interactions between a boat and wind or a kayak and water. He suggests that the difference these things make should also be understood in terms of their size, mass and physiognomy—it matters what boat, which wind, what kind of kayak, in which waters. Moreover, these things are discrete entities that also exceed their properties and qualities—a critical point also emphasized by Lucas (2012) and others (Olsen *et al.* 2012). For archaeologists to care for things implies a respect and commitment to their own being. To care for things also demands a defense against their further concealment and repression. Even so, things are often admitted to the heterogeneous collective under the pretext that their unruly and ambiguous character is normalized (Olsen 2012a). And, in so doing, we continue to fail at appreciating their otherness.

Finding fault with what she regards as gestural attempts at inclusion, Póra Pétursdóttir (2012) asks to what extent do the efforts to “include” things as full-fledged participants in society actually contribute to their further assimilation as “humanized others” and thus, to a continued species of neglect? While we continue to argue that things deserve better, Pétursdóttir speculates as to whether “part of the problem resides in the belief that a moral corrective is somehow inherent to our modes of inquiry and our choice of perspective” (Pétursdóttir 2012, 586). Drawing insight from the work of Nandy and Olivier among others, Pétursdóttir targets the imperative of history itself, which continues to guide archaeological research agendas and dominate conceptions of the past. In a superb discussion of Eyri, an abandoned herring factory in Iceland, Pétursdóttir points out how this site could bear witness to big stories concerning the limits of capitalism or the expectations and consequences of early twentieth-century industrialization.

However, to do so would be to situate the site as a means to an end, as a vehicle to signification, and Eyri itself would be lost in historical translation. The thingness, the otherness of gigantic cogwheels, oil centrifuges, banal blue combs, or writing-strewn concrete walls is explained away and “their right to be included” among the stories of history “is mistaken for their right to *be*” (Pétursdóttir 2012, 578). And sometimes things in themselves defy that basic archaeological imperative to make sense of a situation, to observe and recognize the material past in a reliable, consistent and repeatable way.

In an encounter with the floor of a stock room, Pétursdóttir takes pause:

Here I was confronted with a *landscape* of things—of something and nothing which I had no means of grasping. This entanglement of non-things and nothings evaded every category, every concept, every instrument I mastered. I could not name them, I could not count them. They did not obey as I kneeled down to tell them apart. Yet their presence was beyond doubt, and even grew stronger with my despair. (Pétursdóttir 2012, 597)

In this room, Pétursdóttir breaks rank with all those who would see the past outside of history as historically knowable, and yields to this untamable presence. Overwhelmed, she is forced out. In a brave concession, she admits that the cacophonic jumble defies coherent witnessing (Figure 2). It is exceedingly rare to hear of an archaeologist granting things the upper hand. It is extraordinary to witness true humility in the face of a debris-strewn room; to learn of a trust that leads one, not down that path where we have everything at our disposal to deal with such situations, but to pass on such hubristic confidence altogether. These things, it would seem, are doing just fine without an archaeological intervention. And through Pétursdóttir’s example we learn just what is implied by the New Materialist dictum to take things seriously. Is such a move part of what it is to truly care for things in themselves? And with such moves do we achieve a truly democratic ontology?

Pétursdóttir is wary of how ethics are “extended” to things. She is suspicious of the notions of care and democracy with respect to archaeological engagements with things. To care for things, contrary to being a wholly altruistic moral imperative, entails a relationship of control. With an awareness of the genealogy of the concept in science studies, which draws its insights from the world of healthcare, Pétursdóttir suggests that “the thing is placed under the rule and authority of another” (2012, 598; after Domanska 2006). Likewise, democracy falls short of the mark in accounting for an ontology where things are given equal share. Underlining the conventional translation of the Greek roots *kratos* (rule), of the *demos* (people), Pétursdóttir reminds us that things are not best served by “*power to the people*” (2012, 588).

Still not every move that passes on that mind-numbing twofold of animate humans amid inanimate things can be characterized as a simple matter of *extending* human qualities to things as if they were formerly lacking (Webmoor and Witmore 2008). For symmetrical archaeology it was, and remains, a project of *recomposition*—we should not forget that the very notion of what it is to be human, of what it is to be a thing, has also changed (Latour 2005; Olsen *et al.* 2012). Humans are now, and have always been, participants among others. It follows that this project involves more than claiming that



FIGURE 2. Stock-room floor at Eyri (Photograph by Póra Pétursdóttir, used with permission).

action, memory, interpretation, subjectivity or perception are no longer the exclusive domain of human being; on some level, one could contend that these features never were (Margulis and Sagan 1995). Lime mortar perceives stone. A rill of water interprets a wall.

There is, of course, much merit to Pétursdóttir's excellent point that giving formerly human-monopolized domains back to the world sounds exceedingly familiar and doesn't adequately account for the differences that belong to rust-covered relics of the Icelandic herring industry. And it is these differences that we now struggle to capture. In recognizing things as things, one has to be utterly specific. Not all things share the same properties. A rill of water does not "interpret" a remnant wall in the same way as a survey archaeologist or a tractor. Here, Pétursdóttir's example to actively wonder (after Stengers 2011; also Webmoor 2012a; Witmore 2012b) about how to pose relevant questions concerning an abandoned herring community, without imposing the kinds of questions that always matter for archaeologists, is a powerful and important consideration. Still, the New Materialisms are not about the rejection of human perspectives—it is here that we may connect to Lucas's point that archaeology is about, or rather *circumscribed* by, people (2012, 261). It would be utterly absurd to deny the differences that humans make to the world. These differences, however, should not become a site for ordering existence with radical divides, exclusivities or privileged being (Bryant 2011a; Harman 2010, 2011a). *The aim is not to remove humans but to stop believing that we hold a fifty-percent stake in ontological shares on reality.* Thus we continue our labors with a new kind of humility, curiosity and hope that radically increases the number of perspectives among herring, nets, factories and oil tanks. The independence of these things cannot be supplied by parties that are lured in—it can only be given by the thing in itself, including its rapports.

In this there is a need for an open vocabulary that carries no empirical weight. Words will always fall short of things, but they also allow us to mobilize *something* of them (Latour 1999; Witmore 2006, 2009). Not every term stained by notions of human exceptionalism or mastery should be cast aside. Words are worth fighting for; yes, these too are things.

So what are we to make of ethics, care and democracy? Olsen, Shanks, Webmoor and I have argued that because “morality is rooted in a modernist humanism crafted to maintain the autonomy and sovereignty of the human subject” ethics cannot be “extended” to things (not that this is by any means a simple matter); rather, they need to be reformulated and broadened (Olsen *et al.* 2012, 206). Yet it does not follow that all entities exist on equal ethical footing. Abandoned herring factories have different needs and desires, but those do not trump human *self-interest*. In this regard, care is a generous attitude. Care is not the exclusive poster child of the healthcare system, with its hospitals impacted by Bentham-inspired prison design; care implies an immanent kind of devotion, nurturing and compassion-filled disposition among things and between things (Olsen *et al.* 2012, 207). Care implies an appreciation for an entity’s wellbeing and a respect for it in its own being (Olsen 2012a). Care, curation (from Latin *curare*: to care) is also a condition of the rapports between non off-gassing styrofoam and a black-figure amphora in the RISD museum, between pozzolana-lime concrete and brick in walls of *opus reticulatum*. The fact that we learn from Pétursdóttir’s engagement with the things of Eyri also implies care for a community of archaeologists and, yes, *self-interest* expressed through the act of publication.

And what of democracy? The ancient Greeks, in their non-modern wisdom, maintained another old meaning for the term *demos*, which also connotes “district, land or country,” “the place where people live,” or the “commons or commonalty.” Such polyvalence was never doused among the ancients and that leaves plenty of room for non-humans in the Greek notion of *demokratia* without squelching their bewildering and strange differences (Rathje *et al.* 2013; Witmore 2011). Still, there is more to be said about how to approach things. How are we to mobilize and manifest them? It is with respect to method that archaeology is so very different from other New Materialist endeavors, and here it has much to offer.

Approaching things

Unlike other fields that confront the realization that there is bewildering diversity of things out there that make a difference, our first inclination as archaeologists is not one of surprise that leads to the subsequent registration of many forms of being, as Bogost suggests (Bogost 2012, 38). Archaeological publication contains millions of items that, when all totaled, constitute a mountain of marvelous material miscellany, in addition to a vast wealth of experience and understanding. On one level, this is part of why we do fieldwork, and one of archaeology’s most admirable skills is found in its practical, tactile engagements with what has become of the past. Thus, our problem has never been one of failing to register jet beads, oak roots, carnivore scats, clay deposits or the bone memories of tuberculosis—the terrain of the natural sciences is not new to archaeologists—rather, as we have seen, our problem has been one of looking for something more, something deeper, something else, whether this

endeavor was tied to an imperative of history (Olsen 2010; Olivier 2011; Pétursdóttir 2012; González-Ruibal 2013a) or a will to (over)interpretation (Olsen 2012). All archaeologists are guilty of these sins. But now our charge is to return to confront a realism not projected onto the world by us; to confront a world of things in all their wonderful and splendid peculiarity.

So where does one begin and end in approaching things?

The answer to this question follows on from what archaeologists already do best, by picking up bits and pieces in a kind of pragmatic and opportunistic bricolage. We take whatever a given situation demands in beginning with things, in their midst, and following them wherever they lead; it is this commitment that has largely contributed to our disciplinary diversity (Olsen *et al.* 2012). How far one goes with such feral work arises out of a whole series of considerations, both practical and metaphysical, and these cannot be laid out programmatically. We may, nonetheless, specify some helpful propositions, such as symmetry and irreduction, as guides in approaching things. A good archaeological account cannot be accomplished cheaply; it demands careful and exhaustive description combined with media saturation. While infidelity has afforded us the realization that we have often overshot our targets, a renewed fidelity demands more iterative engagement in returning to things missed. Let us address these points in turn.

Though often misunderstood (see discussion in Latour 2005, 75–76), the principle of symmetry helps one to approach things with an agnostic, even naïve disposition (Webmoor 2012a; Witmore 2011). Don't take this in the smug sense of the skeptical critic who remains aloof from the seemingly wayward beliefs of others. Here "agnostic" is understood in the sense that we do not decide in advance what role various entities play in a given situation by imposing arbitrary hierarchies of value or preformed dogmas concerning the nature of the real (cf. Skibo and Schiffer 2009, 22). Symmetrical archaeology strives to allow entities to define, to frame, themselves. If we are not to encumber things "with interpretative burdens they mostly are unfit to carry" (Olsen 2012a, 22); if we are not to lose them to the imperative of history, then we are well advised in taking two steps back in granting dignity to all participants in a given situation. Thus we place them on the same footing by default. This position is tied to the principle of irreduction, with which we have already dealt—no entity can ever exhaust, fully encapsulate, or be reduced to another (Harman 2009, 17–18).

Through excavation, archaeology has long struggled with the overwhelming moment of encounter and the question of what we take away. Of course, archaeologists have long been innovators in crafting other modes of fieldwork, whether through refined programs of survey (Cherry 2003) or more open styles of object-oriented engagement (Andreassen *et al.* 2010; Harrison and Schofield 2010; Harrison 2011, 2013a). Viewed often as a means to the end of publication, the importance of the tactile experience itself often goes underappreciated in fieldwork (however see Shanks 1992; Tilley 2004; Edgeworth 2012). Cutting back water-saturated heath from a concrete platform in a light rain, peeling away layers of a metallised surface amid a cacophony of mopeds, cars and lorries in the heart of Athens, attempting to find the path of a road supposedly Bronze Age in date under the unrelenting heat of the midday sun; these aspects of

kinetic experience are central to our encounters with things (Olsen 2012b; Olsen *et al.* 2012). In approaching things there should be little doubt that details deserve more than a measure of explicit consideration. In every situation, the following rings true: undertake thick, careful description (Pearson and Shanks 2001, 53–67).

One hundred and fifty years of archaeological practice has born witness to the fact that with our modes of documentation there is always a displacement, a transformation, a focus on signal at the expense of noise. Here it pays to bear in mind how habit, routine and procedure can make one inattentive to the ambiguities and ineffable qualities of things rendered as background clatter. Things defy intelligibility as much as they may provide a thin ledge upon which to hang history, something that is ultimately quite foreign to them, and in that moment we run the risk of their oblivion (Olivier 2011, 181). Here, it also helps to recall that our media, our modes of engagement, comprehend things differently (Witmore 2006; Ryzewski 2009). So, break habits. Disrupt routine. Experiment with other modes of engagement (Witmore 2009). Saturate, oversaturate, with video and photography. Shatter the photographic frame, aim for collage (Figure 3; see Shanks 1992, 180–194). Then describe and describe some more—all this descriptive detail one can unpack later, if there is time, in a space where hesitation is possible. Dozens of hours of ambient video walks along routes of transhumance, along paths, streets, walls, or through museums; video diaries of those confounding moments of contact with weird stuff will pay off later. Still, anything we do in documentation is always a translation. We can only manifest something of the style of things; much will always remain beyond reach. There is always a trade-off. There are always gains and losses. And there is always more to be said and done (Joyce 2011).

Purpose and responsibility should not be severed from this issue of approach. Why are you there? What do you gain? Why should you have interest? By centering our agendas on things we gain a little traction in sidestepping overdetermination, we place a historical imperative on hold. Perhaps someone else will take it up later, or not.

With the New Materialisms, we draw even closer the long-standing recognition that no matter how much advanced design or preparation one may bring to an encounter, thought usually follows on the kinetic experience. It is time to acknowledge that theory cannot be applied (Witmore 2012b); rather it is more like that moment of clarity when an expression seems adequately to stand in for intuitions that arose out of iterative relations with a WHS trowel and soil-discoloration-turned-strange-pits in a former Roman military barrack block. And yet what happens when the path leads to indetermination? What do we do when we encounter gaps? How do we leave room for what may be hidden? Sometimes a new path presents itself because no other possibility remains. To “trust” that a possibility will reveal itself is different from being “confident;” that is, to carry on with the attitude that we have everything at our disposal to confront any situation.⁵

We are obliged to raise the question of veracity at every twist and turn. This is not only a question of trust. One has to understand what the question of doubt reveals about the adequacy of an archaeological description. Even more perplexing is the impossibility of

5. Here I am drawing on an argument made by Stengers (2011) concerning the distinction between “trusting” and “being confident in.”



FIGURE 3. Rear yard of abandoned house at 24 Nafplion Street, Argos, Greece, July 2008 (Photograph by author).

full verification under the weight of scrutiny. Against a standard notion that once skepticism sets in the validity of the statements are called into question or the data become irrevocably suspect, the status of archaeological descriptions, I suggest, should always be approached with a spirit of caution, rooted in a deep awareness of just how risky and tentative is the act of reaching an adequate archaeological account. What grounds the linkage of a series of pits to processes of tanning? What testimony does a round concrete surface bear to its erstwhile existence as a machine gun platform? Such questions arise not from the stance of the remote skeptic, but from the less hubristic understanding that the inexhaustibility of things always leaves us with more at which to marvel.

In addition to thicker descriptions of archaeological experience, there is a need to carefully detail the paths taken by things displaced in the course of archaeological work. Lay out with excruciating intricacy the itinerary followed by a tagged stone mortar from a recently plowed field at Petrothalassa to the shelf of a storeroom in Porto Kheli, Greece. Traceability of work done combined with retroactive verification provides us some recourse beyond skepticism (Witmore 2009). If things exceed relations, if a land is inexhaustible, then there is always more to say, and do. Far from diminishing the truth-value of our work, thick description, traceability and iterative engagement make it possible to understand the very grounds for truth in archaeological production. What

is more, truth is tied to an “ecology of practices” through which the past lives in a different way (regarding matters of definition see: Olsen *et al.* 2012; Witmore and Shanks 2013). But also, and most importantly, understanding what a flagstone path or a ceramic skyphos tell us (not that we should expect them to speak in the same way as texts), understanding the memory that things hold, helps us to better care for the past that *things* bequeath the other things of this world.

Archaeology: The discipline of things

Unlike so many other platforms that argue for taking things seriously, archaeologists have always lingered with and among things in a different way. That is not to say that we have a monopoly or a special claim to things—far from it. Things have been forgotten and ignored, reduced either to practice or to theory, and even in the wake of their emancipation they have been further yoked. Just as one errs in reducing the turn to things to the bovine kinetics of academic interest—because we return to what we have always done—one should not fail to see that we return to a place where we have never been, as superbly expressed by Alfredo González-Ruibal (2013b; also Olsen 2012b).

Indeed, the combined features that I have placed under the banner of New Materialisms signal an even more ambitious realization. With its New Materialisms, archaeology takes leave of its longstanding self definition as “the study of the human past through the material traces of it that have survived” (Bahn 2000, 2) and embraces what it has always been foremost: an engagement with things and their rapports with an aim to understand the past and its relevance to life (Olsen *et al.* 2012; Witmore 2013). As Olsen (2012b) recently put it, we may at last put aside our airy ambitions to something less ordinary in the shadows of anthropology, history and sociology, and let things be unruly, fragmentary, hackneyed, banal and dirty. “Unlike some of the new thing-friendly environments, archaeology is of course the discipline of all things, of *everything*, no matter how outdated, incomplete, unexciting or repulsive” (Olsen 2012b; also see Olivier 2011; Olsen *et al.* 2012).

The propensity of a house to assemble, of a road to participate or cog-wheels to be themselves, the proclivity of an abandoned mining town to lure us and others in with feeling are things at which we should rightly marvel. Rather than looking to the horizon, we should take awe in them, in what they supply in their amazing strangeness. We may look upon the vast and bewildering spectacle of things in wonder, not in the sense of utter perplexity, of being “without a path,” but more in terms of astonishment, reverence and curiosity; a kind of double operation in which we are surprised and yet entertain questions (Stengers 2011, 374; also see Wilson Nightingale 2004). Wonder also reminds us that in our dealings with things it is best to remain open, never closed, and to approach them with a naïve trust in their ability to lead us on, and in our powers as archaeologists to probe, imagine and connect.

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Comments

■ Material and Cognitive Dimensions of Archaeological Evidence

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This is a bold paper that sets out a strong materialist position, challenging our taken-for-granted assumptions. It points towards the sheer materiality of the archaeological record and the richness of encounters with things that archaeology affords. It also proposes a mode of engagement with materials that de-centralizes the human, arguably allowing things to emerge to some extent in their own right. In all these respects it is an important contribution.

It is refreshing to have a theoretical paper so firmly grounded in the things and assemblages of archaeological sites. Rather than discuss the many aspects I agree with, however, these comments will focus on what seems to be the nub of the argument, and that is the implication that materials and things are somehow encountered first in our perception of them, with interpretation following on later as a secondary process. It is argued that “thought usually follows on the kinetic experience” and that “theory cannot be applied.” But my experience is different. As I found out when I conducted an early ethnographic study of archaeological work in 1989–1990, the material and cognitive dimensions of things are practically inseparable. Theory is as present in the act of discovery out on site as it is in the academy—all the more powerfully so, perhaps, for being part of embodied expertise, skilled procedures and kinetic experience. Application of theory (in the form of anticipations, strategies, rationales, working models) was evident in all the material transactions observed during my ethnographic fieldwork, as illustrated by numerous case-studies (Edgeworth 1991/2003).

What those case-studies also showed, crucially, was how emerging materials can surprise and contradict applied theories. There are aspects of material evidence that cannot be anticipated, and always have the capacity to contravene that which is expected of them. This means that there is a kind of practical two-way transaction, or double feedback loop, in which materials and ideas mutually shape (and are shaped by) the other, with neither having primacy.

Of course I appreciate that my ethnographic take on archaeological practice is not the only possible one, and it is extremely valuable to have Witmore’s very different perspective, especially as it is not based on quite such a dialectical model of practice as mine was. Looking through the author’s eyes, however, I get the sense that the archaeological site he sees is much more difficult to probe and to penetrate than the sites that I am

familiar with. The array of things is indeed astonishing, at times bewildering, and often deserving of wonder. There is much to be gained from such a perspective. But in order to make more sense of the site thus seen, there is nowhere obvious to make a start, nothing to follow. Since all entities are equally deserving of attention, it is hard to know where to dig in with a spade or which layers to begin to scrape away with a trowel, in order to find out more about the site.

Most things described by Witmore are discrete objects with closed surfaces—individual entities complete unto themselves and abstracted out of any temporal process—whereas the sites I know are inhabited by open things that are still in the process of formation, with parts of them already excavated away and other parts still buried in the earth, yet to be uncovered. Unfolding through time, the form such things might take in the future is far from certain. For this reason I feel that archaeology is more grounded in Tim Ingold's flowing materials than Graham Harman's unified and autonomous objects. What is missing from Witmore's largely static assemblages of things is not just the sparking, creative presence of ideas intermeshed with materials, but time itself.

Put ideas and materials together on an archaeological site and the intermingling of them sets everything into motion, opening up the site. Now things are not so much a bewildering array of static entities, but rather things to be emptied out, followed along, half-sectioned, probed, uncovered, removed, or otherwise acted upon. Take the cut of an archaeological feature as an example. The cut is a material thing, but it is also an idea about the forms of agency that created it. In most cases the cut is not visible in its entirety but extends beyond the limits of perception into the side of the trench or slopes away below unexcavated layers. In order to find out where it goes and what its overall shape might be you have to follow it along, removing occluding layers with the blade of a trowel or mattock. Crucially, it is not just a material form you are following: it is also the idea of past human and non-human agency that is being pursued. You anticipate where it is likely to go in the light of inferences made so far, and test out these practical predictions as you proceed, asking questions as to why it was cut this way, what the purpose of it was, how it is connected to other features, and so on. Such questions affect the manner in which you dig, the excavation strategy itself, and therefore to some extent the form of the evidence which manifests and takes shape. Material patterns emerge which contradict what was previously thought and force modifications of interpretive schemes.

The idea that all things are equal is fine in theory. But archaeological practice is the act of alighting upon some things as significant while sweeping other less significant things away. Each scrape with the trowel has that double action to it, revealing some things by erasing or removing others. It moves over an unequal terrain, riven by material boundaries and divisions—between artefact and non-artefact, nature and culture. The existence of material boundaries between anthropogenic deposits and geological layers—the so-called 'surface of the natural' that is such an important stratigraphic marker for archaeologists (Harris 1989)—defies much contemporary social theory, which states that the nature:culture opposition is mainly an intellectual construct. This typifies the stubborn and resistant character of archaeological materials, which cannot be forced to fit easily into a universe "made exclusively of unique, singular individuals, differing in spatio-temporal scale but not in ontological status" (DeLanda 2006). What

archaeology needs is a specially adapted, temporalized form of O-O-O (Harman 2010, 2011a) taking account of the specific character of archaeological materials: an A-O-O or artefact-oriented-ontology. Such an ontological ground would be anything but flat. On the contrary, it would be bumpy and uneven, its undulations changing from moment to moment, shelving away into buried layers and unseen depths—not unlike, actually, the topography of an archaeological site.

Archaeologists, in following the cut, traverse the fine line between opposed categories like nature and culture all the time. In some cases, the cut *is* that line. Sometimes you follow a cut along, thinking it is part of a human-made feature, and it unexpectedly shades off into the convoluted and irregular patterning of an animal burrow. Sometimes a seemingly artificial cut, as it emerges from the ground, takes on the regular but non-artificial form of an ice-fissure that opened up in frozen ground at the end of the last Ice Age, or the characteristic shape of an ancient tree-throw. Alternatively, a cut might take you into a complex stratigraphic sequence that relates to some past combination of human and non-human forces, such as an animal burrow that once disturbed an artificial feature like a pit, or *vice versa*, or a tree-throw that was made use of as a pit for occupation or dumping of material, then filled up with silt through erosion and silting, not to mention the actions of earthworms and bacteria. Archaeologists are actually quite good at exploring the material interstices between nature and culture, and the material itself provides us with an abundance of intermeshed or entangled evidence.

I find myself in agreement with many aspects of the strong materialist approach outlined in this excellent paper, while at the same time disagreeing wholeheartedly with others. For me the so-called materialist turn presents a powerful counterbalance to the former emphasis on “reading” the archaeological record. But for all that archaeology is about things, it is still about people as well (and here I mean people in a sense that goes beyond their classification by materialists as just another class of thing). I am with both Chris Witmore *and* Mortimer Wheeler on that one.

□ The Asymmetries of Symmetrical Archaeology

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Witmore draws attention to a number of key issues in the New Materialisms and symmetrical archaeology, in particular the foregrounding of things and the de-centering of the human, while rejecting a return to a deterministic materialism. The careful picking apart of the notions of network and assemblage is helpful, as well as the critique of a Gell-like agency for things (Gell 1998). I welcome also the idea of co-construction or co-production that does “not require the presence of a human being” in so far as this seems to recognize that things can act from outside the social — that the agency of things can be external to the human and impinge on it. This seems to me to correct a tendency within Actor-Network Theory to so react against binary opposites that all humans and things are already caught within a social web. Thus it is important that Witmore accepts an irreducibility of things, where “things go on perturbing one another when humans cease to be part of the picture,” though I would add that they also perturb each other before and during interaction with humans.

However, there are some difficulties with the focus on symmetry. A “symmetrical archaeology” risks throwing out all the dynamism of human–thing relationships along with the bathwater of human–thing binarism. In my view, human–thing relations are dialectical in that the unity of opposites generates change (Hodder 2012). Humans are at once one with and separate from things. To be human is by definition to make and use things, to think, feel, respond to things, but at the same time we have to separate ourselves off from things, imagine ourselves not just another thing. It is this dialectic that leads to change; humans want to rely on things and imagine them stable, but things have their own lifespans and processes that undermine and disrupt human lives. Humans become dependent on things and this dependence can be productive, while at the same time being destructive. One way of thinking of this double-sidedness of human–thing relations is in terms of tangled hierarchies (Dupuy 1990): in some ways humans dominate, but in other ways things dominate, creating tension and change. Thus humans depend on cars and this dependence is productive and humans seem in charge; but at another level cars contribute to global warming that threatens human lives, and things seem in control of us.

Another obvious example is that humans depend on food and this is a necessary part of a productive life, but this dependence on food can also lead in the modern world to obesity and eating disorders and the massive health problems caused by being overweight, from diabetes to heart disease. Our dependence on food becomes linked to questions of health and lifestyle and wellbeing. So many in developed countries end up not wanting to eat food that is blemished or past a sell-by date, and for various

other reasons we end up throwing half of it away. Reports in 2013 by the Institution of Mechanical Engineers in the UK, and by the Natural Resources Defense Council in the US, found that up to 40–50% of food crops never reached consumers. This despite massive global poverty. So again, things seem in charge.

Many today are addicted or dependent on drugs or alcohol or cigarettes, and these are clear examples of dependency relationships in which the positive and negative aspects vie with each other so that society at large is in a continual process of management and administration in order to regulate and control. But I argue that these examples are just versions of a wider and deeper phenomenon that is the tension between the positive and negative aspects of our relationships with things. The relationship is always strained; productive and necessary for existence and yet unmanageable and contradictory. We are both one with things—and here perhaps it is helpful to talk of networks and symmetries—but at the same time we are other, controlling and controlled by things in asymmetrical relationships.

The focus on symmetry in symmetrical archaeology also seems to me to have difficult moral dimensions. The concepts of symmetry and democracy within heterogeneous assemblages seem to embrace an ideal of flatness that has parallels in the notion of social network and in network analysis. The flatness of the concept of network is troubling, as it distracts attention from social inequality. We can undoubtedly talk of the global circulation of goods and services as a network, but in so doing we flatten out the deep social and economic divisions that networks sustain and mask. In his recent book on our “Junkyard Planet,” Adam Minter (2013) discusses the global circulation of recyclables. The container ships that bring manufactured goods from China to the United States do not want to go back empty, so they offer low costs for taking back all types of junk to poorer areas of China, where it is sorted by hand. This heterogeneous assemblage or network is part of a process whereby economically developed countries export both their junk and the hard and dirty labour associated with sorting and recycling it to other countries. The people who have come to depend on the global circulation of junk do not want production, use and recycling to cease, even though pollution may be caused, energy “wasted,” and global inequalities reproduced or strengthened.

We use terms such as “air” book, the “cloud,” the “web,” all of which terms seem light and insubstantial, even though they describe technologies based on buildings full of wires, enormous uses of energy, cheap labour, and toxic production and recycling processes. Mills (2013) estimates that the global Information and Communications Technologies (ICT) ecosystem uses a total of 1,500 terawatt-hours of power every year, equal to the total electricity generated by Japan and Germany combined. Coal is still the main producer of electricity in the US, so Mills can say with some justification that “the cloud begins with coal” and that cellphone use contributes to global warming. We see social networks as flat, but in fact there is a dimension of depth in which dark matters, coal and rare earths, entrap us. It would be difficult to give up smartphones and Big Data; there is already too much invested, too much at stake. The things seem to have taken us over; at least, our relationship with digital things has become asymmetrical: we need smartphones (or think we do) and depend on them, even if they lead us further towards greater global inequalities and global warming.

Rather than taking a critical stance towards our asymmetrical entanglement with things and the inequalities that are produced within entanglements, Witmore at times describes an almost romantic attraction to the exoticness and otherness of things; a sense of awe and wonder is often expressed. The idea of approaching “the world with care and in wonder” seems to ignore the two-sidedness of things. As noted by Elizabeth Grosz (2001), on the one hand, “it is matter, the thing, that produces life,” but on the other, when humans and things cannot manage without each other, there is dependency and co-dependency in which they constrain and limit what each can do. So, for Grosz, the thing is also associated with a malevolent “biological materiality that is or may be the result of our unknowing (usually atomic or nuclear) intervention into nature, the revenge of the blob [...] which imperils man.”

I agree that it is helpful to explore approaches that “challenge archaeologists not to see cobbled surfaces as mundane backdrops to the real events of life,” but it is not helpful, indeed is dangerous, “not to peer through multiple layers of plaster for a deeper reality of household renewal; not to look beyond the pot, the awl or a stone enclosure for explanations concerning the reasons for their existence.” We can accept that things are more than backdrops without giving up on trying to explain the ways in which thingness traps humans into forms of dependency and inequality. To wonder at things seems to me to be the wrong stance if we are to deal with the inequalities of material circulation, global warming and food waste.

In the same way, “to think of an archaeology without the Past” seems irresponsible, as it is in the past that modern global entanglements with things emerged and accumulated. Our relationships with things have produced specific ways of being human in the present. It is surely a responsibility of archaeologists to explore the long-term roots of our entrapment in things and to contribute to contemporary debates, for example about post-environmentalism (Latour 2008), from that perspective. It is precisely because archaeology is about thingness BOTH in the present AND in the past that it has a critical edge, something to offer.

□ Is There Life Amidst the Ruins?

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I am not much impressed by talk of disciplinary turns. With its origins in the turgid and largely unreadable discourses of literary criticism, turn-spotting seems to be a party game to be played by vainglorious academics who are more interested in keeping abreast of the latest fashions in their subject than in finding anything out about the world they are supposed to be studying. At best, it is an exercise in brand-labelling in which scholars have been known shamelessly to indulge as a way to enhance the literary-philosophical allure of their work; at worst it is tendentious nonsense. In the disciplines of archaeology and material culture studies, as Witmore notes with evident approval, a whole rash of such turns have been announced in recent years, and vigorously promoted by those who hope to profit from their promulgation. They include the “ontological turn,” “the agentive turn,” “the species turn,” and “the turn to things.” But Witmore wants to go one better. All of these offered glimpses around the bend: perhaps they were but twists rather than turns. Add them together, however, and they amount, he tells us, to a “full turn,” a 180-degree rotation that allows archaeologists to put behind them the bad old days when “things were mere intermediaries to something else” and archaeology to “shed its old definition of the study of the human past through its material remains.”

Welcome to the New Materialisms! In this promised land, where all and sundry rub shoulders in anarchic abandon, we can only stand in awe and wonder amidst its teeming abundance, marvel at its heterogeneity and despair at its ineffability. For many, this is enough to induce bewilderment and even paralysis. Archaeologists need things, but things don’t need archaeologists. If things don’t need us, and if our words cannot hope to match up to the reality—if things can tell their own stories better than we can—then what business do we have with them? Why not just leave them be? These questions seem unanswerable, and are enough to send us scurrying back into the arms of garrulous philosophers who, with their own agendas and from the safety and security of their armchairs, are only too keen to bamboozle us with tall tales of rampant non-humans, from speed-bumps to baboons, collectively playing to humans on a level field, of objects pronounced active simply because their presence has effects, and of a world reduced to rubble in which everything is connected but nothing lives, grows or moves, and where all there is—even the air we breathe and the water we drink—has gone solid.

For the New Materialisms, the past was not back then, “over yonder,” a foreign country (Lowenthal 1988) where things were done differently, and which we can apprehend only through its remains. It is here with us in our vivid present, in the things around us, and even looms in our future. “Pastness,” as Cornelius Holtorf (2009, 37) calls it, is a matter of carrying on, of perdurance, not of antiquity. For things that carry on, like mountains or

streams, or the air we breathe, it makes no sense to ask how old they are. Such things hold their own pasts within them: they are records, not objects in the record. So, for that matter, are we. Becoming what we were, and having been what we become, our own carrying on is, in itself, a practice of remembrance. This is a view with which I am in broad agreement, and which I have myself advanced elsewhere (Ingold 2012b, 2013, 80–82). The irony of Witmore's account, however, is that his approach to the archaeology of the past is so out of step with his understanding of the past of archaeology, according to which old ways are destined for oblivion, cast aside by the promise of the new. The "new," for him, signals "a radical difference in orientation and perspective," a turn from the old days when things were regarded as but intermediaries in the lives of persons. New Materialisms, good; old materialisms bad—for Witmore it is as simple as that. Perhaps it is a generational thing, but what matters to me is no longer the novelty of arguments or approaches, compared to what went before, but their cogency and clarity of expression. And in these respects, I had some problems with this article. Neither is it cogent, nor is it clear to me, beyond the welter of bibliographic references and the irritating habit of juxtaposing ostensibly incommensurable elements culled from here, there and everywhere, what its author's point is.

Witmore makes two related claims for the New Materialisms. First, they are irreductionist; second, they are symmetrical. The two claims are interconnected, since it is the irreducibility of things that levels the playing field, allowing each thing to be itself, regardless of scale or composition. For Witmore, irreductionism means that things are not reducible to their components. A watch cannot be reduced to cogs, springs and precious stones; a steamship cannot be reduced to plate metal, rivets and so on. Is it then reductionist to note, as I have done (Ingold 2007a: 8), that in sixteenth-century England, plaster was made by mixing lime with lard, dung and egg-yokes? Witmore thinks it is. By the same token, every recipe book, every compendium of instructions on how to make stuff, would be a reductionist tract. This is nonsense. Why? Because lime, lard, dung and egg-yokes are no more the components of plaster than are flour, butter and sugar—and probably egg-yokes too—the components of a cake. They are ingredients. And to make something from ingredients is not to assemble determinate parts into a whole but to blend materials in movement, and to follow them in their admixture and resultant transformation.

The problem is that Witmore seems only able to comprehend things as if they were cobbled together from bits and pieces. Everything there is, or could possibly be, is the result of a kind of cosmic bricolage. In this, each and every entity is assembled from other entities. These other entities, in Witmore's vocabulary, are the 'parts' or 'components' from which the whole entity is made. When parts are brought together, he says, not only do new properties of the whole emerge, but also some of the original properties of the parts are lost. Thus, things "are both more and less than the sum of their parts." Imagine an equation in which, on one side, are the parts ($P_1, P_2, P_3, \dots$) connected by plus signs, and on the other side is the whole (W). For the reductionist, the relation between the two sides is one of equality: thus $W = P_1 + P_2 + P_3, \dots$. For the irreductionist, however, the whole is both more ($W > P_1 + P_2 + P_3, \dots$) and less ($W < P_1 + P_2 + P_3, \dots$) than the parts that make it up. Yet both the reductionist and the irreductionist have in common

that they subscribe to the summative logic of parts and wholes. Theirs, in other words, is the logic of the assembly. I, by contrast, subscribe to the logic of the walk (on this distinction, see Ingold 2007b: 74–75).

According to the logic of assembly, as Witmore puts it, “individual entities are primary.” In any properly archaeological approach, he insists, we have to start from them, and not from some mystical appeal to vital forces and flows, as I am alleged to have done. So the world as it is presented to us must consist of discrete and enumerable entities, each with its own individuality, and each put together from other entities, as (apparently) are the watch and the steamship. Now, if everything in the world were put together like that—if it were entirely governed by a calculus of parts and wholes—then perhaps we would be offered a choice between reductionism and irreductionism. But you only have to look at some of the candidates in Witmore’s list for what might count as “things” to see that this is not so. The list begins with “air and soil, rain and sea.” Is air an individual entity, made up of other entities? Is it either more or less, or both more and less, than the sum or its parts (molecules of oxygen, nitrogen, carbon dioxide and so on)? Obviously not. For air is not an entity, period. It is, as the *Oxford English Dictionary* puts it, “the invisible gaseous substance which envelops the earth and is breathed by all land animals and plants.” Air is nothing without its enveloping circulations, inhalations and exhalations (on this, see Irigaray 1999). Gasses of diverse chemical composition are ingredients of air, they are not components. How about rain? Is rain an individual entity? No, it is drops of condensed moisture, held together by surface tension and descending under gravitational force from the clouds. Likewise for soil and sea: neither is an individual entity in any meaningful sense.

What about some of the other things in Witmore’s list? Take “nitrogen-fixing bacteria.” As a single-celled organism, it is perhaps possible, at least in theory, to isolate a bacterium and consider it as an individual entity. But to suggest that the bacterium is “assembled” from other entities, as a whole from its parts, is absurd. Bacteria arise and proliferate through a process of cell division known as binary fission, drawing in the requisite materials from the “culture” in which they are raised. Further down the list is “Hadrian’s Wall.” Built by Roman soldiers from locally cut stone, there is certainly a sense in which this monumental wall was assembled. At a pinch, one might totalize the wall and regard the whole construction as an individual entity. But were the stones from which it was built “parts” of the wall? Certainly not to begin with: the stones were no more parts of the wall than are twigs on the forest floor “parts” of a bird’s nest (Spuybroek 2011; Ingold 2013: 69). They only *become* parts as they are chipped into shape, put in position, and, over the centuries, gradually and inexorably settle. The perspective that construes the stones as parts is one that looks back from an imaginary (but never actually achieved) point of completion, taking the construction apart, in the mind’s eye, before putting it together again. But this was not the perspective of the wall-builders who were commanded to toil, day in day out, with the material. Nor indeed, from the point of view of the watchmaker, are precious stones, cogs and springs truly the “parts” of a watch, or, from the point of view of the shipbuilder, sections of plate metal “parts” of a vessel. They only look like parts of an assembly to us; for makers, they are the materials they work with and which they strive to bring into correspondence.

And so, to return to the plaster and the cake: these, too, are not individual entities made up of other entities. The cook and the plasterer do not begin (as Witmore commends that New Materialists should) with “actual entities.” He or she begins with materials, which are mixed and stirred, heated or cooled, pounded or grated, under a watchful eye. So the alternative to a focus on entities, whether reductionist or irreductionist, does not lie in an appeal to some “primal, underlining current of forces and flows” or to an “amorphous pre-individual vitality.” It is rather to do precisely what the cook or the plasterer does, or the watchmaker or shipbuilder: to keep an eye on what is happening to the materials. There is nothing mystical about this. It is what any skilled craftsperson does. Why should New Materialists not do the same? Of course, things are composed and fall apart in different ways. The eddies of water formed in a pool fed by many streams, or the clouds fed by circulations of moisture in the atmosphere, are differently composed from the roots and limbs of a tree that draws nourishment from the soil and from the air, differently again from the nest of the bird that is set in its branches, differently from the basket fashioned by a human weaver, and differently again from the vessel welded by shipbuilders. Conventionally, we might have supposed that eddies, clouds and trees grow, while nests, baskets and steamships are made. Such a contrast is, of course, too simple; nor am I out to defend a black-and-white distinction between the made and the unmade, or the artefactual and ecofactual (Ingold and Hallam 2014). Witmore is right to stress the arbitrariness of these divisions. But surely we should be interested in exploring and comparing the variable dynamics of ontogenesis—or in a word, the *work*—that brings these different kinds of things into being.

Such exploration requires that we walk with and through our materials: that we follow them and the traces they leave, as hunters follow the tracks of animals. Is this not what archaeologists do when they “follow the cut” (Edgeworth 2012)? What, then, is unarchaeological about the logic of the walk? What is wrong with putting movements and materials before the parts and wholes to which they are seen, looking back, to have given rise? Is it unarchaeological, as Witmore seems to think, to be concerned with wind and weather, with the waves of the sea, with rivers and glaciers, with the elemental forces of deposition and erosion that have sculpted landscapes through the ages? Must the archaeologist necessarily start with an assumption of the solidity of materials, in a world that has already precipitated out from the forces and flows that bring things into being? Can there be no room in the New Materialisms for the processes of photosynthesis and decomposition, of metabolism and respiration, without which there could be no life at all? Is there even a place in the promised land for the geologist, the botanist or the zoologist, or are they to be cast out along with the processes they study, leaving archaeologists in sole possession of the ruins?

In the bad old days of eco-functionalism, everything was supposed to be adapted for survival. Critics rightly pointed out that if a thing did not survive, then it would not exist; *ergo* anything that exists is, *ipso facto*, adapted—rendering the concept of adaptation effectively superfluous. What then are we to make of the pronouncements of learned philosophers, such as Bruno Latour, to the effect that anything which modifies a state of affairs and makes a difference is, *ipso facto*, an actor—or at least an actant (Latour 2005: 71)? Is there anything more to the observation that matters would be different if

the thing wasn't there, beyond an admission that it exists? If it didn't make a difference, it wouldn't be there. No difference; no thing. Whereas before, every existent was supposed to have an adaptive function, now it is supposed to have agentive effects. The new formula is no less tautological than the old, and just as ridiculous.

It seems that in order to level the ontological playing field, Witmore and his fellow irreductionsits, symmetricians all, have contrived to reduce agency to the common denominator of bare existence, to which they habitually assign the qualifier "non-human," thus neutralizing the potential of animate life to bring forms into being. Living, sentient creatures, both human and non-human, figure in this account as but warmed-up assemblages, their capacities for action and perception stripped down to the physical presence and tangibility of lifeless objects. Where are the labour and workmanship, the passion and the suffering, that went into making the things whose ruins we now encounter? Confronting Hadrian's Wall, the Roman soldier has become a phantom: "Look," exclaims the New Materialist, "how the Wall testifies to the collective, non-human agency of stones!" Sure, for archaeologists, as Witmore says, "thought usually follows from kinetic experience," from the graft and tactility of excavation at the trowel's edge, in pouring rain or under the relentless glare of the sun. But when it comes to the stuff they excavate, human effort, or the effort of domestic animals, is treated as just another object in the assemblage, a mere husk of sensuous, muscular exertion. There is no production—no work, no labour, no growth. There is only connection: the sequential joining up or collage-like juxtaposition of inanimate fragments. The New Materialisms indeed! Marx must be turning in his grave.

□ Old and New Materialisms

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There is much to welcome in Witmore's proposal for archaeology's full engagement with the many voices that propose to abolish the hierarchy of humans over non-humans, without falling back into narrow empiricist notions of matter. As a theoretically informed synthesis that proposes methodological strategies, the article is a necessary exercise to channel archaeological debate into the promising field of speculative realism and New Materialisms. The article raises important questions, but at times the answers offered feel insufficient. In the spirit of conversation, I will try to address the thoughts that emerged during the several times I read it.

Despite the author's claims to the contrary, the article reads like an extensive exercise in the application of theory, in the sense that the author seems to be aiming to overcome. The examples used to back the argumentation do not do much to illustrate how theory emerges organically from long-term engagement with a particular section of the world. The methodological proposal is interesting, but one wonders how oversaturated recording and thick description combined with the disruption of recording routine through alternative means can be achieved without interpretation: we follow things for a reason, "chance" encounters happen because we are placed at a particular place and time, both in theoretical and actual terms. And when to disrupt and how to do it depend on the story that wants to be told.

It is indeed a necessary political act to argue against the assumption that the world cannot be imagined without humans, and this move enables us to understand that political reason is always entrenched in relationships that exceed its intentions, whether deliberate or not. However, it is also a political act to equalize all beings and their capacities to affect. Ontological equality does not mean homogeneity; difference needs to be addressed and allowed to all beings. Reading the article, one wonders why things are allowed so much wonderful diversity and bewildering capacity (and I imagine other non-humans, such as animals, mould, viruses or rust, to name a few categories that are not addressed in the paper), while humans are lumped into that which opposes non-humans. Humans are in first place made of many things, substances and relationships, all of which challenge the traditional assumptions of individuality and humanity as they have been extensively discussed in recent years. Yet they are also irreducible to those components and relationships. Humans, like Harman's (2010, 2011a) and Bryant's (2011a) objects, react selectively to others' capacities and properties and retain not only properties that manifest independently of anybody noticing them, but also a hidden, volcanic power that may be triggered in new relationships.

In their bewildering physical and psychological diversity, humans contribute to the emergence of an incredible variety of often unprecedented things. They have also

managed to generate large assemblages of artefacts that are often so standardized that it is difficult to identify individual variation. This capacity is particularly intriguing in, for instance, pottery-making, since, as any novice potter can testify, it can be a frustrating encounter between the motor skills and bodily habits of the maker with the will of a material that stubbornly stretches and thins out despite best efforts to keep it under control. Experienced Western potters say that people tend to make the same kind of pots over and over again: it is hard to break out of one's own motor habits, particularly when encountering a specific material. Pottery-making is indeed different when the skills are acquired during childhood and in conjunction with a host of other skills and techniques of the body that make sense in that specific environment. In such settings individual variation may be eliminated through various aspects of the process of enskillment; however, the artefacts emerging in the process may be better understood if human action, while not central and all-directing, is addressed in all its possibilities and limitations. For instance, in the context of indigenous identity-making practices in northwest Argentina, an earthenware motorbike made as a souvenir for an indigenous community museum belongs to an assemblage of souvenirs, museum artefacts, buildings, places, oral stories, take-over actions, forced evictions, legal documents and various other elements that collaborate to the so-called "re-emergence" of indigenous identity in northwest Argentina. The clay motorbike is an active vehicle in more than one sense: it performs the collection as museum; it realizes a particular aesthetic which shows that contradiction and juxtaposition are constitutive of the assemblage in which the object emerged; it contributes to a publication by triggering unexpected associations, and hence a new assemblage in which scholars are entangled (full discussion in Lazzari and Korstanje 2013). Last and not least, it extends the maker's body, whose movements were confined for various reasons. The museum came into existence by a complex interconnection of wills, perceptions and possibilities: the landslide that washed the landscape and made hitherto unnoticed objects visible; the dreams of a man who encountered a puma who gave him instructions to build a museum; the desires of able and disabled bodies who routinely work in its maintenance; the materials used in the construction, and many more aspects. Human desire, bodily located and experienced, cannot be minimized as a key constituent in assemblages.

The article repeatedly argues that it does not want to do without humans, but it often reads as if the perfect archaeological universe would be one in which the archaeologist would exist surrounded by his or her wondrous things, which would be cared for regardless of relevance or interest to others, and persistently followed through all their circumstances. I certainly agree that any small tagged stone found is as important as an elaborate artefact. But the criteria for caring, as well as that of researching, has to be a meeting between our experience as researchers—coming across particular things while following different ones—and our openness to that which may matter to others, both in the past and in the present.

As Bennet argues (2010, 107), the political gate is rightly opened to non-humans, "for they also have the power to startle and provoke a gestalt shift in perception." This is one of the richest points of this approach, as it gives us a common framework to investigate social, political and identity formations both in the past and in the present in

a way that effectively dilutes the past/present dichotomy. Yet it does so as long as we allow the past to have its own ontological standing. The past as it was does emerge today from the process of encounter with the involuntary memory of things, as is well argued in the article. However, the past indeed *was*: like black holes in the universe, we cannot know what was or happened there, but we can distinguish its effects in the present. The power of the past to haunt us, affronting or sheltering us and our actions has to be acknowledged in order to move beyond the constructionist position that sees the past as a creation of the present.

The article's discussion of the capacity of objects to provoke shifts in perception resonates with Gell's (1998, see Gosden 2005) notion of the power of objects "*en masse*," explored exhaustively in his analysis of style. Gell's analysis, despite the recently much vilified "secondary agency" of the first chapters in the book, remains unmatched. So does Marx's insight on the commodity form, mediation, and consciousness (and I would add on gold as substance *par excellence*, due to its natural conditions and properties [Marx 1973]), as Bryant (2011a, 247) recognizes in a far more stimulating genealogy for this line of thought than the one proposed in the article. Man makes himself, but not under conditions of his own choosing: New Materialisms extend this axiom to a fuller understanding of what this relationship might entail. "Man" and "conditions" are not merely mutually dependent terms, but a dazzling range of beings that, while fully implicated in each other's existence, reserve their capacity to withdraw and exceed such implication.

Discarding older works due to apparent inconsistencies or failure to achieve the goal of true ontological equality (a goal which the author recognizes cannot be truly achieved) is a common practice when establishing new debating grounds and carving out new niches. However, archaeology could benefit from carefully exploring the conceptual openings (without ignoring their pitfalls, of course), together with the methodological pathways opened by earlier works whose pulse is still very much alive. The new light cast out by this more recent explicit concern with the ontological equality of beings shows us an exciting path.

Reply

■ Confronting Things

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One of the challenges in crafting a reply to commentaries on one's own work relates to how best to adequately fulfill a double obligation. On the one hand, an author is obliged to address the specific critiques raised by the commentators, while on the other, an author is compelled to embrace the response as an opportunity for more clarification as to their original aims. I am grateful to Edgeworth, Hodder, Ingold and Lazzari for their comments and the opportunity they permit me in addressing this challenge, albeit partially given the limits of white space.

I find much common ground with Hodder, Edgeworth and Lazarri. Both Hodder and Edgeworth rightly pick up on the critical point that archaeology is not limited to that monopoly of "humans and the rest," though they both endorse variations of this privileged relationship in different ways. So while I agree with Hodder's stress on the inexhaustibility of things, I disagree with his affirmation of that familiar, modern taxonomy of humans and things. For Hodder, the engine of change exists at the cross-section of these two purified spheres of reality. Edgeworth makes a similar move with his endorsement of the mutual constitution of ideas and materials, even when he adds the qualification that neither has primacy. This is because he gives too much weight to only *two* types of entities, at the expense of others. The responsibility for eliciting the distinction between rockfall and a robber's trench belongs to all the interlocutors involved in an excavation: trowels, stones, truncated former walls, loosely compacted fill, members of Durham Archaeological Services, local volunteers, nineteenth-century excavation reports, and so on. Here Edgeworth's point that "emerging materials can surprise and contradict applied theories" can only come about if theory, whatever we mean by this term, is not in fact fully applied (Witmore 2012b). Rather, a space for hesitation is permitted where many might weigh in on how these things ever so subtly define themselves. Importantly, neither flat ontology nor symmetry is an endorsement of "ontological equality," as both Edgeworth and Lazarri seem to suggest; rather, these notions help us to suspend an assumption of privilege by placing all entities on the same footing from the start (Olsen *et al.* 2012, 13). The point of symmetry is not to deny the fact that the world is full of asymmetries, inequalities or dependencies, as well described by Hodder, but to better assist with rooting them out. No empirical weight should be placed on the term "symmetry." Symmetry is not about defining the basic furniture of the world, to evoke a common metaphor; rather, it is a guiding principle for how to detect the relevant features of the room.

Here, both Edgeworth and Lazarri zero in on the statement that archaeologists follow the things. In this, I am not saying that the practice of pursuing things comes before any articulation of ideas. Again, this oversimplified image of a separate theory that can be applied to things in practice simply doesn't work (see Witmore 2012b); archaeology is far too multifaceted to be boiled down to only two domains (Witmore 2004). Certainly, I agree with Edgeworth that we often have to situate materials within productive frictions to lead us on. However, with respect to Lazarri's emphasis, I am also stating that the solution of what a thing may or may not be should not drive its realization. An archaeologist cannot begin with the answer that a stone enclosure under excavation along Hadrian's Wall was a mile castle. To focus on the Roman past from the start in the course of excavation is to relegate an erstwhile existence as a sheepfold, a quarry or a grass-covered mound of tumbled stone to oblivion; it is to destroy the things that hold memories of these other pasts (Olivier 2011; Witmore 2013; also see Hingley 2011; Shanks 2013). Indeed, here we encounter a classic issue of assumed versus justified identifications of archaeological materials. Archaeology cannot assume, it must substantiate, and we need a model of truth adequate to the task. We need more localized, more nuanced understandings of how archaeology actually works; and both Hodder and Edgeworth have made valuable contributions in this respect. Ultimately, for me, this comes down to a question of fidelity, of faithfulness, to the things that an archaeologist should follow.

Importantly, there is no reason standing behind, or beside, or above, or below, or beyond the relic wall. The plaster-covered surface is not reducible to anything else. Remnants of an aqueduct cannot be encapsulated fully by their erstwhile existence. A stretch of wall that runs from Steel Rigg along Highshield and Hotbank Craggs to Housesteads does not provide access to different realms of reality (indeed, *pace* Ingold, the wall along this section is also an achievement of nineteenth- and twentieth-century endeavors; see Hingley 2011). Because the past that was does not exist, because the "Past over yonder" cannot be touched, our angle as archaeologists will always be oblique. Our angle will always be permitted by what the actual things present concerning their bygone existence. Courses of stone, clumps of mortar and soil-filled pits provide some traction, some glimmering flashes, as to how they came to be, and manifesting this will always be an outcome, an achievement. This, contrary to how Hodder reads the statement "archaeology without the Past," is not about abandoning the great questions of the discipline. It is not about ignoring the erstwhile existence of plaster surfaces. It is not about taking leave of the kinds of stories Hodder evokes. Rather, it is about better caring for what becomes of the past; it is this richness that enables such stories. Accordingly, I capitalized "Past," as a realm posited to exist outside the present, to distinguish it from pasts as histories, as the assemblages and stories that are generated as part of the archaeological imagination.

For Ingold, I seem to be entertaining illusions. It is surprising how much traction he was able to get out of a line here, a statement there, or a word that may or may not have appeared in the paper. With sleight of hand and an ireful tone that aims for closure rather than conversation, Ingold presents a caricature, which slides into vicious misrepresentation. What does Ingold gain by overmastering the text? There is more to this than critical gesture or rhetorical appeal. By installing himself as master, Ingold offers an

example of eliminativism that shoots wide of its target. Repeatedly, he replaces specifics with proxies, which maintain little fidelity to the ideas in the way they were stated. It is all too easy to transform a proposition where “an amorphous pre-individual vitality is unarchaeological” into another statement where “wind and weather, rivers and glaciers are unarchaeological,” but Ingold simply repeats the problem—this proposition is not interchangeable with these things.

Consider another example:

But to suggest that the bacterium is “assembled” from other entities, as a whole from its parts, is absurd. Bacteria arise and proliferate through a process of cell division known as binary fission, drawing in the requisite materials from the “culture” in which they are raised.

What is shocking here, besides Ingold’s emphasis on an individual bacterium—which makes no appearance in the paper—is how out of touch he is with the world of microbiology. James Shapiro has long shown how bacteria arrange themselves in multicellular assemblages with novel properties (1988). Even a single bacterium, such as *Azotobacter*, requires a lot of genes to fix nitrogen and is composed of respiratory membranes, ribosomes, cell membrane, nucleoids, etc. (Margulis *et al.* 1999, 36). In my scheme, as with Graham Harman’s object-oriented philosophy (OOP), everything in the world is equally a thing, by which I am referring to individual entities or units that cannot be broken into their parts. Again things are not reducible to those features, which make up their composition (another point completely ignored by Ingold).

To indulge one more discrepancy with Ingold, materials are things; ingredients are things. If flour, the contents of eggs, sugar, etc. are mixed, then they react to each other to form a different thing, cookie dough. Divide up the dough, place portions on a pan and put this in the oven and you will have different things emerge still. However, if a mouse happens along prior to mixing then the sugar is no ingredient *for the mouse*; rather, it is sweet, tasty morsel. Sugar interacts with a mouse as a thing to be consumed. Sugar is only an ingredient within the process of making dough. By forcing entities into a pre-ordained taxonomy, Ingold locks them into a position of potentiality with respect to other things they might one day affect. Ingold also misses the point that by treating all entities equally as things, no presumption of privilege has been made. If one is not to pick and choose arbitrary hierarchies between entities, then one should recognize all entities equally as things from the start. The stuff that grounds reality neither comes from above nor below but is centered on the interactions of things as actual entities.

What is absurd, given these, among other discrepancies, is for a reader to take “Archaeology and the New Materialisms” and simply affirm that this article results from the bovine tactics of an academic herd where appetite outstrips intellectual acumen. By painting the article as work naively cobbled together under the rubric of a new trend, as publicity without purpose or understanding, Ingold hopes other readers will share in his affirmation. However, this amounts to more than the obvious danger one runs with the evocation of turns; the point of which was to contextualize a difference, not to avow allegiance. The fact that Ingold is angry, rather than simply amused or even supercilious, suggests that he recognizes how there is far more at stake here. It is no accident,

therefore, that Ingold fails to take seriously the purposes of the paper, including a key aim: our fidelity must be foremost to those things that hold archaeological concern, not to academic fashion.

While a proper genealogy of work under the rubric of the New Materialisms would require a book-length treatment, one profits by appreciating how historical materialism is an important tradition and has much to offer. Within archaeology, moreover, it would be a profound mistake to deny the enormous influence of Marx, whose ideas were further developed and refined by the Frankfurt School through the labors of Theodor Adorno and, especially, Walter Benjamin (1968). Heirs to Marx have never tired in calling attention to the practices and ready-to-hand technologies that ground society, and whatever angle a study may take, it gains by recognizing how these practices and things are actively related to sustaining particular group configurations and inequities (McGuire 2009). Still, with Marxism, particularly in its early form, as Bjørnar Olsen has pointed out, “things, albeit important, are largely reduced to a confined structural feature and the means of production within the total social formation” (2010, 5). The critical point here is not to sever materialism from its relations with struggle—this, as Isabelle Stengers argues, would be for it to lose its meaning altogether (2011, 368; also see Pétursdóttir 2012). Rather, it is to define materialism in such a way as to recognize how individual things are the grounds of all archaeology and how these things cannot be exhausted by their confrontations with other things. These aspirations are, in fact, an important aspect of Benjamin’s project of historical materialism as recognized by both Olivier (2011) and Olsen (2010).

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